



**CORE  
MATERIALS**



# SUSTAINABILITY REPORT 2020

Towards a Sustainable, Lighter and Greener Future



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*“Sustainability mindset in everything we do.”*

**Eric Gauthier**



**Eric Gauthier**  
CEO 3A Composites Core Materials

## TOWARDS A SUSTAINABLE, LIGHTER AND GREENER FUTURE

An increasing demand for more sustainable products is reshaping the industry of core materials and creating a powerful incentive for companies to lead through innovations.

We believe that a responsible and sustainable future requires constant innovation, efficient waste management, sustainability mindset and collaboration with customers and partners.

We are proud that our lightweight products not only deliver sustainable properties and quality with total cost of ownership, but also play a key role in making the end products of our customers more sustainable and thus, the future greener.

We know that sustainability is our greatest opportunity, and therefore our R&D and engineering departments are continuously working on technology improvement that is in collaboration with the innovative forestry management, waste optimization and recyclability practices boost further our sustainability approach in all our production processes.

**3A Composites Core Materials** is the first company in the world producing the fully carbon neutral core material **BALTEK® SBC** and the **AIREX®** rigid foams are the industry pioneer in low resin uptake.

Of course, there is much more to do and we are progressively working on implementing our sustainability strategy and goals. Our company’s social, environmental, corporate and industrial programs ensure a consistently positive and sustainable impact on local, regional and global levels. We are confident that **3A Composites Core Materials** R&D, forestry management practices, the unique approach towards global collaboration and best-practice sharing will deliver the necessary innovations and improvements and continue to reflect values of our customers in their end products.

I appreciate your interest in our sustainability strategy as this represents a key part of our business. We will continue to make progress and report back on our achievements regularly.

**Eric Gauthier**  
Chief Executive Officer  
3A Composites Core Materials

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# COMPANY PORTRAIT

**3A Composites Core Materials** is a global organizational unit within the 3A Composites Group, part of Schweiter Technologies (SIX Swiss Exchange: SWTQ).

We are pioneers and a global leader in sandwich composite technology with more than 75 years of experience. Our portfolio consists of high-performing, robust, reliable, yet lightweight and sustainable core materials with our main focus on PET foam and balsa wood.

Our operations are located in Europe (Switzerland), the Americas (NC and KY), China (Shanghai and Changzhou), Ecuador and Papua New Guinea that make our **AIREX®** foams, **BALTEK®** balsa wood composite materials as well as **FOREX® / SMART-X®** display solutions globally manufactured and locally available.

Since its foundation over 65 years ago, our Swiss site has been the divisional head office and produced **AIREX®** special closed-cell foams for sandwich technology and gymnastics, as well as **FOREX® / SMART-X®** lightweight sheets for visual communication.

We have two manufacturing locations in the US: in High Point, NC, home to our North America head office and core materials conversion, and in Glasgow, KY, where our **AIREX®** PET foam products are manufactured.

We also have two sites in China: one in Shanghai that serves as the regional head office in the Asia-Pacific region & core materials conversion, and one in Changzhou that focuses on the production of **AIREX®** PET foams. Changzhou is the latest group investment in China that helps in the implementation of companies' strategies in the APAC region.

Our **BALTEK®** balsa wood cores are manufactured in Ecuador and Papua New Guinea with a fully integrated model from FSC®-certified owned plantations to world-class manufacturing standards, being the only balsa wood supplier that can deliver core kits directly from source.

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# WHAT WE DO MATTERS: SANDWICH CONSTRUCTION AND MARKETS AT A GLANCE

A sandwich construction consists of two high stiffness skins separated by a core material and together these multiple layers bring greatly improved properties, significantly reduce weight and thus energy consumption and considerably facilitate handling.

**3A Composites Core Materials** develops strong and solid, yet lightweight core materials, because the right balance between the two results in more durable, sustainable, and energy-efficient end product sandwich solutions for our customers.

Nature extensively uses this concept that as an example is shown in the structure of a bird's wing bone (see below).



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## Core Materials Markets

There is an endless number of applications of sandwich technology and our core materials. Here we stated the key markets that we have served for decades with major developed application and success cases:



### Aerospace

Modern applications for all sorts of composites for commercial and general aviation, aerospace and defense industries. Wings, flaps, radomes, fuselage, transport containers, floor covers and interior parts.



### Automotive

Applications for passenger cars, trucks, buses, recreational and special purpose vehicles. Roofs, A&B and door cladding, front ends, parcel shelves, seat back covers, trunk floors and cladding, floor parts and panels, various interior parts and superstructures.



**Building & Construction**

Applications for residential buildings, industrial and commercial buildings, pedestrian and road bridges, interior design and architecture, bridge construction. Roofs, doors and gates, window frames, applications for interior architecture.



**Marine**

Solutions for all marine components. Hulls, sides & decks, superstructures, bulkheads and stringers, transoms, covers, hatches, floors & interiors.



**Rail**

Lightweight constructions for all types of rail vehicles. Roofs, decks, toilet modules, compartment walls, doors, covers, floors, front ends and supporting cabins.



**Renewable energy**

Solutions for wind industry turbine blades and nacelles. Edge close-outs, shells, spinners, covers, rotor blades, shear web and nacelles.



**Industry**

Multiple solutions for other industries, such as sports and leisure, science and medicine, radomes, and industrial components. Radar covers, ski cores, shower tubs and many others.

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# CORE MATERIALS PRODUCTS

3A Composites Core Materials (3ACM) portfolio consists of **AIREX**® specialty foams and **BALTEK**® balsa wood products.

**AIREX**® foams based on PET are extruded in industrialized continuous processes, either in direct extrusion (**AIREX**® T10) or welded (**AIREX**® T90 / T92) sheet configurations.

**BALTEK**® SBC are balsa wood core materials that are produced in a fully integrated manner, starting with our own seeds in nurseries, carefully selected through a genetic improvement program, growing on our FSC®-certified plantations and harvesting after c. 4 - 5 years. The trees are cut down to green lumber

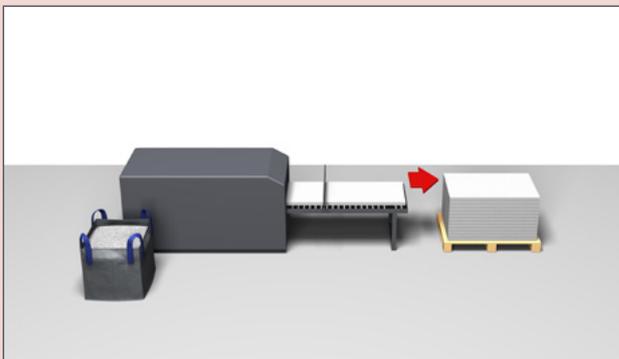
and kiln-dried in an industrial, carefully monitored process to ensure prime quality wood for infusion processes without the occurrence of microorganism attacks. Density sorting allows the creation of a homogeneous product from an inhomogeneous material.

**AIREX**® and **BALTEK**® cores provide a best-in-class weight to mechanical properties ratio at a competitive cost and are marketed to sandwich producers for aerospace, automotive, marine, rail, renewable energy, building and construction and other industrial applications.

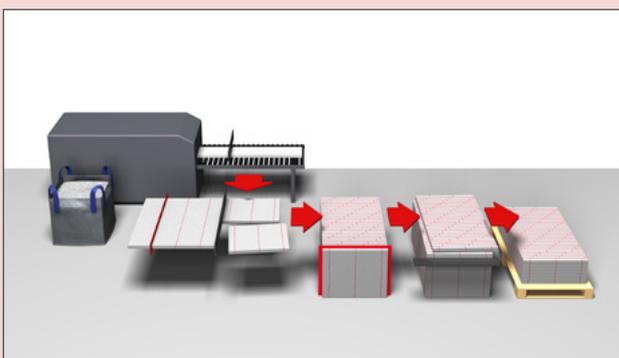
Main production principles are displayed in the graphics below.

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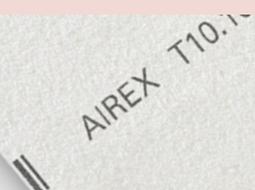
## AIREX® PET production



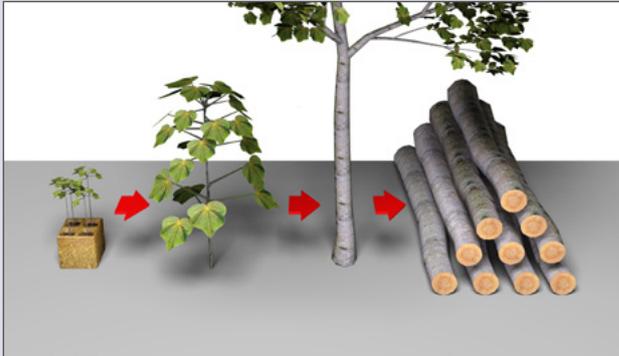
**AIREX**® T10 production: direct extrusion



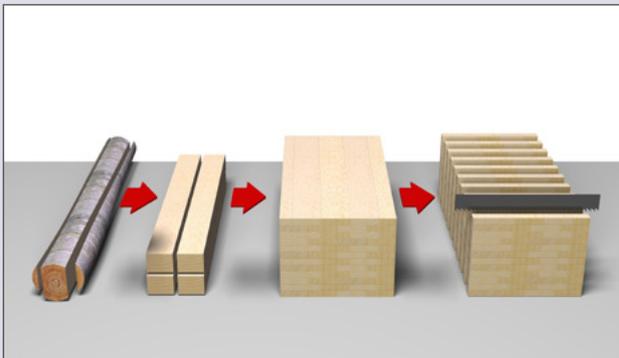
**AIREX**® T90 and T92 production: various cutting and welding operations



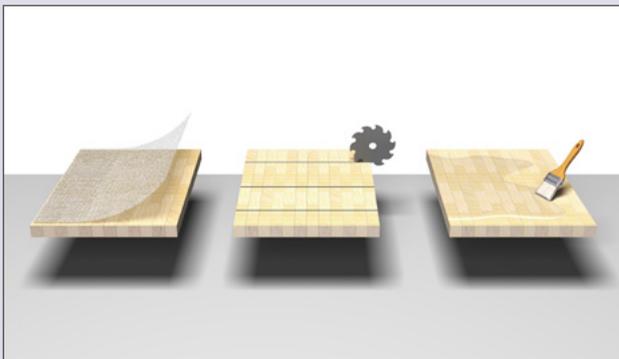
### BALTEK® balsa production



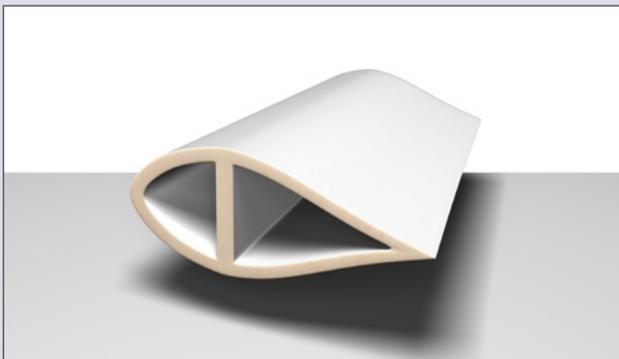
1: Sustainable forestry management



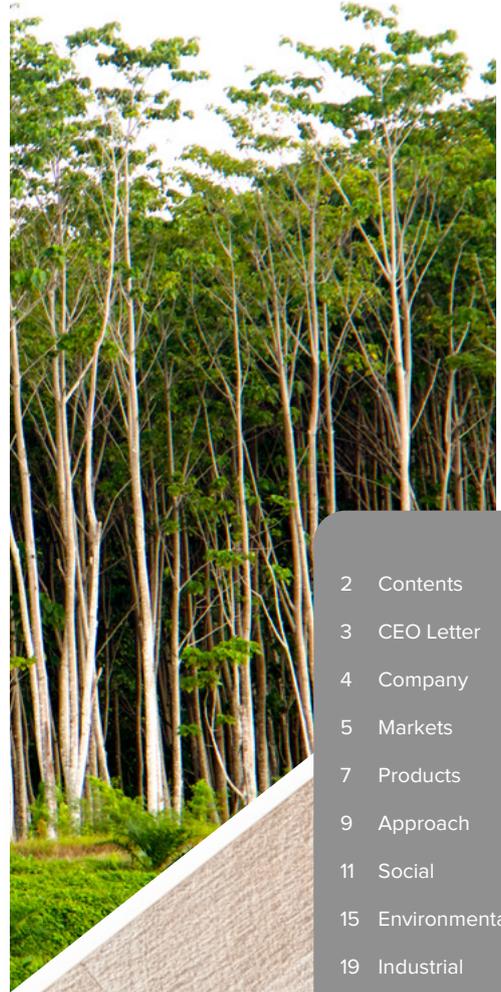
2: Advanced wood working technology



3: Customized value adding processes



4: Engineered composite solutions



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# SUSTAINABILITY APPROACH AT 3A COMPOSITES CORE MATERIALS

Sustainability is at the heart of everything we do. Our commitment to sustainability has contributed to our strong performance across the business and is fundamental to our success. We differentiate four sustainability pillars (Social, Industrial, Environmental, Corporate Governance & Financial) that are represented through our corporate social responsibility concept, environment, health & safety standards, sustainable forestry management, strong corporate governance, operational excellence practices, continuous R&D and innovations. All these are recognized contributions towards a greener, lighter and more sustainable future.



Our sustainability management approach is aligned with several of the United Nations Sustainable Development Goals (SDGs) and their associated targets. These goals came into effect on January 1<sup>st</sup>, 2016 as part of the United Nations 2030 Agenda for Sustainable Development. Our contributions to the goals that are most important to our sustainability agenda are described below.

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Sustainability Goal and Objective		Our Commitment
<p><b>SDG 2 Zero Hunger</b></p> <p>END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE</p>	<p><b>3ACM</b> recognizes its responsibility as one of the major employers in PNG and Ecuador and maintains vital focus on supporting local communities and ensuring access to transport, uniforms and health facilities. Due to a severe COVID situation in Ecuador, <b>3ACM</b> has regularly participated in food drive programs, making sure that food and nutrients reach those who need them most.</p>	
<p><b>SDG 3 Good Health and Well-Being</b></p> <p>ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES</p>	<p>Health and Safety standards are one of our core values. The company constantly monitors and improves co-workers' awareness of the importance to stay safe and responsible, both at work and at home. In a year marked by the COVID-19 pandemic, we take a great pride in knowing that our efforts contribute directly to the reduction of global health risks and to the elimination of the pandemic situation worldwide.</p>	
<p><b>SDG 5 Gender Equity</b></p> <p>ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS</p>	<p>The inclusion of women in all areas of processing, administration, and management level, giving equal opportunities to all genders within the organization.</p>	
<p><b>SDG 8 Decent Work and Economic Growth</b></p> <p>PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL</p>	<p><b>3ACM</b> is one of the leading companies in providing quality employment, training, and development to our employees and their families through our people development and social programs.</p>	
<p><b>SDG 9 Industry, Innovation and Infrastructure</b></p> <p>BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION</p>	<p>Being a pioneer in PET and Balsa solutions, <b>3ACM</b> constantly strives for the next level of innovation and optimization to benefit our customers and the environment. We drive innovation and change, focusing on waste reduction and efficiency in our forestry and industrial processes. Our products are constantly improved, driven by the Hybrid Core Concept: the best combination of sustainability, properties and price. We pride ourselves in offering our partners best-in-class Total Cost of Ownership (TCO).</p>	
<p><b>SDG 12 Responsible Consumption and Production</b></p> <p>ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS</p>	<p>All our forestry production follows responsible forestry management guidelines and regulations, protecting resources from over-exploitation or harming the social actors, flora, or fauna in our areas of influence. In addition, we increase the resource efficiency and promote sustainable lifestyles across all our industrial and forestry sites. We go the extra mile by not only abiding by local and international regulations but also constantly certifying our global operations across the industry.</p>	
<p><b>SDG 13 Climate Action</b></p> <p>THE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS</p>	<p><b>3ACM</b> takes a proactive approach towards consistently reducing industrial emissions, increasing the biomass of our plantations that capture more and more carbon from the atmosphere. Our forestry operation constitutes a carbon sink, offsetting most of our carbon emissions in industrial facilities.</p>	
<p><b>SDG 15 Life on Land</b></p> <p>PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS</p>	<p>Our annual High Conservation Value (HCV) monitoring plants in Ecuador and Papua New Guinea ensure that all the wildlife that coexists with our forest plantations is preserved and maintained over time.</p>	

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# SOCIAL SUSTAINABILITY PILLAR

The social pillar is reflected by our care of the local communities we work with and alongside, by the company’s health and safety standards, by the attention we show to the well-being and equality of our employees. 3ACM is an inspiring and socially responsible employer that takes care of current and future generations through health, safety and social programs.



**Ramón del Pino**  
General Manager Americas

## HEALTH & SAFETY PROGRAM

All employees at 3A Composites Core Materials as well as contractors and visitors regularly receive H&S training, and those who deal regularly with production receive compulsory Personal Protective Equipment (PPE) training, as well as training on how to detect, prevent and mitigate occupational hazards (i.e. over the last 5 years in China we carried out 11,660 hours of training for 150 full-time employees).

Raising awareness of a culture of safety and the improvement of work safety by minimizing risks and creating safer working conditions represent core values to us. We have developed several policies to raise awareness at all our sites of the company’s mission and objectives to minimize the amount of accidents in all our global operations. We collect H&S data on a very regular basis and report action plans for further developments. Our constant attention to H&S standards is highly appreciated by our employees and partners.

To stress the importance of H&S, we have a full-time doctor and three qualified nurses in Ecuador and one nurse in PNG, two regions with a high accident rate at that time. The nurses are based at the factory, but make regular field visits to check H&S situations, carry out regular first aid training and update the co-workers on H&S and COVID-19 related topics and measures. They are able to administer

*“Genuine commitments with our stakeholders.”*

**Ramón del Pino**

medication, if necessary, or refer employees to the hospital, where they will be treated on company’s expense. Contractors are also included in the company’s regular training programs.

A healthy mindset of our employees is a constant part of the company’s focus: we provide a hotline for mental health issues that can be reached by employees seeking advice and support. We try to always be there for our co-workers, especially during these challenging pandemic times.

3ACM participates in the vaccination and immunization program, granting employees the right to receive free seasonal and COVID-19 vaccines. We are proud to report that as a result of mutual careful attention towards H&S, the number of incidents has been reducing gradually and our target is to report a zero-accident level by 2023.

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### SUPPORTING SPORT ACTIVITIES OF EMPLOYEES

We attach great importance to the physical well-being of our co-workers and promote sporting activities through various supporting programs, including tennis/soccer courses in Ecuador, organized regular running and yoga classes in Switzerland, company membership solutions for gyms in Switzerland and China.

### DIVERSITY, EQUALITY AND INCLUSION

In Switzerland, we support employees by providing day care solutions for the children, enabling parents to return to their sustainable jobs. Moreover, the company allows employees to adjust their workloads and reduce them due to family specific situations. A part of the consistent approach towards developing young professionals is our apprenticeship positions, where students and graduates can gain their first industrial experience and gain an insight into multiple company departments.

In PNG and Ecuador, **3ACM** engages several contractors for harvesting and transport and thus encourages local small and medium business enterprises. The company’s decision to increasingly hire local small growers in its operations has had a positive economic impact, improved community relations, as well as contributed to social equality.

We ensure that employees of all genders receive equal opportunities within the organization and are proud to report that in PNG, where **3ACM** is one of the major employers, 21% of our workforce is female. In China, 12% of all industrial co-workers and 40% of office co-workers are women. In our office in Sins, Switzerland, 29% of the workforce is female, while at the US site, female colleagues make up 32% of the workforce.

### SOCIAL PROGRAMS

#### PRE-SCHOOL EDUCATION IN PAPUA NEW GUINEA

Pre-school education is not formalized in Papua New Guinea and left to private initiatives, although that might change in the future. We run two community centers for our employees and families and two playschools for the employees’ children aged three to six years.

The schools are free of charge and the initiative is managed by four teachers, who are trained ▶

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Studying process



Graduation day





Studying process

New library and visitors

We want care about local communities and take care about current and future generations.

and certified for early child development. The play-school curriculum follows an early childhood learning approach, and the teaching method follows the concept of Light Education Ministries Phonics.

We have an early learning class for children ages three to six years and reading readiness classes for children aged five to six years. All learning is in English. The school runs from February through November, and graduation is in December.

In 2020, the class reached a maximum capacity of 40 students, who were spaced out in line with the most recent COVID-19 requirements and all 40 completed the year with 7 graduating and moving to grade 1 in 2021. The company will support children graduating the first grade by covering tuition, uniforms and school supplies costs. In 2019 we had 42 students enrolled, of which 36 completed the year.

#### ADULT LITERACY PROGRAM IN PAPUA NEW GUINEA

An adult literacy program started in 2019 as a pilot project and we were the first business to participate in such an initiative. Classes are offered to co-workers that can speak English, but not read or write. The

program comprises 12 weeks with two two-hour classes a week. The participants learn reading, writing, math, and practical knowledge (filling out a deposit slip, using an ATM, etc.). The course is available for 20 people from each compound. The teaching concept is quite intense, giving a chance to young students to attend their lessons in the morning while their mothers and fathers attend later during the day and evening.

In 2020, we were forced to put the Adult Literacy Program on hold due to COVID-19 restrictions with lockdowns and schools closing. In order to continue our support of the education initiative in Papua New Guinea, even in this challenging pandemic year full of varying restrictions, the company purchased more than 300 new books and opened small libraries in each of our compound-based schools in Kokopo, PNG.

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### WATER, FOOD AND HOUSING PROGRAMS IN PAPUA NEW GUINEA

The company provides housing for employees and constantly works on improving living standards for people in neighboring communities. Securing water, food and housing for the employees and improving living standards of the contractors and partners is a constant focus of **3ACM**. We regularly collect feedback with regard to living standards from our employees and report on the action plan and further improvements.

### INFRASTRUCTURE PROJECTS IN ECUADOR

**3ACM** participated along with the local authorities in repairing a 15 km stretch of an access road in Cotopaxi, province of Ecuador. This project enabled local farmers to transport products to the large markets in the vicinity, thereby ensuring an income and welfare for their families.

In 2020, we planted balsa trees in the public areas of Quevedo, Ecuador as part of company's plan to create a more sustainable and greener future. In addition to that, **3ACM** donated several bus stops to the city of Quevedo, Ecuador. Once in place, the city will house architectural pieces made from our materials.

### 3A COMPOSITES AVENUE IN CHINA AND OTHER PROGRAMS FOR THE ELDERLY PEOPLE

**3ACM** financed the construction of a road for a nursing home with more than 600 elderly people in China. The road connected the living and canteen areas, giving disabled people and wheelchair-users additional independence and flexibility. In order to thank the support of **3ACM**, the nursing home decided to name this road after our company's name.

The company sponsors on a very regular basis different social initiatives and projects. One of the recent initiatives in Asia is a professional nursing training program for the care of elderly people that gained particular importance during this pandemic year.



3AC Avenue in China

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# ENVIRONMENTAL SUSTAINABILITY PILLAR

The environmental pillar comprises the sustainable management of our forestry operations, preserving and protecting forests, improving species and forestry practices, protecting land and water resources and securing biodiversity.

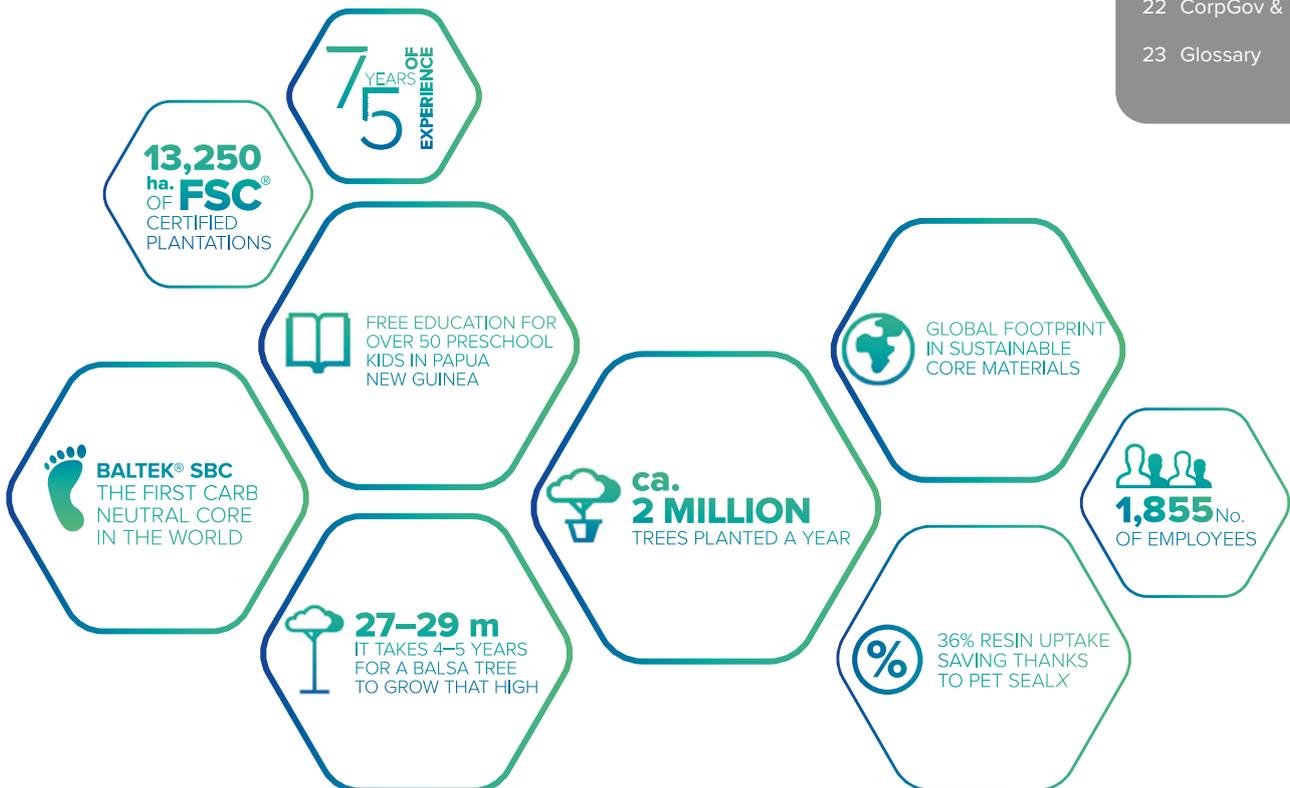
As the owner of one of the biggest operations in Ecuador (with c. 11,000 hectares in the provinces of Los Ríos, Manabí, Santo Domingo de los Tsáchilas, Esmeraldas, Guayas and Cotopaxi) and Papua New Guinea (with c. 3,000 hectares in East Britain Province) of balsa (*Ochroma Pyramidale*), we fully recognize the responsibility in promoting a sustainability mindset in global operations, and especially in balsa plantations. Our company controls the entire process of the balsa value chain for the core materials industry, including planting, growing with best-in-class silviculture practices, harvesting, and the production procedures of Forest Management Units (FMUs) that are 100% FSC® certified. Some of the harvesting, plantation maintenance, and transport activities are outsourced to contractors that encourage local

small- and medium-business activities. Since 2019, balsa wood from small regional growers, who are recognized as joint venture partners and included in the company’s FMUs with constant environmental monitoring practices, is considered as FSC® Controlled Wood. Best practices and safety standards are always communicated to all suppliers in our operations.

In 2020 we planted c. 2,706 ha with balsa wood (2,165 ha in Ecuador and 541 ha in PNG), which is 26% higher than in a previous year.

On top of our global sustainability concepts and in line with our sustainability strategy goals, we have developed an Environmental Monitoring and Resource Optimization Guide for forestry sites in Ecuador and PNG in line with United Nations SDGs and FSC®. ▶

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It describes monitoring and protecting practices that include Environmental Impact Assessment (EIA), High Conservation Value (HCV) monitoring, constant control of accuracy of available maps (topographical features, existing and planned roads, boundaries, inhabited spaces, camp location, watercourses), respect of buffer zones, HCV sites and non-disturbance status of slopes greater than 30°, ensuring the protection of water sources, important community non-timber resources, endangered species, settlements, and sites of historical or cultural significance. HCV sites in plantations are monitored on an annual basis, while Wildlife Encounter Database records sightings of all animals in plantations. Our annual HCV monitoring plans in Ecuador and Papua New Guinea ensure that all the wildlife that coexists with our forest plantations is preserved and maintained over time.

**3ACM** understands its responsibility towards forestry and nature and uses available soils according to their best use potential, allocating them only to sustainable production practices and protects and guarantees conservation of the biodiversity. We continuously invest in R&D and engineering know-how, work with balsa seed trials in order to further increase our industrial productivity, quality and forestry operations yield.

We pay careful attention toward the timing of harvesting. It is our company’s stringent policy never to clear virgin rainforest for new planting, that’s why our balsa is 100% plantation-grown on the company’s own land and on that of local landowners who are in long-term partnerships with us and who value and treat balsa forests with care and respect. Moreover, most new or leased land is reconverted land used for other agricultural activities including crops or cattle.

In 2010, **3ACM** was awarded the FSC® Certification as the first global producer and since then has maintained the FSC® Certification for both of our plantations (Ecuador with FSC-C019065 and Papua New Guinea with FSC-C125018) as our commitment towards sustainable forestry management, ensuring long-term plantation productive capacity and sustainable attention towards nature with FSC principles.

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## FSC® CERTIFICATION PRINCIPLES AND CRITERIA

### Principle #1:

#### Compliance with Laws

We comply with all applicable laws, regulations, and nationally ratified international treaties, conventions, and agreements.

### Principle #2:

#### Workers' Rights and Employment Conditions

We maintain or enhance the social and economic well-being of our staff and associates.

### Principle #3:

#### Indigenous Peoples' Rights

We identify and uphold Indigenous Peoples' legal and customary rights of ownership, use, and management of land, territories, and resources affected by our management activities.

### Principle #4:

#### Community Relations

We contribute to maintaining or enhancing the social and economic well-being of local communities. In everything we do, we try to make a positive impact in the communities we are present all over the world. In Ecuador and Papua New Guinea, we run a corporate social responsibility program focused on environmental education aimed at communities. The objective is to help these communities develop a sustainable future and raise awareness on the importance of environmental protection.

### Principle #5:

#### Benefits from the Forest

We efficiently manage the range of multiple products and services of the Forest Management Unit to maintain or enhance long-term economic viability, and the range of environmental and social benefits.

### Principle #6:

#### Environmental Values and Impacts

We maintain, conserve and/or restore ecosystem services and environmental values of the FMU, and avoid, repair or mitigate negative environmental impacts.

### Principle #7:

#### Management Planning

We have a management plan consistent with its policies and objectives, and proportionate to scale, intensity, and risks of its management activities. Our management is implemented and updated based on monitoring information to promote adaptive management. The associated planning and procedural documentation is sufficient to guide our staff, inform affected/interested stakeholders, and justify management decisions.

### Principle #8:

#### Monitoring and Assessment

We demonstrate that progress towards achieving our management objectives, the impacts of management activities, and the management FMU's conditions are monitored and evaluated proportionate to the scale, intensity, and risk of management activities in order to implement adaptive management.

### Principle #9:

#### High Conservation Values

We maintain and/or enhance the High Conservation Values (HCV) in the FMU by applying a precautionary approach.

### Principle #10:

#### Implementation of Management Activities

Management activities conducted by us for the FMU are selected and implemented consistently with our organization of economic, environmental, and social policies and objectives and in compliance with the Principles and Criteria collectively.

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## ENVIRONMENTAL PROGRAMS

### ECUADOR — CONSERVATION VALUE ATTRIBUTE PROJECT (2019)

Within the FSC®-Certification context, an FMU, or part of it, can be declared as a Conservation Value Attribute (CVA), if it guarantees the preservation of values, goods, and services that determine or influence the life of a community or an ethnic group. In this regard, three of our balsa farms in Ecuador contain elements that have been identified as archaeological and cultural values attributed to the Milagro-Quevedo Culture, which constitutes one of the pre-Columbian cultures of Ecuador with the most significant territorial extension.

This culture was located in the entire river system of the Guayas, including its two great rivers Daule and Babahoyo, and all their tributaries. One of

the characteristic features of this culture is the tolas or artificial mounds that have been found both in groups and in isolation. It has been determined that different types of tolas exist according to their purpose: agricultural, funerary, ceremonial, and residential. The registered structures constitute a group of 11 tolas, although it is likely that there were much more of them. **3ACM** fully recognizes its responsibility and its mission to preserve these tolas, as well as further develop a sustainability mindset.



### PAPUA NEW GUINEA — HIGH CONSERVATION VALUE ASSESSMENT PROJECT (2019)

An HCV analysis was carried out in cooperation with the PNG University of Natural Resources and Environment during 2019/2020. It presents findings and recommendations of the HCV assessment on six selected balsa plantations in East New Britain, including owned and managed balsa forest, small holder

plantation blocks, and buffer areas. The evaluation demonstrates the commitment to the standards of FSC®. Biological diversity was proven in all plantations and buffer zones and a significant number of plant species within plantation buffers. All sites are shown to have rich avifauna diversity (Singing Sterling, Eclectus Parrot, Meyer’s Friarbird, etc.) as well as insects (moths and butterflies, beetles, cricket, dragonflies and damselflies, etc.), mammals (various bats) and endemic species (frogs, snakes, etc.). Based on this research, we take actions to ensure the values found are maintained and further enhanced. On the social/cultural side, this includes the continuous support of local community needs (i.e., minimizing the use of buffer zones for harmful activities, such as hunting, fires, and clearing; or monitoring of illegal harvesting within protected buffer zones). In contrast, on the ecological side, it covers water catchment (i.e., periodic water quality monitoring of priority sensitive streams and creeks) or erosion control (i.e., maintaining buffer zones on all rivers). In terms of the biological aspects, actions taken are preserving endemic species (i.e., raising awareness amongst staff and local communities) or protect places of critical temporal use (i.e., nesting trees in buffer zones close to the plantation blocks).

### PROJECT SOLAR BUTTERFLY

**3ACM** is an official technical partner of the project Solar Butterfly, construction of a mobile home that can travel on self-produced solar power. The project’s mission is to raise public awareness around solar energy and environmental protection. Our part in this partnership is a new application for Ocean-PET, a material developed from recycled plastic waste from the ocean. This project is currently in its initial phase. More information and details will be disclosed in our 2021 Sustainability report.

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# INDUSTRIAL SUSTAINABILITY PILLAR

The industrial sustainability pillar comprises the sustainable management of our industrial operations, monitoring of sustainable quality and performance of our products, its continuous improvement, while preserving and protecting water resources, increasing energy efficiency, reducing paper consumption and bringing down CO<sub>2</sub> and other industrial emissions.

At the site Sins, Switzerland, the total energy consumed was reduced by 10% in 2019 and by a further 8% in 2020 despite an increase in production. This was mainly achieved due to projects focused on the gradual reduction of gas consumption and corresponding CO<sub>2</sub> emissions. Gas consumption fell by 26% in 2019 and by a further 9% in 2020. The total use of cooling water fell by 15% in 2019 and by a further 36% in 2020, as a result of our specific associated improvements. Despite much higher production volumes, the amount of waste was reduced by ca. 12% in 2019 and by an additional 8% in 2020. Moreover, the production of our Swiss site benefits from the country’s energy mix with 75% coming from renewable resources (66% from major hydropower plants and 8.4% from solar, wind, small hydroplants and biomass).

In 2018, the High Point site, NC, US implemented several efficiency projects that positively influence the site’s energy and water consumption. In 2020, High Point further increased its production volumes by 44% and reported -28% less gas and -16% less water consumptions and only 33% more electricity usage than in previous year. Waste recycling programs help to maintain waste at the same level (+4% compared to 2019) despite production volumes almost doubling.

Our Balsa operation in Ecuador benefits from an energy mix in a country which is almost entirely powered by renewables. Hydropower is abundant and inexpensive, allowing 3ACM to fuel its balsa cores production in a sustainable way. Moreover, both of our sites in Ecuador and Papua New Guinea use biomass to fuel the boilers responsible for



**John Chen**  
Managing Director Region Asia Pacific

the generation of water vapor that is used in our kiln-dry process for wood. The sawdust from our operation is also utilized to reduce to the bare minimum the sourcing of biomass from external sources.

Our focus on sustainability and constant awareness of scarce resources resulted in 5% less energy consumption in factories in China, even during market boom in 2020. The factory is equipped with a solar power generator that supplies shower blocks and bathrooms for co-workers.

All our products, **AIREX®** and **BALTEK®** are compliant with REACH and RoHs regulations and include zero illegal hazardous raw materials.

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*“Solutions  
for a greener world.”*

**John Chen**

## GREENHOUSE GAS EMISSIONS

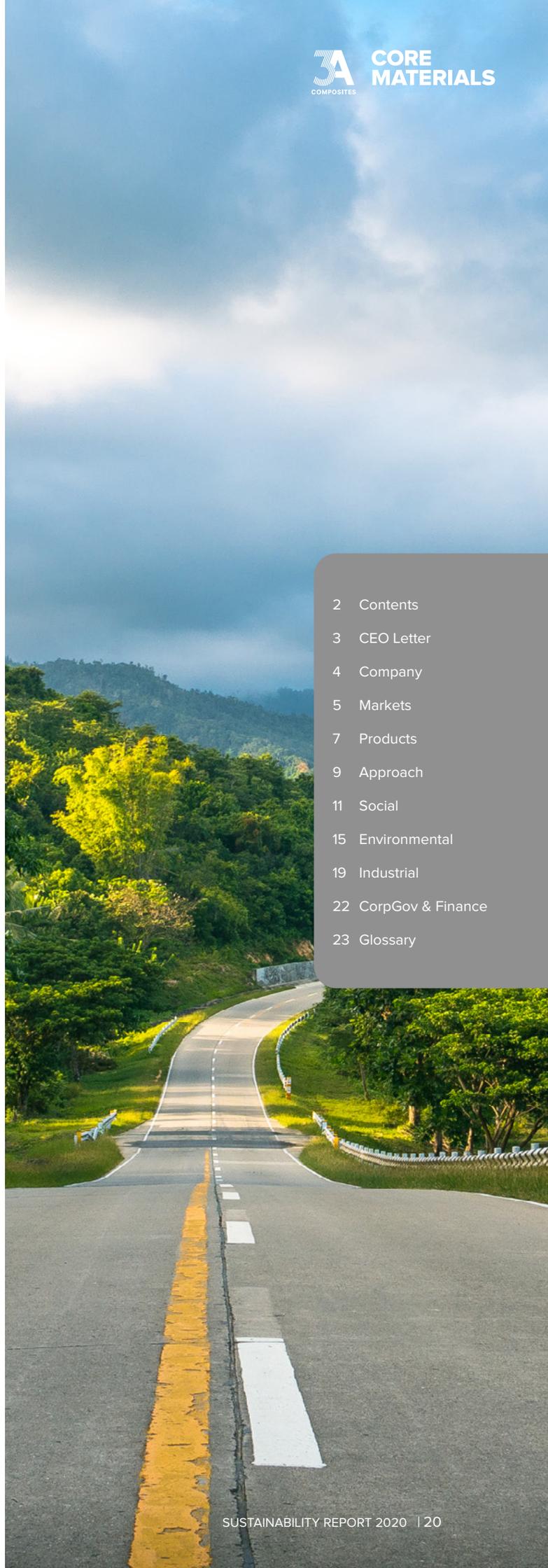
Most of our sites have projects reducing energy consumption and, as a consequence, the greenhouse gas output. We closely monitor environmental emissions and fulfill all government requirements.

For the balsa product, **BALTEK® SBC**, a Life Cycle Inventory (LCI) analysis was carried out to quantify the CO<sub>2</sub> absorption from our plantations. The analysis proves that the greenhouse gas (GHG) emissions captured by our balsa plantations are significantly higher than the GHG emissions caused by the balsa core material production. The research and calculations were conducted by SCX – Bolsa de Clima de Santiago, Chile, and Factor CO<sub>2</sub>, Ecuador and confirmed that **BALTEK® SBC** achieves a superior GHG emission balance without the use of external offsetting. As a result, **BALTEK® SBC is the first carbon-neutral core material in the world.** Moreover, our company’s policy is to have a planting rate higher than a harvesting rate that together with our genetic improvement program means a constant increase in biomass and higher carbon capture. Carbon surplus captured by the annual balsa production of Ecuador and PNG may partially offset either our own PET production, or industrial emissions of our customers making respective products carbon neutral. We continue working on further increasing biomass in our plantations and capturing more carbon emissions.

We are proud of having engineered **3ACM®** PET foams to **absorb significantly less resin** in sandwich production and hence avoid excessive material usage at the customer level. Moreover, requested end products’ properties are reached by our products with **much lower density** range than those from our competition. Our company’s R&D and engineering departments work tirelessly on the continuous improvement of our PET and Balsa quality and property combination. All those facts make us proud to announce that **3ACM is making the future lighter and greener, and the end products of our customers more sustainable.**

We know that there is always a room for further improvement and as such we set ambitious goals for our global operations, including PET and Balsa, to ►

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further improve our joint footprint and continue to make the future lighter, greener and more sustainable.

**ISO CERTIFICATION**

**3A Composites Core Materials** demonstrates its best practices through regular external certification and compliance with international golden standards.

**Quality Management System** at all our sites demonstrates its compliance with ISO 9001:2015. The **Environment Management** practices at our Swiss site are certified with ISO 14001:2015 and **Health and Safety Management** practices - with ISO 45001:2018. We highlight our commitment to continuous improvement in relation to environmental, quality and H&S management with annual audits and re-certifications every three years.

**INDUSTRIAL PROGRAMS**

**OPERATION CLEAN SWEEP®**

**3ACM** is a proud supporter of Operation Clean Sweep® (OCS). We are aware that spilled plastic pel-

lets, flakes, and powder can make their way into local waterways and, ultimately, estuaries and oceans, endlessly contaminating nature. The campaign's goal is to ensure that no plastic particles (pellets, flakes, and powder) are left uncollected on the **3ACM's** premises through the implementation of additional precautionary measures, the installation of advanced filters and systems that will be blocking any loss of plastic particles and powder, working and further educating our suppliers and transport partners about solutions to pursue and ensure Clean Sweep. **3ACM** will disclose more insights into these projects and its results in the 2021 Sustainability Report.

**GLOBAL LIVE QUALITY ASSURANCE**

All **3ACM** sites are connected with a software program that reports live to a global quality database and shows hundreds of tests running live in all technical laboratories around the globe. This is the way to guarantee the best properties and performance of our products to our customers in every location across the globe.

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# CORPORATE GOVERNANCE AND FINANCIAL SUSTAINABILITY PILLAR

The **Corporate Governance and Financial** pillar comprises good, fair and ethical corporate governance practices, sustainable and profitable growth, reliability in relation towards the customers, partners and stakeholders, being a constant innovator and leader in setting sustainable industry standards.

**3ACM** recognizes honest, transparent and fair business conduct as fundamental to its operations. Our commitments are included in the [Global Code of Conduct](#) that applies throughout the company and is binding to senior and middle management, as well as to all employees, partners, customers and suppliers.

On top of being a responsible global employer and partner, we recognize the commitment towards financial performance and sustainable growth. We at 3ACM are fully aware of the company’s mission and aspirational targets for sustainable development and growth, acting towards increasing the value offering and our customers’ experience. The company is proud to show year-on-year sustainable financial results, market positions, as well as being recognized as a trustworthy and responsible long-term supplier,



**Kilian Jauch**  
Division CFO

business partner and employer. Our approach of continuous improvement, both in R&D and sustainability areas, together with established preventive risk-management practices, secure our position against short and long-term risks and challenges.

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*“Green energy is not about fashion, it’s about securing a better future.”*

**Kilian Jauch**

## GLOSSARY AND ABBREVIATIONS

3ACM	3A Composites Core Materials
c.	circa
CO <sub>2</sub>	Carbon Dioxide
CVA	Conservation Value Attribute
EIA	Environmental Impact Assessment
FSC	Forest Stewardship Council
GHG	Green House Gas
HCV	High Conservation Value
H&S	Health and Safety
ISO	International Organization for Standardization
KY	Kentucky
LCI	Life Cycle Inventory
LED	Light-Emitting Diode
NC	North Carolina
PET	Polyethylene terephthalate (thermoplastic polymer resin)
OCS	Operation Clean Sweep®
PNG	Papua New Guinea
PPE	Personal Protective Equipment
R&D	Research & Development
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals, EU Regulation
rPET	recycled PET (post-consumer grade)
SDG	Sustainable Development Goals
TCO	Total Cost of Ownership

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