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Leadership Messages and Sustainability at Domsjö Fabriker

A. Message from CEO Lars Winter

FY19 was a year in which we focused our strategy on further strengthening our position as a high quality producer of specialty biorefinery products. Our sales of specialty cellulose and specialty lignin products increased during the year and we reached as well new customers as new applications. The investment in small bag packaging equipment made last year has made it possible to reach other customers and applications where our specialty Lignin can replace fossil oil based products and thus contributing to the required Bioeconomy transition.

During the fiscal year we have also worked intensely on a project to replace our 11 old diffusor washers with a new DD-washer. The process also includes setting up a blow tank and will lead to improved washing capacity and increase the production in the cooking plant. The DD-washer will be commissioned during our annual shutdown in May 2019 and will start up at the end of May.

In October 2018, we presented our application for the new operational permit in a hearing to the Land and Environmental Court. The Court approved our application in January 2019 but at the same time required us to make significant reductions in our effluents to the recipient regarding COD, Suspended solids, Nitrogen and Phosphorous as well as to reduce our emissions to air of SO2, H2S and dust particles. In order to comply with these requirements we have initiated several investigations during the coming years to identify and implement the possible measures to achieve a required reduction in effluent load and emissions to air. The outcome of these investigations will be investments in equipment that will reduce our impact on the environment at the same time as we are developing and increasing our production.

Wood supply has during FY19 been at a very tough competition to the largest extent due to the weather conditions that in different ways have restricted the harvesting during the winter and summer period of 2018. Increasing competition arising from capacity expansions in the surrounding has also increased the demand on the local market with ~15%. The increasing demand will put continued pressure on wood sourcing and will lead to increasing demand for imported wood. For Sweden, this is an important issue to address, as the growth in the Swedish forests is significantly higher than the yearly harvesting. The ambition of the Swedish Government to establish a Bioeconomy based on the sustainable wood raw material will require a decision on how much of the growth in the Swedish forest that shall be used to supply wood to the Swedish industries in our efforts to support the transition to a Bioeconomy.

The Biorefinery Domsjö Fabriker produces several products that replaces fossil oil based alternatives and thus already today supporting the transition to a Bioeconomy. This can be further developed but requires increasing supply of local wood, which can be achieved partly by measures from the forest owners who can increase the growth in their forests. However, the ambition from the Swedish Government regarding how to balance the preservation of the nature with the requirement of supplying sustainable wood raw material to the industries need to be clarified. I am convinced that we can establish a significant increase in the growth in the Swedish forest, harvesting in areas that are today restricted and at the same time undertake measures that preserves our nature. This is required, as the negative impact from fossil oil consumption on the forest environment can be partly mitigated by utilizing a larger part of the growth in the forest in order to replace fossil oil based products.
II. About the report, reporting principles, boundary and scope

The sustainability report for Domsjö Fabriker AB (from here on called Domsjö Fabriker or the company) for the fiscal year 19 (FY19), April 2018 – March 2019 is made annually and follows the principles of stakeholder inclusiveness, materiality, sustainability context and completeness. This sustainability report is made as a separate document from the financial statement and is produced in line with the international standards of the Global Reporting Initiative (GRI). This report has been prepared in accordance with GRI standards: Core option.

The boundary and scope of this report includes Domsjö Fabriker, for reasons of coverage within direct control and availability of data. For further information regarding the information in this report please contact Monika Backerholm, Communication Manager. The last Sustainability report was published May 2018.

http://www.domsjo.adityabirla.com
http://www.adityabirla.com

A. Sustainability Data Management

Domsjö Fabriker has a data management system together with the rest of Aditya Birla Group (ABG) for continuous tracking of key disclosures. One module is configured for indicators around the Global Reporting Initiative (GRI) requirements and will capture all GRI Standard indicators. This will help monitoring these indicators and at a later stage publishing the sustainability report in line with strategy of Aditya Birla Group.

Domsjö Fabriker works systematically with sustainability data management through different management tools. All kinds of incidents (health, safety, environment, social, labour and legal) are tracked so that remedial actions can be taken. The tools assist to conduct investigation, root cause analysis, corrective-preventive action plans and closure. During FY19 the company has started to prepare for implementation of a new system for incidents and deviations.

III. Location and local structure

Domsjö Fabriker is located in Örnsköldsvik and is base of both operations and headquarters. Domsjö Fabriker has only one supplier of wood raw material, Domsjö Fiber, which is partly owned by Domsjö Fabriker together with Övik Energi AB. Domse Latvija is Domsjö Fabriker’s subsidiary in Latvia with 14 employees. Domse Latvija procures wood, primarily from the Latvian market.

IV. What makes a sustainable business and a sustainable product?

According to Aditya Birla Group, a sustainable business is one that can live within the constraints of a “two degree sustainable world”. A business that can reduce its impact on the externalities, as required by the shrinking legal space within which it must operate, as well as one that can adapt to external factors that are driven by global megatrends which will inevitably affect it.

Businesses work according to management systems. Today, these management systems are often designed to meet limits set by local laws. However, these limits are not sufficiently restrictive to control our cumulative impact, such that we remain within the planet’s safe operating limits.
In areas such as the production of greenhouse gases, notably carbon dioxide (CO₂), biodiversity management, nitrogen use, water management, land use, safety and health management, businesses will have to introduce greater levels of management control, over time. By doing so, they will increase and standardise performance in these areas. In many cases, reduction will not suffice, and a complete transformation to new technologies or new methods will be required. This is especially true of the energy matrix, where reduction in the use of energy can only go so far towards reducing CO₂ before new fossil fuel-free sources of energy must be introduced to our energy mix.

Domsjö Fabriker, as a biorefinery, is working in this direction with a wide range of products, all based on renewable and traceable raw materials. Our products can replace those fossil-based in the textile and chemical industries and thereby contribute to strengthening the bioeconomy and reducing the environmental impact of our own and our customers operations and products.

V. Governance structure
Domsjö Fabriker is a part of Aditya Birla Group since 2011. Aditya Birla Group is an expanding Indian conglomerate with roots in the Indian textile industry. The business includes production of viscose fibre, aluminium, copper, cement, chemicals, fertilisers and isolators as well as running retail businesses, etc. The turnover is 44 billion USD and the group’s activity is spanning 34 countries, Aditya Birla Group is anchored by a strong force of over 120,000 employees, belonging to 42 nationalities and operates in 34 countries across 5 continents.

The Aditya Birla Group is the world’s largest manufacturer of viscose fibre, and is involved in the entire textile value chain, from the production of viscose to the finished cloth and apparel. Domsjö Fabriker is one of four cellulose plants in the Aditya Birla group. Two are situated in Canada and one in India. The group has development laboratories and pilot equipment which enables simulating all industrial processes, from forest to fashion.

Approximately one out of four viscose clothing items in the world is produced using viscose fibre from Aditya Birla. Four viscose fibre brands are produced; Birla Viscose, Birla Modal, Birla Excel, Birla Purocel. The products are known as Birla Cellulose. Viscose fibre is not only used for different kinds of clothing, from fashion to work clothes, but also for home textiles and non-woven use, such as personal hygiene and medical purposes. Liva, a cloth made from viscose fibre in a by ABG controlled manner is also marketed in co-operation with several brands of textile manufacturers.

Domsjö Fabriker is committed to Aditya Birla Group’s corporate values, principles and policies. The principle keystones and values are the core within the Group and implemented in Domsjö Fabriker with a Swedish approach, taking government laws and institutions into account.

Keystones:

- **Employees**: People build the Group’s success.
- **Customer**: The customer is the focus of every activity.
- **Environment, health and safety**: Respect for the environment, health and safety is part of everything done.
Group values:

- **Integrity**: Acting and taking decisions in a manner that is fair and honest. Following the highest standards of professionalism and being recognised for doing so. Integrity for us means not only financial and intellectual integrity, but encompasses all other forms as are generally understood.

- **Commitment**: On the foundation of Integrity, doing all that is needed to deliver value to all stakeholders. In the process, being accountable for our own actions and decisions, those of our team and those on the part of the organisation for which we are responsible.

- **Passion**: An energetic, intuitive zeal that arises from emotional engagement with the organisation that makes work joyful and inspires each one to give his or her best. A voluntary, spontaneous and relentless pursuit of goals and objectives with the highest level of energy and enthusiasm.

- **Seamlessness**: Thinking and working together across functional groups, hierarchies, businesses and geographies. Leveraging diverse competencies and perspectives to garner the benefits of synergy while promoting organisational unity through sharing and collaborative efforts.

- **Speed**: Responding to internal and external customers with a sense of urgency. Continuously striving to finish before deadlines and choosing the best rhythm to optimise organisational efficiencies.

The governance structure for implementation of sustainability consists of three layers. Domsjö Fabriken has a Core Committee at Pulp and Fibre Business level that is responsible for taking sustainability into the company’s business strategy. The Apex Sustainability Committee, with representatives from all units in the pulp and fibre business, is primarily responsible for implementation of the framework, see figure 1 on next page. The Apex Sustainability Committee delegates responsibilities to Unit Level Sustainability Committees, Roadmap Task Forces and Stakeholder Engagement Committees for implementation of various sustainability initiatives in line with the group strategy and framework. The Unit Sustainability Committee is being established and will be the link to management of Domsjö Fabriken.
A. Board of Directors
The board of Domsjö Fabriker AB consists of:

- Kumar Jain Shailendra, Chairman
- Dilip Gaur
- Vinod Tiwari
- Lars Winter
- Andreas Hadjimichael
- Ronny Hellström (ER)
- Maria Wallenius (ER)

B. Sustainability Framework
The sustainability vision and framework has been developed at the Aditya Birla Group level and cascades down to different businesses and plants. The main components of the framework include a sustainability vision, policies and standards to be applied by group companies. The purpose of the framework is to proactively build relationships with stakeholders, monitor performance against various standards, and drive results to ensure long-term sustainability of the organization. The framework is driven by the Aditya Birla sustainability model which consists of three vehicles for
sustainable growth: responsible stewardship, stakeholder engagement and future proofing, please see figure 2 below.

Figure 2: Aditya Birla sustainability framework. Source: Building sustainable businesses fit for a sustainable world, ABG 2019

By adopting an evidence-based approach we are ensuring rigour and consistency in our processes. The units have to provide details of the systems that they have in place and the resulting performance through photographs, documents and registers uploaded as part of the SAQs (Self-Assessment Questionnaires). Those that rank themselves >80% are reviewed off-site and the highest performers >95% are visited in order to verify the consistency of their results. We have also introduced a series of Assurance Principles to guide the self-assessment and verification process. Domsjö Fabriker was assessed regarding Legal requirements, Occupational Health, First Aid during and WASH (Water, Sanitary and Hygiene) 2018.
During 2017 Domsjö Fabriker was audited and certified according to the international environmental standard ISO 14001:2015. Other implemented standards are ISO 9001 (Quality), ISO50001 Energy and PEFC™ and FSC® standards (Chain of Custody for wood material). All employees have been educated about the standards as well as about environmental issues in general. The working process of the management team has been revised to widen the scope according to the new environmental standard and Aditya Birla sustainability framework. The updated version from 2015 includes a wider scope were some kind of life cycle approach need to be taken into account.

VI. Supply chain, raw material, operations and products

A. Supply chain

We have a responsibility for the planet's resources and how they are used. As an important member of society we want to contribute not only with our sustainable products, but also with a safe and secure workplace. Our sustainability work is a natural part of our business and a significant competitive advantage.
Based on sustainable and traceable forestry, our products have all the qualifications to be a factor in the transition into a sustainable, biobased society in which fossil raw materials and energy sources are replaced by sustainable alternatives.

Together with our stakeholders, we want to make a difference. We want to improve existing operations and create new application fields for the growing forest, thus contributing to reduced environmental impact, increased growth and more job opportunities. Basically all products made from fossil based material can be produced by Domsjö Fabriker. We can refine the renewable forest raw materials into valuable products while also reducing the negative impact that fossil oil has on the environment and climate.

Domsjö Fabriker has over the years transformed and developed into a biorefinery where multiple products using the various components of wood, cellulose, hemicellulose and lignin are produced.

**What is a biorefinery?**

EuropaBio – the European Association for BioIndustries, defines biorefineries as follows:

“Biorefineries exploit all of the elements of biomass, recycling secondary products and wastes of the reaction into valuable products, even producing the very energy which powers the process itself. In this respect, the concept is analogous to a petroleum refinery, where oil is refined into many marketable products including chemicals, energy and fuels. However there is a crucial difference: biorefineries are based on the use of renewable materials as a feedstock whereas today’s petroleum refineries are based on the use of non-renewable materials such as fossil fuels.”

The products from Domsjö Fabriker have different end uses but the mutual properties are that they all contribute in a positive way to less impact on the environment, both locally and globally. Domsjö Fabriker is in the beginning of a textile value chain ending with production of apparel using natural fibres. The products are made from renewable raw material and the processes are designed to minimise the environmental impact of the products along the value chain. Sustainable forestry and “making more from every tree” is crucial to keep this value chain sustainable.

Domsjö Fabriker engage with the value chain through innovation, knowledge sharing, responsible sourcing and use unique processes for production of environmentally sound products from renewable raw material. Customers are supported by providing technical support how to use the products and by understanding customers’ needs now and in the future.

Aditya Birla Group has a supply chain and procurement policy which stresses the importance of using alternative materials and renewable energy, water stewardship, safety, health, respect for human rights and elimination of child and forced labour across the value chain which Domsjö Fabriker is committed to. Domsjö Fabriker uses biobased raw materials to produce its products and heat energy. There is no lack of water where Domsjö Fabriker is located and the quality of the water is good. Health and safety is always on top of the agenda and targets are set and monitored. Chemicals and other materials are mainly purchased from domestic suppliers or from suppliers mainly located in Western Europe, see table 1 on next page.
Table 1: Supply Chain Data

<table>
<thead>
<tr>
<th>Raw material procured</th>
<th>Countries of origin</th>
<th>Type of suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>Sweden, countries in northern Europe</td>
<td>Forest owners and Forest owners associations through Domsjö Fiber AB</td>
</tr>
<tr>
<td>Sulphur</td>
<td>Sweden</td>
<td>Trader</td>
</tr>
<tr>
<td>Chemicals (caustic, lime, etc.)</td>
<td>The Netherlands, Sweden</td>
<td>Producer</td>
</tr>
<tr>
<td>Packaging material</td>
<td>Sweden, Czechia, Slovakia</td>
<td>Producer</td>
</tr>
<tr>
<td>Fuels (diesel, fuel oil etc.)</td>
<td>Sweden</td>
<td>Producer</td>
</tr>
</tbody>
</table>

B. Forest and wood raw material

The main raw material used in the process is wood and originating from the forest. The forest and its products are part of the solution to the climate and environmental issues of our time, as more and more see the opportunities with bioeconomy instead of an economy largely based on fossil raw materials. Through the transition to a resource efficient economy based on renewable raw materials produced through sustainable forestry our collective carbon footprint is reduced. Forest industry products are refined in many different areas and often replace materials and products made from fossil raw materials. In addition to a high degree of refining, important jobs are also created.

There is a clear picture of the conditions necessary for development of a sustainable bioeconomy. The Swedish forest industry is important as the world’s second largest exporter of forest products, but also with great expertise as well as advanced research. Swedish companies are at the very forefront as regards development of new wood and cellulose-based products, such as bioplastics, bio composites, carbon fibre materials and textile fibres. Breakthroughs in the development of chemicals and refined fuels are also imminent.

A prerequisite for a sustainable bioeconomy is increased access to renewable raw materials. Sweden has a long tradition of well managed forestry which has resulted in large areas of forest and a forest that are growing more and more. The Swedish forests are developed instead of being exploited, with harvesting far less than the growth and that guarantees future access. Sweden has more forests than ever with more than 20% of the forest being exempt from consumption for nature conservation reasons.

According to Swedish Forest Industries:

- In Sweden alone, forest covers 70 per cent of the surface. There are 87 billion trees.
- There is now twice as much wood in Sweden as there was 90 years ago.
- One percent of our forest is felled annually. Nonetheless, growth outpaces felling.
- For every tree harvested at least two new are planted.
- Sweden is the world’s third largest exporter of forest-based products.
- 80 percent of our forestry based products are exported.
- The substitution effect of the Swedish forest industry products are equivalent to Sweden’s annual carbon dioxide emissions.
- Environmental and production targets in forestry are brought in line with each other, since the Swedish Forestry Act was updated in 1993.
- Sweden’s forest industry has reduced its emissions by over 60 percent since 2005 and also uses almost no fossil fuels in its processes.
- The forest industry is one of Sweden’s most important business sectors. It directly employs 70,000 people in Sweden.
The annual wood consumption is 1.3 million m$^3_{\text{sub}}$ (solid under bark) of spruce and pine. Most of it originates from northern Sweden but a smaller part is imported from the Baltics and other countries in northern Europe. Domsjö Fiber is responsible for all our wood supply to the biorefinery which is made through contracts with forest owners and forest owners associations nationally as well as internationally. The wood is transported mainly by road but also by sea or rail. The production process results in high quality and environmentally sound products. All wood supplied is under ABG Wood Fibre Sourcing Policy and are considered as FSC Controlled as a minimum and the wood traceability is audited according to Chain of Custody for PEFC™ and FSC® yearly.

A responsible managed forestry is crucial for a sustainable forestry and a sustainable value chain and therefore all incoming wood sources are based on ABG’ Fibre Sourcing Policy and controlled under an audited Chain of Custody according to the requirements in the FSC® and PEFC™ standards. The wood originates from forest land which does not require irrigation, it’s traceable and does not come from any illegal sources. 80-90 % of the wood consumed originates from Sweden and is mainly from local areas. The forestry is nontoxic and does not require agricultural land or irrigation.

“The forest and its products are part of the solution to the climate and environmental issues of our time as more and more see the opportunities with bioeconomy instead of an economy largely based on fossil raw materials. Through the transition to a resource efficient economy based on renewable raw materials produced through sustainable forestry our collective carbon footprint is reduced. Forest industry products are refined in many different areas and often replace materials and products made from fossil raw materials. In addition to a high degree of refining, important jobs are also created.”

Source: [www.domsjo.adityabirla.com](http://www.domsjo.adityabirla.com)

Further, the Aditya Birla Pulp and Fibre Business as a whole has partnered with Canopy, an international non-profit making environmental organization dedicated to the protection of forests and biodiversity. Canopy works with businesses to develop innovative solutions to make their supply chains more sustainable and to help protect the world’s endangered forests. Aditya Birla is working with Canopy on the “Fashion Loved by Forests” campaign. In line with this initiative, Aditya Birla announced its Wood Sourcing Policy in 2015 and works closely with Canopy to ensure that wood from sustainable forestry is used by the Birla Cellulose brand.

C. Operations
The environmental work and the production process have been in focus for many years. Environmental measures in both processes and treatment plants have gradually decreased our environmental impact. We were the first in the world to bleach to the highest brightness without chlorine. Today, we are alone in the world to have a closed-loop bleach plant without any emissions to water.

1. The process
The logs are mainly coming from local areas and transported by trucks. The logs are debarked, chipped and fed into the digesters together with cooking chemicals. The bark is incinerated and provides energy as steam, electric power and district heating. After cooking the cellulose is washed and bleached using only hydrogen peroxide. The bleach plant is the world’s only chlorine free and closed loop bleaching plant. After the bleaching department the bleached cellulose is dried and shipped. The entire process, from tree to finished cellulose bale, takes about 40 hours.
During cooking, hemicellulose and lignin are dissolved. The hemicellulose is fermented and distilled to bioethanol.

The cellulose process also produces cooking chemicals were the main part is used when producing energy and later on recovered in the cooking liquor preparation and recycled again in the process. The other part is used when producing lignosulphonate. The majority of the lignosulphonate is dried and packed in either small or large bags and sold to external markets. In figure 4 the process in Domsjö Fabriker is shown.

Figure 4: The unique process in Domsjö Fabriker

D. Products

Speciality cellulose, lignosulphonate and bioethanol are the main products, see figure 5. The renewable raw material, the company’s commitment to sustainable sourcing of wood and the unique process minimize the products’ environmental footprint.

Figure 5: Domsjö products
a) **Speciality Cellulose**

The specialty cellulose, based on softwood, has proven its excellence during many years in very demanding applications such as pharmaceutical tablets, sausage casings and filaments. The main markets are Europe, Indonesia, India and China. The cellulose from the unique process is tailor-made to meet customers’ requirements. Domsjö Cellulose is bleached in a unique, totally chlorine-free and closed loop bleach plant, resulting in high brightness cellulose. Domsjö Fabriker has a long-term commitment to providing superior cellulose of high quality, expertise and reliability. The production of speciality cellulose during the fiscal year (FY19) was 205,752 tonnes.

b) **Lignin**

The unique process gives a modified lignin, i.e. lignosulfonate. It is used as a dispersant agent or as a binder in various applications such as agrochemicals, animal feed and at oil and gas drilling. The most common application area is admixtures for concrete. The lignin improves the concrete’s flow properties and therefore reduces the need for cement in concrete structures while retaining the strength characteristics. Adding lignin to concrete is a favour to the environment as cement production emits large amounts of carbon dioxide. Estimates show that adding one kilo of lignin to concrete reduces carbon dioxide emissions from cement production by 20 kilograms. The annual lignin capacity at Domsjö Fabriker is 120,000 tonnes, which, if all used in concrete, would reduce the need for cement equivalent to 2.4 million tonnes less carbon dioxide emission from the cement industry. This corresponds to the emissions from more than 600,000 medium sized cars each driving 15,000 km a year. The lignin from our process is dried using biogas from the biological treatment process and shipped to customers in over 60 countries around the world. The production of lignin for FY19 was 89,772 tonnes. The lignin is packed either in small or big bags depending on the market and what kind customer based product the lignin will end up in.

c) **Bioethanol**

The unique cooking process releases hemicellulose as sugar which is fermented in the ethanol plant. In the fermentation process bioethanol is produced. The bioethanol is mainly used as car fuel. The remaining 10 % is used as raw material for production of green chemicals. Ethanol is a good solvent and is therefore also used in many areas like water based paints, pharmaceuticals, perfumes, cleaning products, paints and inks. Some applications for ethanol are as coolant in heat pumps, in screen washer fluid and in the paint industry. Ethanol is an interesting raw material for the chemical industry, as it replaces oil as raw material for different kinds of plastic and chemicals. In the chemical industry’s shift towards more renewable raw materials, ethanol from forest biomass can play an important role. The bioethanol is delivered to a customer on site producing green chemicals. The production of ethanol FY19 was 13,687 tonnes.

d) **By-products**

Domsjö Fabriker also produces by-products. Bark from wood handling and Bioresin together with other reject from the cellulose process, is sold as bio fuel. Carbon dioxide is produced in the bioethanol process and is used when producing carbonic acid. In the biological treatment plant biosludge is produced and that can be used in soil improving material.
VII. Assessment of material topics

During production precautionary actions are always considered and taken to minimize the environmental impact and use of resources. This is also something that is a keystone in the environmental management system ISO14001 to include continuous improvements and a life cycle perspective of the operations and activities. Domsjö Fabriker has a system for collecting, handling and closing deviations regarding environment and health & safety. During 2018 Domsjö Fabriker initiated a project to collect and handle all kinds of non-conformities in a new system to improve the handling further and increase the transparency. The aim is to launch this Q2 2019. The company is also testing the system to see if it is possible to document risk analyses in the same system and by that way have traceability of all actions, send reminders and to close all open actions that have been found.

A. The significance of materiality assessment

The Aditya Birla Group has developed a sustainability model to achieve its sustainability vision. Responsible Stewardship, Stakeholder Engagement and Future Proofing are identified as key components of this framework, and to be practiced by the Group’s businesses. The second step defined by the model is Stakeholder Engagement. The goal for Domsjö Fabriker is to build strong relationships with stakeholders and key technical experts. By doing so it is expected to learn which trends are most likely to affect the businesses in the future and how they might change. In order to succeed, it is vital that materiality assessments are carried out as a part of the stakeholder engagement to allow for identifying priority risks and opportunities linked to the business. This allows Domsjö Fabriker to focus the resources and monitoring on sustainability aspects most relevant to the business and to stakeholders.

B. Process for materiality assessment:

A materiality assessment was carried out during 2018 with representatives from each department including environment, health and safety, process and operations, supply chain, finance and human resources.

The input comes from stakeholder assessment, environmental topics and from earlier materiality assessments. Additional issues identified by the participants were collated and ranked based on the risk assessment according to stakeholder requirements and expectations. In figure 6 the result from the materiality assessment is shown.
Figure 6: The Materiality assessment

C. Summary of Materiality Topics

From the identified topics above the five most important topics were listed; Product quality, Legal conformity, Safe workplace and safe working environment, Attractive workplace and Payment security as input in the Materiality Assessment for Domsjö Fabriker.

Environment

Legal conformity #5
Domsjö Fabriker complies with environmental regulation and invests continuously in improving systems and processes for disposal or treatment of waste and effluents as well as the environmental management. One fine regarding emissions of phosphorous from a landfill outside the mill area were paid during FY19 with the total sum of approximately 25 000 SEK. Domsjö Fabriker exceeded the permit for noise during 2018 and the project that started 2017 to remediate this continues. The focus area “New permit” is handling this issue. We got a new production permit late 2018 with requirements that need investments but also requirements in the meaning of investigations.

Quality (including financial topics))

Payment security #21
This topic is handled through the focus areas; production and quality. Focus on making our own money to secure future investments and improvements.

Product quality and delivery reliability #19
Product quality is one of the focus areas for the mill. Increased focus on quality is a key factor for success.

Social

Safe workplace and safe working environment #26
Domsjö Fabriker believes that healthy and safe employees are vital for operational efficiency and sustenance. The company wants its employees to feel safe to work in the mill, knowing that all their concerns are listened to and addressed at the highest level within the organization. Domsjö Fabriker has a system to handle issues relating to health and safety. Accidents are handled through MTOK
(human, technical, organisation and cultural causes) to prevent that it will happen again. There is a
general target of zero accidents and a target of more than nine or more of reported incidents per
accident.

**Attractive workplace #28**

Domsjö Fabriker provides various benefits to its employees to encourage continued association with
the organization. The company strives to provide a positive experience for the employees throughout
their association with Domsjö Fabriker. It is self-evident to do what is necessary to help its employees
to combine work with personal life. It also supports wellness and social activities.

Materiality assessment is a tool to help the organisation to understand the most important questions
to focus on. The most important material topics are handled through the management review once a
year and corrective action are taken when required.

**VIII. Performance Disclosures of Key Sustainability Aspects**

**A. Assessment regarding Domsjö Fabriker’s operations and Sweden’s environmental quality objectives**

Sixteen environmental quality objectives describe the state of the Swedish environment which
environmental action is to result in.

During the environmental application process Domsjö Fabriker has evaluated what kind of
environment objectives that are affected by its operations, see table 2 on next page.

**Table 2: In what extent the environmental objectives are affected**

<table>
<thead>
<tr>
<th>Objectives that are not considered to or in minor extent affected by Domsjö Fabriker</th>
<th>Objectives (water) that are directly affected by Domsjö Fabriker</th>
<th>Objectives (air) that are directly affected by Domsjö Fabriker</th>
<th>Objectives that are indirect affected by Domsjö Fabriker</th>
</tr>
</thead>
<tbody>
<tr>
<td>A protective ozone layer</td>
<td>A balanced marine environment, flourishing coastal areas and archipelagos</td>
<td>Clean air</td>
<td>Good-quality groundwater</td>
</tr>
<tr>
<td>A safe radiation environment</td>
<td>Zero eutrophication</td>
<td>Natural acidification only</td>
<td>Sustainable forests</td>
</tr>
<tr>
<td>A varied agricultural landscape</td>
<td>Flourishing lakes and streams</td>
<td>Zero eutrophication</td>
<td>Thriving wetlands</td>
</tr>
<tr>
<td>A magnificent mountain landscape</td>
<td>A non-toxic environment</td>
<td>A non-toxic environment</td>
<td>A rich diversity of plant and animal life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A good built environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced climate impact</td>
<td></td>
</tr>
</tbody>
</table>

There are four environmental objectives that Domsjö Fabriker considers as not affected; A protective
ozone layer, A safe radiation environment, A varied agricultural landscape and A magnificent
mountain landscape.
To water it’s mainly nutrients (phosphorous and nitrogen) that effects the objectives. The largest part of the nutrients originates from the feeding of micro bacteria in the biological treatment plant. A lot of focus has been concentrated on minimizing this concentration and the trend is declining. Today the company is investigating if it is possible to build a new biological treatment plant with an even more efficient and environmental friendly process than today.

The water outside Domsjö Fabriker has a long industrial history and emissions from that time can today still be found in sediments and fiberbanks in Örnsköldsviksfjärden and could possibly also affect the quality of the water in general. This is a general situation for many companies within the forest industries that have a long history of operations along the Swedish coast. This is something that are looked at in different projects were the Swedish Forest Industries are one of the initiators.

For environmental objectives to air, the emissions of sulphur dioxide, nitrogen oxide, particles and carbon dioxide are the main parameter that effects the environment. Even if the emissions to air from Domsjö Fabriker affects the objectives no environmental quality standard are exceeded. To air the objectives for good built environment is also affected when it comes to noise and smell. Domsjö Fabriker has started up projects regarding these two parameters and the target is to minimize the emission of them. When it comes to emissions to air there is also a project started regarding securing emission data from the recovery boilers. New positions for measuring air emissions are to be built during 2019 and a traceability check is to be done for the data.

Regarding the objectives for reduced climate impact Domsjö Fabriker has a small impact since the use of fossil fuels are almost negligible and even more reduced during the year by switching from heavy fuel oil 5 to 1. In a life cycle perspective the use of the final products could also contribute to a reduced climate impact since cellulose could replace the more resource-intensive cotton production, lignosulphonate could be used when producing concrete and ethanol could be used as a fuel instead of fossil based fuel.

Regarding the objectives that are affected indirect the quality of groundwater is mainly affected by the historical emissions that have occurred and the sustainable forests are crucial for the long term operations in Domsjö Fabriker.

During the fiscal year, Aditya Birla Group performed an internal audit during a week focusing on legal compliance and compliance regarding internal Occupational Health and First aid standards. The company also scored 100% regarding how the company has been working with safe water, sanitation and hygiene (WASH) at the workplace at an appropriate level of standard for all employees. Domsjö Fabriker was the first site within the group to have scored 100% regarding WASH and also been validated.

**IX. The environmental year - the short version**

During the fiscal year quite a lot of resources were gathered to prepare for the negotiation with the Environmental court and the authorities regarding a new permit for the operations. The negotiation were held at Green room at Domsjö site during October 10th-11th. The permit was received December 10th and included permission to produce 255,000 tonnes of cellulose, 170,000 tonnes of lignin and 25,000 tonnes of bioethanol. Domsjö Fabriker has also the right to receive process water from local industries to the biological treatment plant. In the same permit Domsjö Fabriker was exempted from the BAT limits regarding nitrogen oxides. The mill is waiting for a final decision.
regarding exemption from the BAT limits regarding particles that will come during 2019. The Swedish protection agency has appealed the decision regarding energy permit and that decision will come in connection with the decision above.

The outcome from the permit was a lot of direct requirements but it also resulted in different kinds of investigations that needed to be done. The investigations are related to both emissions to water and air, safety, chemicals and tanks and also to fish and fish health. Some of these investigations will go on during the years to come.

Environmental improvement:

- In the biological treatment plant we have made some smaller improvements to be able to empty the large tanks when needed. We have also continued to optimize the dosage of nutrients.
- The work with installing a Drum Displacer, a washing equipment in the bleach plant, has continued during the year and is planned to start up during 2019.
- Improvements in the evaporation plant has been performed to reduce emission of nitrous gases.
- The building where there were a fire 2017 caused by an external company cutting in material containing chlorate has been dismantled and other equipment/buildings with the risk of containing chlorate has started to be decontaminated.
- The work with reducing noise has continued.

No major environmental incident have occurred during FY19.

X. Environmental responsibilities

A. Emissions, effluents and waste

1. Emissions to water

Domsjö Fabriker monitors effluents and waste to ensure that the environmental requirements are met and does not negatively affect the environment. Water is a prerequisite for the production and only surface water is used. All care is taken to ensure that water is used efficiently and that effluents are monitored. The total water effluents were 26.7 million m³ during FY 19. Biological treatment plant and sedimentation basins are used as wastewater treatment. The treated water is discharged to Moälven (river) and Örnsköldsviks fjärden (narrow coastal inlet connected to the Baltic Sea). The emissions discharged to water are shown in the table below, see table 3 below.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>14,301 tonnes</td>
<td>16,718 tonnes</td>
<td>14,743 tonnes</td>
<td>13,648 tonnes</td>
</tr>
<tr>
<td>TSS Suspended</td>
<td>1,062 tonnes</td>
<td>1,192 tonnes</td>
<td>851 tonnes</td>
<td>815 tonnes</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>180 tonnes</td>
<td>120 tonnes</td>
<td>108 tonnes</td>
<td>132 tonnes</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>27 tonnes</td>
<td>19 tonnes</td>
<td>12 tonnes</td>
<td>14 tonnes</td>
</tr>
</tbody>
</table>

In 2016 a third bioreactor of equal capacity to the existing bioreactors was taken into operation. It has now been running during two years and a lot of the work to optimise the reduction rate has been
focusing on nutrients, both phosphorous and nitrogen. The results show a big improvement on the emissions of nutrients, mainly due to improved control of nutrient feeding.

During 2018 the project regarding a new Drum Displacer Washer in the bleach plant has continued. The plan is to have this in place and in use during 2019. This would lead to more efficient washing of the pulp.

2. Effluents to water

Surface water from Moälven is the main source of water used in the process. In addition water is procured from the municipality for drinking, bath and showers. The total water usage during FY19 was 26.7 million cubic meters. The water is reused and recirculated at different stages in the production process. The Moälven River has enough water and no negative impact is known as result of our water withdrawal from the river, see table 4 below.

Table 4: Water sources by type

<table>
<thead>
<tr>
<th>Water source</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>River</td>
<td>24.7 M m³</td>
<td>25.6 M m³</td>
<td>24.8 M m³</td>
<td>26.7 M m³</td>
</tr>
<tr>
<td>Municipality</td>
<td>39.6 m³</td>
<td>30.1 m³</td>
<td>37.3 m³</td>
<td>39.8 m³</td>
</tr>
<tr>
<td>Total</td>
<td>24.7 M m³</td>
<td>25.6 M m³</td>
<td>24.9 M m³</td>
<td>26.7 M m³</td>
</tr>
</tbody>
</table>

3. Emissions to air

Sulphur dioxide (SO₂), nitrogen oxides (NOx) and particulate matter are released from the process to air mainly from the recovery boilers. The lignin dryers and some other sources cause minor emissions. To decrease emissions to air, flue gas scrubbers and electrostatic precipitators are since many years in use. An important part of the cleaning processes is that heat is recovered and used in the process. During 2016, a new gas measurement device was installed. It showed higher emission levels than the old one and therefore measurement results are now more correct. During FY17 additional nozzles for exhaust gas cleaning were installed in both recovery boilers as the systems had shown to be undersized. The work to optimise the equipment to minimise the emissions of sulphur dioxide continuous. During 2018 a project regarding new positions for measuring emissions to air was started. The target is to have them in place during Q2 2019. Table 5 shows the emissions to air.

Table 5: Air emissions by type

<table>
<thead>
<tr>
<th>Type of emission</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter *</td>
<td>133 tonnes</td>
<td>55 tonnes</td>
<td>160 tonnes</td>
<td>199 tonnes</td>
</tr>
<tr>
<td>SO₂ **</td>
<td>196 tonnes</td>
<td>472 tonnes</td>
<td>563 tonnes</td>
<td>750 tonnes ***</td>
</tr>
<tr>
<td>NOx **</td>
<td>367 tonnes</td>
<td>450 tonnes</td>
<td>448 tonnes</td>
<td>515 tonnes</td>
</tr>
<tr>
<td>CO₂ (renewable)</td>
<td>558,792 tonnes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂ (fossil)</td>
<td>2,343 tonnes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Uncertain dust measurements, spot-check, ** New devices installed for measuring SO₂ and NOx from autumn 2016, *** From FY19, more emission sources included in the total figure

The quantity and content of emissions to air is monitored and possibilities to reduce emissions through various initiatives are continuously going on. The total direct greenhouse gas, GHG, emissions during FY19 amounted to 3,452 tCO2e (tonnes of carbon dioxide equivalent) due to consumption of furnace oil, LDO, diesel and petrol, see figure 7. There are no emissions from furnace oil under FY19 because start-fuel for the boilers were changed to LDO in the end of February 2018, see figures 7 on next page.
The indirect emissions are due to electricity and steam purchased. In FY19 total indirect emissions were 18,702 tCO$_2$e, see table 6.

Table 6: Sources for indirect emissions to air

<table>
<thead>
<tr>
<th>Source of Scope II Emissions</th>
<th>Emission tCO$_2$e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity purchased from grid (non-renewable)</td>
<td>9,621</td>
</tr>
<tr>
<td>Steam purchased from Övik Energi AB (renewable)</td>
<td>9,082</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18,702</strong></td>
</tr>
</tbody>
</table>

The GHG emission (Greenhouse Gas Emissions) per tonne of pulp produced during FY 19 was 0.11 tCO$_2$, including direct and indirect emissions.

GHG emissions are reduces through product applications. For example, lignin can be used as an additive in concrete manufacturing and acts as a water reducer while maintaining the strength of concrete structure. It is calculated that using 1 kg of lignin in concrete manufacturing results in reduction of CO$_2$ emissions by 20 kg, due to reduced demand of cement. Currently Domsjö Fabriker delivers approximately 90,000 tonnes per year to the concrete additive business, which leads to 1.8 million tonnes reduction in global CO$_2$.

4. Solid waste

The type and amount of waste is monitored in order to ensure that the waste is handled and treated according conditions set by the authorities. The amount of handled and disposed waste was in total 12,367 tonnes in FY19. The categories of waste generated as well as treatment and handling methods in FY19 are summarized below in table 7.
### Table 7: Waste generated by quantity, handling and treatment methods in FY18

<table>
<thead>
<tr>
<th>Type of waste</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery</td>
<td>5,709 tonnes *</td>
<td>5,163 tonnes *</td>
<td>9,076 tonnes</td>
<td>8,810 tonnes</td>
</tr>
<tr>
<td>Recycled</td>
<td>681 tonnes *</td>
<td>758 tonnes *</td>
<td>320 tonnes</td>
<td>750 tonnes</td>
</tr>
<tr>
<td>Hazardous</td>
<td>135 tonnes</td>
<td>352 tonnes</td>
<td>440 tonnes</td>
<td>156 tonnes</td>
</tr>
<tr>
<td>Landfill</td>
<td>2,209 tonnes</td>
<td>2,832 tonnes</td>
<td>2,721 tonnes</td>
<td>2,651 tonnes</td>
</tr>
</tbody>
</table>

*The figures in the sustainability report FY16 and FY17 were switched between ‘recovery’ and ‘recycled’.*

### B. Energy

Domsjö Fabriker is a biorefinery, which means that renewable raw materials (biomass) generates many products as well as meeting energy requirements. Work is continuously done to be self-sufficient regarding energy by reducing the energy consumption and producing energy from renewable sources. The work is done according to ISO 50001. Targets for different individual processes are set and monitored.

Work is continuously going on to use energy in the most efficient way. Energy consumption is measured and monitored on a regular basis and work is done to reduce it further. The total steam production amounted to approximately 1,004 GWh. Additional purchased electricity during the year amounted to 238 GWh and purchased steam from a nearby industry was 152 GWh.

In our biological treatment plant, bacteria break down organic materials into e.g. biogas. Our facility is one of the largest producers of biogas in Sweden. The biogas is recovered and used as energy source for lignosulphonate drying and generation of electricity and steam. See table 8 for fuel consumption.

### Table 8: Fuel consumption by type

<table>
<thead>
<tr>
<th>Fuel Consumption by type</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased fuels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnace Oil and Light Diesel Oil</td>
<td>14.8 GWh</td>
<td>14.1 GWh</td>
<td>15.0 GWh</td>
<td>9.4 GWh</td>
</tr>
<tr>
<td>Sulphur</td>
<td>39.6 GWh *</td>
<td>38.8 GWh *</td>
<td>38.9 GWh</td>
<td>41.5 GWh</td>
</tr>
<tr>
<td>Own-produced fuels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biogas</td>
<td>50.3 GWh</td>
<td>52.2 GWh</td>
<td>46.3 GWh *</td>
<td>47.4 GWh</td>
</tr>
<tr>
<td>Black Liquor Solids</td>
<td>1,052 GWh</td>
<td>1,151 GWh</td>
<td>1,245 GWh</td>
<td>1,248 GWh</td>
</tr>
<tr>
<td>Total for production</td>
<td>1,157 GWh</td>
<td>1,256 GWh</td>
<td>1,345 GWh</td>
<td>1,346 GWh</td>
</tr>
</tbody>
</table>

*) Updated figures for FY16, 17 and 18.

The energy consumption was 6.5 MWh per tonne of pulp produced. Several initiatives to reduce energy consumption, particularly by optimizing steam consumption, have been carried out. Around 96% of the energy consumption originates from renewable fuels, see figure 8. Fewer process disturbances FY19 led to lower use of oil and higher use of sulphur.
Several improvement projects have been started in FY 19 where we could see big potential to reduce energy consumption in especially drying department. Hopefully we could see effects of that in FY20. Finished projects have reduced energy consumption by approximately 2148 MWh. Most of that reduced energy consumption were due to an installation of a new start up fuel for the recovery boilers. Light Diesel Oil (LDO) is liquid in normal outside temperatures and therefore do not need to be heated with steam to be in liquid-stage as furnace oil. Some old lightning equipment were switched out to more energy efficient lights. These actions have resulted in savings of 21 GJ of steam and electricity per day. This steam and electricity saving in combination with 2 % increased production of cellulose has decreased the specific steam and electricity consumption per tonne of cellulose by 6 % over the last five years. See table 9 for energy saving projects.

Table 9: Energy saved by energy reduction projects

<table>
<thead>
<tr>
<th>Scheme/Project</th>
<th>Source of energy savings</th>
<th>Energy savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>New start fuel for recovery boilers</td>
<td>Boilers, steam</td>
<td>1,997 MWh</td>
</tr>
<tr>
<td>More energy efficient lightning</td>
<td>Maintenance, electricity</td>
<td>151 MWh</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,148 MWh</td>
</tr>
</tbody>
</table>

C. Materials

Material consumption is monitored and initiatives to optimize material use efficiency are encouraged. Except from water the main raw materials are wood, sulphur and sodium hydroxide. The table below shows the quantity of material used by type for production of speciality cellulose, lignin and bioethanol during FY18, see table 10 below. All chemicals have to be approved before they can enter the mill. Before approval an assessment is done regarding environmental and health & safety matters.

Table 10: Material used at the mill by type

<table>
<thead>
<tr>
<th>Raw Material</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>1.3 M m³sub</td>
<td>1.2 M m³sub</td>
<td>1.2 M m³sub</td>
<td>1.2 M m³sub</td>
</tr>
<tr>
<td>Sulphur</td>
<td>6,197 tonnes</td>
<td>6,625 tonnes</td>
<td>5,192 tonnes</td>
<td>5,597 tonnes</td>
</tr>
<tr>
<td>Semi-manufactured goods or parts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphur dioxide</td>
<td>18,631 tonnes</td>
<td>19,976 tonnes</td>
<td>18,375 tonnes</td>
<td>16,590 tonnes</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>31,433 tonnes</td>
<td>31,362 tonnes</td>
<td>30,983 tonnes</td>
<td>27,324 tonnes</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>14,089 tonnes</td>
<td>15,544 tonnes</td>
<td>12,978 tonnes</td>
<td>11,257 tonnes</td>
</tr>
</tbody>
</table>
XI. Economic responsibilities
Sustainable economic performance is critical for business continuity, maintaining healthy relationships with stakeholders and creating a positive socio-economic impact in the region in which Domsjö Fabriker operates. The economic value generated and distributed by Domsjö Fabriker in FY19 is as in table 11.

Table 11: Economic value generated and distributed (KSEK)

<table>
<thead>
<tr>
<th>Economic Value Generated</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>2,344,417</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economic Value Distributed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Costs</td>
<td>1,904,786</td>
</tr>
<tr>
<td>Employee benefits and wages</td>
<td>293,895</td>
</tr>
<tr>
<td>Payment to providers of capital</td>
<td>15,499</td>
</tr>
<tr>
<td>Payment to governments</td>
<td>2,327</td>
</tr>
<tr>
<td>Community Investments</td>
<td>125</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economic Value Distributed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic value generated minus value distributed</td>
<td>127,785</td>
</tr>
</tbody>
</table>

More information regarding financial reporting can be found in the more comprehensive financial report.

XII. Social responsibilities

1. Employment
Various benefits to the employees are provided to encourage continued association with the organization. Examples of benefits to all employees, regardless of full-time or temporary, include life insurance, disability related benefits, retirement related support, paid holidays (additional to regular leaves), parental leave, marriage leave and bereavement leave. Further full time employees receive benefits related to healthcare services. The company believes in encouraging health and wellness amongst its employees.

In FY19, Domsjö Fabriker had a total of 393 permanent and 11 temporary employees. 27 new permanent employees were recruited and 44 permanent employees left, mainly due to retirement, see also figure 9. All employees employed by Domsjö Fabriker have a labour contract and a collective agreement in accordance with Swedish laws.

Figure 9: Percentage of permanent employees by gender and age.
a) Wellness

Many wellness activities have been organised during the year. The employees have been offered to attend dance courses, skiing classes as well as running events. Free lunch seminars have also been offered with a variety of wellness themes.

As in previous years, access to free exercise activities at Brux Sports Centre to all our employees is offered, an opportunity that many use during lunches as well as evenings. It has also been quite popular for the employees to use the benefit of free swimming at Örnsköldsvik swimming hall.

b) Training and Education

Domsjö Fabriker regards the employees as its greatest asset and works closely with the employees to attend to their needs of continuous development. An introductory program is developed for each new employee in consultation with their respective managers. The company also conducts role-specific trainings on health, safety and environmental topics. A goal is 2 % of the employees' working time is used for training.

In FY 19 training of permanent employees was 1.6 % of total man-hours which is below normal level for a year. Some of the mandatory trainings for the employees include specific health, environment and safety related topics. Apart from this, introduction trainings for new employees, as well as specific trainings for particular job requirements (essential skills for performing duties), are mandatory. Each manager is responsible for ensuring that the employees have the right type of as well as sufficient training. To make it easier to manage, HR has put great effort to create a training matrix and special proficiencies for each position. By using this system the education need is visualized and training programs can be coordinated between HR-department and managers.

2. Occupational Health and Safety

Healthy and safe employees are vital for operational efficiency and sustenance. It is important that employees feel safe at work in Domsjö Fabriker, knowing that all their concerns are listened to and addressed at the highest level within the organization. The company works closely with employees to have optimum representation in various occupational health and safety committees in order to ensure that everyone is heard and solutions are developed to provide a safe working environment to all staff.

Indicators related to safe working environment are closely monitored. The occupational health, safety, environment and quality department, HSEQ, monitors and develops systems to ensure a safe working environment. Every accident, first aid, near miss incident and safety observation is documented and reasons, consequences and possible actions are investigated in order to prevent future incidents. Safety audits are conducted every quarter and risk analysis and assessments are carried out periodically. No employee or contract worker faced any fatalities during FY19. The injury rate has improved compared to previous results, see table 12.
Table 12: Safety at work

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Quantity FY16</th>
<th>Quantity FY17</th>
<th>Quantity FY18</th>
<th>Quantity FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTIFR (Lost time incidents frequency rate)*</td>
<td>15.5</td>
<td>15.0</td>
<td>7.4</td>
<td>18.4</td>
</tr>
<tr>
<td>Lost Time Injuries</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Lost days</td>
<td>292.1</td>
<td>115.2</td>
<td>67.2</td>
<td>113.2</td>
</tr>
<tr>
<td>Safety indicator</td>
<td>3.9</td>
<td>8.6</td>
<td>7.5</td>
<td>5.0</td>
</tr>
</tbody>
</table>

* This calculation is made by the following formula; (1,000,000 / number of hours worked in 12 months) x number of accidents in 12 months.

* Safety indicator = (Near hit+risk observation)/(lost time accident+zero accident)

Domsjö Fabriker works systematically with working environment according to AFS 2001:01 as well as the Safety management system according to Seveso Directive (Directive 2012/18/EU). The formal agreement with trade unions comprises health and safety topics including regulation of work hours schedule, leave for medical appointments, agreement on sick leaves, rights to holidays and contribution to good order and safety.

3. Public relationship events

a) India Unlimited

Every year, the India Unlimited event takes place in Stockholm. Organizers are the Indian Embassy with the goal of focusing on cooperation between the countries. Since Domsjö Fabriker is the largest Indian acquisition in Sweden, it is natural that Domsjö Fabriker is an important part and sponsor of India Unlimited.

b) Sponsorship

Domsjö Fabriker is a proud sponsor of Örnsköldsvik Gymnastics Club and its talented gymnasts. They represent Örnsköldsvik on a high international level. MoDo Hockey men’s and women’s ice hockey teams are also sponsored and the seats in Fjällräven Arena are frequently used for representation. Occasionally seats are available and the tickets are being raffled amongst interested employees, with the privilege to bring also one family member to the game.

In addition a number of smaller local sports associations, with focus on the ones where employees are involved, are sponsored. No individual sponsorships are given, but to a great variety of associations and teams as well as some cultural sponsoring. Domsjö Fabriker has been a sponsor of the Swedish Cancer Society for many years.

XIII. Stakeholder Engagement

“Gain knowledge to understand how fast ‘External factors’ will change and when disruption will occur as we approach a two degree world.” Source: http://sustainability.adityabirla.com

1. Our approach to Stakeholder Engagement:

“Together with our stakeholders, we want to make a difference. We want to improve existing operations and create new application fields for the growing forest, thus contributing to reduced environmental impact, increased growth and more job opportunities. The products we produce replace all products that would otherwise be produced by fossil oil. We can refine the renewable forest raw materials into valuable products while also reducing the negative impact that fossil oil has on the environment and climate.” Source: http://www.domsjo.adityabirla.com
Aditya Birla Group has identified stakeholder engagement as one of the key aspects of its sustainability strategy. The Group has a stakeholder engagement policy and a technical standard to incorporate stakeholder engagement into governance. The aim is to develop a relationship of trust, communication, transparency and common interest with key stakeholders. During the management meetings the expectations and requirements from our stakeholders are discussed.

2. Overview of relationships with key stakeholders:

a) Customers
Domsjö Fabriker works closely with customers to identify their needs (short-term and long-term) through customer surveys and efficient feedback. The R&D Team (DomInnova) drives innovation by encouraging, capturing and implementing ideas for new products. Product development is often done together with existing and potential customers as well as in networks with relevant companies, institutes and universities.

Customers are involved by a number of means like one-to-one meetings, customer surveys, customer audits at our mill, product development initiatives and a regular dialogue on product delivery and logistics.

To be able to create sustainable businesses Domsjö Fabriker has an anti-corruption policy regarding personnel representing Domsjö Fabriker in contact with different stakeholders.

The Sustainable Apparel Coalition has developed the Higg Index as a suite of self-assessment tools for companies in the value chain for textile products, for identification of environmental and social sustainability hot spots and improvement opportunities. The Higg Index is a starting point of engagement, education, and collaboration among stakeholders in advance of more rigorous assessment efforts. Domsjö Fabriker applies the Higg Index to its operations and collaborates with customers in the textile and apparel industry, making use of this tool.

b) Owners, board of directors, local management
The owners requirements and expectations are that the company is a safe place to work at, are a leader when it comes to sustainability, efficiency, follows decided financial budget, and works according to the company values; Integrity, Commitment, Passion, Seamlessness and Speed.

c) State, authorities, local community
Domsjö Fabriker is located in Örnsköldsvik, Sweden. The local community is engaged through:

- Transparent communication through media to inform local communities on any changes in the business, anything from temporary noise to new production lines and products.
- Consultations with local residents whenever a change in the business requires a notification according to Seveso Directive or permit under the Environmental Code.
- Support programs for schools.
- Process of attending to complaints from local bodies.
- Meetings with municipality administration and other authority bodies.
- Engagement in the local Chambers of Commerce.
- Engagement in the Örnsköldsvik Industry Group in cooperation with other local industry related companies.
- Engagement in the Swedish Forest Industries association
- Cooperative relation with Företagsutbildarna (business trainers)
Domsjö Fabriker strictly adheres to Swedish laws and maintains a healthy relationship with the government authorities through the following means:

- Yearly visits by Government authorities to review our environmental, health and safety performance and compliance with agreed conditions.
- Continuous dialogue with authorities regarding the operations.
- Publish reports and statistics regarding performance status of the plant to relevant authorities.

During FY19 Domsjö Fabriker received a new environmental permit for its operations.

d) Local citizens

Local citizens are important when it comes to external feedback, mostly environmental issues like odour and noise. When there is a complaint the company always tries to investigate, remediate if necessarily and communicate the results back the person who has made the complaint.

e) Now employed and future employees

Employees are the company’s greatest asset. Domsjö Fabriker strives to create a working environment where employees are passionate to come to work each day. Consistent and long-term investments in the enhancement of skills and career development are done.

Domsjö Fabriker engages with the employees in various ways such as employee satisfaction surveys, Working Environment Committee meetings where employees are represented by unions, family days, health activities, art club, vacation foundation and staff foundation.

The youths are potential future colleagues. Therefore it is important to be active with different school contacts. Interns from both upper secondary schools and universities are welcome and are taken care of by educated mentors.

Domsjö Fabriker is also active in the national project “Skogen i Skolan” (“Forest at School”) with focus on education and information for students as well as teachers and future teachers. One appreciated activity is the “Forest days” organised together with other forest industries. The students spend one day in the forest where they are taught about sustainable forestry as well as forest based products of today and tomorrow. Together with other local participants, Domsjö Fabriker co-hosts a nature and technology event for students. To this annual event all students in the municipality are invited to work on a technical task and then participate in a one day event to present and compete with their projects.

The cooperation continues with two classes from Sörliden upper school. Together with the technology and management consultant Knightec, students are visited a number of times during the year and a contest is held where the winning group gets a short summer job at both companies. The purpose of the collaboration is to increase students’ interest in technology as well as to increase long-term ethnic and cultural diversity.
f) **Banks and business partners**

General requirements regarding financial information, transparency and openness.

g) **Suppliers**

Demanding quality regarding information (right type in right time), payment according to agreements, transparency and openness and a safe working place. Increasing requirements regarding waste handling and protection equipment.

h) **Partners within innovations and development**

Important to complete already started projects and to be involved in development projects to push our products towards even more sustainable markets.

i) **Neighbouring industries**

Collaboration with neighbouring industries and working together towards common goals is important. Contacts with industrial neighbours are done in association meetings discussing safety, environment, logistics and community emergency services issues and jointly held emergency exercises.

Domsjö Fabriker is together with neighbouring industries parts of an energy cluster. It secures a stable production and takes advantage of every member’s possibility to produce and consume different types of renewable energy. Even the local community gets a part of this for electricity and district heating.

XIV. **Future proofing**

“Modify our strategic business plan to include additional mitigation and adaptation to changes in the ‘External factors’.” Source: http://sustainability.adityabirla.com

A. **Risks and opportunities for cellulose business**

Future proofing is the process of anticipating strength, weaknesses, opportunities and threats that might become more significant in the future as well as developing systems and processes to address these in advance. Future proofing is a key pillar of the sustainability strategy. The following are key risks and opportunities addressed as part of the future proofing efforts, see table 13 on next page.

**Table 13: Summary of risks and opportunities**

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<th>Risk / Opportunity</th>
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<th>The response</th>
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<td>Dependency on wood raw material</td>
<td>The pulp industry is dependent on forests for its raw material. Ensuring a continuous supply of raw material is essential for the business. However, this is only possible if forests are managed in a sustainable manner and forest resources are not reduced over time. Today there is an intensified competition of wood in the area.</td>
<td>Domsjö Fabriker has a certified Chain of Custody according to PEFC™ and FSC® and wood is only procured from legal and traceable sources. The biorefinery is situated nearby sustainably managed forests but to meet coming competition there is a need to expand the supply of wood. In addition a constant work to optimise material usage, including wood, is going on to generate more value.</td>
</tr>
<tr>
<td>Energy intense operations</td>
<td>Pulp production is an energy intense process and there are risks of energy</td>
<td>Domsjö Fabriker is almost self-sufficient regarding energy as about</td>
</tr>
<tr>
<td>Risk / Opportunity</td>
<td>Present / Future scenario</td>
<td>The response</td>
</tr>
<tr>
<td>--------------------</td>
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</tr>
<tr>
<td><strong>Risk / Opportunity</strong></td>
<td>costs impacting bottom line as well as increasingly stringent regulations due to climate change.</td>
<td>96 % of the primary energy consumption comes from renewable fuels, i.e. black liquor, solids and biogas. Continued efforts are going on to explore how the share of fossil fuels in the energy mix can be further decreased. During the fiscal year the company has finalized the change from heavy fuel oil 5 to 1. In addition, opportunities to reduce energy usage through efficiency initiatives are ongoing. Optimizing systems for heat recovery from waste heat generated in the manufacturing process, e.g. heat exchangers for process streams, is ongoing. Due to the cold climate Domsjö Fabriker is less dependent on cooling systems.</td>
</tr>
<tr>
<td><strong>Water intense operations</strong></td>
<td>The pulp industry is a water intense industry. To ensure a continuous supply Domsjö Fabriker needs to be aware of the recipient capacity.</td>
<td>There are ample water resources, which are not impacted by the production. The condition of the recipient water is followed by a thorough inspection program and by continuously monitoring effluents.</td>
</tr>
<tr>
<td><strong>Regulations related to effluents, emissions and waste discharge</strong></td>
<td>Pulp production requires large quantities of water and cooking chemicals. Chemical recovery causes emissions to air. There is a need to minimize the environmental impact of emissions to air and water effluents as well as of waste generation, but also to prepare for any future changes in regulations. Existing regulations (Water directive) regarding how much an activity can affect the water source without worsen the classification of the water source.</td>
<td>Water usage, emissions to air and water effluents are continuously monitored. The aim is to maximise recovery in the process. Due to a unique closed loop bleach plant, water consumption is minimized in the process. Chemicals are as far as possible recovered in the process. There is a constant strive to minimize waste by turning the wood components cellulose, hemicellulose and lignin into products.</td>
</tr>
<tr>
<td><strong>Human resources management</strong></td>
<td>A large work force is required for the biorefinery. There is a steady need for new employees for retirement replacements.</td>
<td>Domsjö Fabriker is involved in a number of local initiatives. One example is vocational training programs with students from local schools. There is a strong in-house learning and development program to ensure continuous learning and knowledge transfer among the employees.</td>
</tr>
<tr>
<td><strong>Utilising our sulphite process</strong></td>
<td>Thanks to the unique sulphite process, Domsjö Fabriker is able to produce a great spectrum of bio-based products.</td>
<td>Domsjö Fabriker continues to work on product innovations, as well as process innovation for more efficient use of existing resources.</td>
</tr>
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</table>
Apart from addressing these risks and opportunities, Domsjö Fabriker emphasizes innovation to identify solutions for future challenges, building a better tomorrow already today.

1. **Innovation**

Development and innovation are central to the organisation and part of the culture. Our R&D Team DomInnova acts as an innovation catalyst with the task to encourage capture and process ideas coming both from internal and external contacts. Development, innovation, and to some extent research, is conducted with the aim to increase the value created by the cellulose product but also for lignin and hemicellulose based products. DomInnova has developed an external network of companies, universities and institutes giving access to advanced laboratory, pilot equipment and analytical instruments. Important partners are MoRe Research and RISE but DomInnova also works closely with research teams within the Aditya Birla Pulp and Fibre business.

The Aditya Birla Group has several facilities dedicated to research for pulp and fibre products and applications along the value chain of the business. These research centres are hubs of innovation, contributing to technological advances that bring versatility to the products and their applications and are important assets for future proofing of the business.
## XV. GRI content Index

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