

# SUSTAINABILITY REPORT

2017-18 Polyplex Corporation Limited

### What is covered in the **Report?**

#### Our approach to Sustainability Report

Polyplex has prepared its second Sustainability Report for the FY 2,017-18. With this Polyplex is embarking on a journey to assess its performance from the sustainability lens. The objective of the Sustainability Report is firstly, to disclose the Environmental, Social and Governance performance to its stakeholders and secondly, to set benchmark for each sustainability indicator with improvement and intervention areas.

#### Our Principle for Defining Report Content and Context

This report has been prepared as per the Global Reporting Initiative (GRI) Standards'In Accordance - Core'framework along with its Containers and Packaging Disclosure. It includes quantitative and qualitative information with respect to the key sustainability aspects for Polyplex that have been arrived at through a process of materiality assessment. This report is prepared by engaging with the key stakeholders of the Company. For which key internal stakeholders of the organization were identified and the engagement with them was undertaken through workshops and one to one interaction.

#### **Scope and Boundary**

The sustainability aspects include the organization's economic performance, corporate governance structure, environment management initiatives, employee engagement programmes, community contributions and endeavor to ensure the safety of its customer and

people. Polyplex's key policies, strategies and systems under the various sustainability aspects are also detailed in the report under the respective sections.

The sustainability report has been drafted such that the organization can track & monitor its sustainability performance through systemic changes and continuous engagement with the key stakeholders.

### The reporting boundary for this report comprises of the following business units of Polyplex:

- 1. Polyplex Corporation Limited, Khatimaand BazpurOperations, INDIA
- 2. Polyplex (Thailand) Public Company Ltd, THAILAND
- 3. Polyplex Europa Polyester Film Sanayi VeTicaretAnonimSirketi, TURKEY
- 4. Polyplex USA LLC, USA

#### Frequency of Sustainability Reporting

We will be reporting on biennial basis on key sustainability performance with the aim to receive feedback from internal and external stakeholders in a timely manner and integrate them within our operations and systems.

The sustainability report can be accessed on our websites at https://www.polyplex.com/ and https://www. polyplexthailand.com/.

For any further queries, clarifications, feedback or suggestions related to this report please reach out to Polyplex at sustainability@polyplex.com

### **Table of Contents**

What is covered in the Report?	2
ABBREVIATIONS	5
Message from CEO	6
1. About Polyplex	8
1.1. Overview	8
1.2. Global Presence	
1.3. Our Products	
1.4. Research and Development	
1.5. Product Sustainability	
1.6. Enhancing Customer Experience	
1.7. Awards, Certifications and Membership	
2. Stakeholder Engagement and Materiality Assessment	
2.1. Connecting with our Stakeholders	
2.2. Identification of Stakeholders	
2.3. Stakeholder Engagement Framework	
2.4. Materiality assessment	
3. Corporate Governance	
3.1. Board of Directors	
3.2. Risk Management	
3.3. Internal Control Systems	
3.4. Policies	
4. Our Economic Performance and Strategic Leadership	
4.1. The Global Scenario	

4.2. Financial Impact of Climate Change	
4.3. Snapshot of Economic Performance	
4.4. Strategic Initiatives	
5. Environmental Stewardship and Energy Management	
5.1. Materials Management	
5.2. Energy Management	
5.3. Water Management	
5.4. Emissions	43
5.5. Waste Management	44
5.6. Biodiversity	45
5.7. Best Practices	45
6. Our Workforce	47
6.1. Our Employees	48
6.2. Training and Skill Development	49
6.3. Performance and Career Development	
6.4. Employee Policies and Schemes	51
6.5. Activities for Employee well being	51
6.6. Integrity and Compliance	54
7. Workplace Safety	55
7.1. Health and Safety Committee	55
7.2. Workplace Safety and Management	55
8. Our Community Initiatives	60
8.1. Contributing towards the community	60
8.2. Overview of Polyplex's CSR initiatives	60
9. GRI Content Index	64

# **ABBREVIATIONS**

BioPET	Biodegradable PET Film
BOPET	Biaxial Oriented PET Film
ВОРР	Biaxial Oriented Polypropylene Film
BRC	British Retail Consortium
COD	Chemical Oxygen Demand
СРР	Cast Polypropylene Film
CSR	Corporate Social Responsibility
EG	Ethylene Glycol
ETP	Effluent Treatment Plants
FDA	Food and Drug Administration
GHG	Green House Gases
GRI	Global Reporting Initiative
IFC	Internal Financial Control
ISO	International Organization for Standardization
LED	Light-emitting diode
MEG	Mono Ethylene Glycol
PCL	Polyplex India Operation
PE	Polyplex Europa Polyester Film Sanayi VeTicaretAnonimSirketi, Turkey
PET	Polyethylene terephthalate
РР	Polypropylene
РТА	Purified Terephthalic Acid
PTL	Polyplex (Thailand) Public Company Ltd, Thailand
PU	Polyplex USA LLC, USA
PVC	Polyvinyl chloride
rPET	Recyclable Polyethylene terephthalate
SDG	Sustainable Development Goals
TPL	Transparent Paper Ltd.
UV	Ultraviolet

### Message from CEO



#### Dear Stakeholders,

Polyplex is proud to be the sixth largest global integrated manufacturer of Polyester (PET) film by capacity with manufacturing and distribution operations in six countries (India, Thailand, Turkey, USA, Netherlands and an upcoming plant in Indonesia), along with additional warehouses in Poland, Spain, China, Germany, Italy and Mexico. We began our journey 35 years ago and have grown from single unit operation at Khatima in India to a multinational company. The products we make touch the lives of nearly every person due to their inherent versatility and wide variety of applications.

The Company remains financially strong and confident about the future of the industry. In 2018, we continued to enhance our product portfolio and focus on operational effectiveness, which in turn delivered Strong and geographically balanced revenue growth besides demonstrating. Higher sustainability in earnings in line with our strategy. The Company's unique model of on-shore, off-shore and near-shore business locations in combination with its other strengths like customer relationship, access & intimacy and wide offering of specialty, innovative and valueadded products has been the key enabler for outperformance and earnings stability.

There have been growing concerns, in general, on the usage of single use plastics throughout the world. Flexible packaging which is multi layered plastic constitutes less than 10% of total plastic consumption globally and PET film in particular is less than 2%. Flexible packaging is considered superior on various sustainability criteria vis-à-vis traditional packaging alternatives due to its inherent functional properties. The issue is of its recyclability arising from various challenges and lack of efficient and economic collection mechanism for post-consumer waste. We are working towards it with the rest of the industry to find effective solutions. A step in this direction was setting up a recycling company in Thailand which converts post-industrial and post-consumer PET waste into PET resin which finds use in various industrial and packaging applications. Our R&D efforts remain directed towards developing solutions which conform to our commitment to reducing the impact of plastic waste on the environment.

The Company has been continuously involved in developing sustainable products and sustainable processes, as an endeavor to contribute effectively towards global initiatives around sustainability and circular economy. The Company has successfully developed the Green PET film with a significant proportion of bio sustainable inputs and energy sources. The Company has developed and optimized "chemical recycling" process for manufacturing Sarafil rPET Polyester film with Post consumer Recyclate content and is in advanced stage of trials for developing Biodegradable PET and Biodegradable sealant layer options.

We are continuously improving the efficiency of our operations through targeted measures to reduce specific energy consumption, thereby cutting down the greenhouse gas (GHG) emissions. We have also used metallized barrier PET film as a substitute for Aluminium foil in food packing. We have reduced wast generation through the re-use of process trims and switched to LED lighting across plants. We have also developed PET film based monomeric structure for use as single layer for some packaging applications.

Regulatory compliance is a key consideration for the Company and we stringently conform to the relevant USFDA and EC directives for food packaging applications.

The caliber and dedication of the employees throughout our organization is a key to the successful delivery of our strategy and a key priority is to provide a safe working environment for them. Hence, we have integrated health and safety into our business management processes and undertaken several initiatives over the years throughout our operations. We also strive to develop and maintain good relations with the communities around our factories to promote sustainable business practices.

For more than three decades, Polyplex has focused on three key pillars - Passion, Discipline and Long-term. As a result, we have been able to outperform the Industry and enhance value for stakeholders. I would like to express my gratitude to all stakeholders including business partners and employees for their contribution and support. We will strive to ensure that we increase the depth of engagement with each of you.

Very Best Regards,

**PRANAY KOTHARI** (Chief Executive Officer)

# About **Polyplex**

Polyplex is one of the largest global manufacturer of thin PET film operating close to regional markets with supply points spread across the globe. Since the inception in 1984, Polyplex has grown from a single-line facility to become a half a billion dollar Company with international presence.

#### **1.1 Overview**

Over the years we have moved closer to our markets to deliver our products more efficiently and effectively. We have a diversified business portfolio ranging from BOPET, BOPP, Blown PP/PE, Thermal lamination and CPP films. These are manufactured in our state-of-the-art manufacturing facilities across the world with our headquarter in Noida, India. Our fully integrated green field film lines with upstream resin plants and downstream metallizers and other offline coating capabilities ensure cost-competitiveness, minimized environmental impact besides bringing the advantage of being a single-point for a portfolio of film products to our customers.

#### Every day, Polyplex Touches Millions of Lives!

#### 2017-18 Highlights

- → Bio PET Film through use of renewable resources
- → Post-consumer raecyclable film (Sarafil rPET) up to 90 percent post-consumer recycled waste
- → Eco Friendly PET Film without any Heavy metals
- → High Barrier metallized films for Aluminum Foil Replacement
- → Source reduction through down gauging and internal recycles
- → Decrease in Energy Consumption through Machine Idling and implementation of Heat Recovery project
- → Increased the amount spent on Environmental Protection by 53.2 percent to 0.40 million USD during the reporting period
- → Work related injury declined by 8.51 percent between April 2017 and March 2018
- → Spent 0.12 million USD during FY 17-18 on CSR activities including education, healthcare and community awareness



#### **1.2 Global Presence**

Polyplex today runs an integrated manufacturing & distribution operation across the world. There are 5 manufacturing units in 4 countries and distribution center in 2 countries with active sales in all major regional markets/customers across the globe. Polyplex is in the process of setting up manufacturing operation in fifth country i.e. Indonesia and the commercial operations are expected to start in 2019. The expansion is driven by an inspired vision to deliver increasing value to our customers, employees, shareholders and communities.

Our products are supplied to 1,700 customers in 76 countries across Europe, Americas, and the Indian sub-continent, Far East, Asia Pacific and the Middle East. Being one of the leading PET Film manufacturers, Polyplex operates close to its key regional markets, with manufacturing and supply points across the world.

### **MANUFACTURING UNIT** India Thailand Turkey USA **DISTRIBUTION CENTRE** Indonesia China

Netherlands 

#### **UPCOMING MANUFACTURING UNIT**

Indonesia

Figure I: Overview of Polyplex

#### The current Polyplex Group structure is shown below:

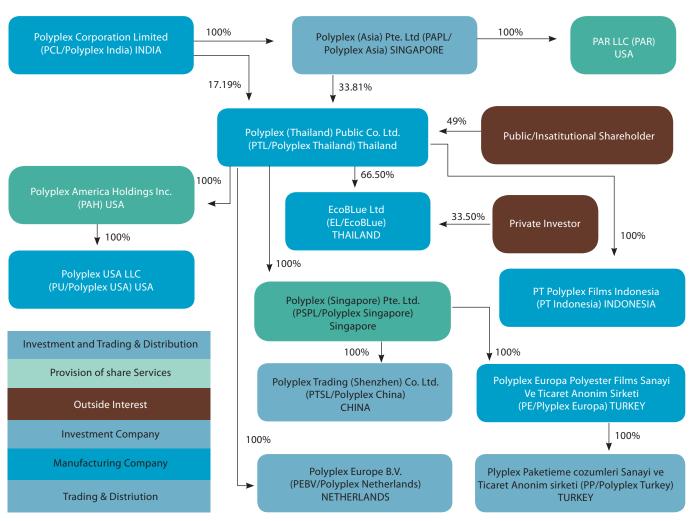


Figure 2: Polyplex's group structure

#### Polyplex Corporation Limited, India Operations (PCL)

Polyplex has two manufacturing facilities in India located at Bazpur and Khatima. Its corporate office is located in National Capital Region (NCR) of Delhi. The Indian operations have a collective workforce of about 776 employees in its manufacturing, sales & corporate operations. Many of the employees in Khatima&Bazpur are housed with their families in the green and spacious residential townships adjoining each facility. The Saraf Public School, set up by Polyplex adjoining the Khatima plant facility in 1992, provides quality education to children of employees as well as those from local communities.

#### Polyplex (Thailand) Public Company Ltd (PTL)

Polyplex Public Limited Company (PTL), Thailand is a 51%

subsidiary of Polyplex Corporation Limited and focuses on the Asia Pacific markets. PTL is listed on the Thailand Stock Exchange and has its Corporate Office in Bangkok. The manufacturing facility in Siam Eastern Industrial Park is located in Rayong close to the deep-sea port of Laem Chabang in the Gulf of Thailand. PTL employs about 637 people in manufacturing, sales and corporate operations. It also has liaisoning offices in Korea, Indonesia and Malaysia to enhance its market reach and to service the customers in a more effective manner.

#### Polyplex Europa Polyester Film Sanayi VeTicaretAnonimSirketi (PE)

Polyplex Europa Polyester Film Sanayi VeTicaretAnonimSirketi (PE) is the Turkish subsidiary with its manufacturing facility in the European Free Trade Zone located in the European side of Turkey at Çorlu, Tekirdag. Our presence here brings us close to our markets in Central & Eastern Europe and the Middle-East besides North Africa.In September 2013, PE incorporated a 100% owned distribution subsidiary in Turkey by the name of POLYPLEX PAKETLEME ÇÖZÜMLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ to facilitate better market reach in local Turkish market.PE employs about 242 people in manufacturing, sales and corporate operations.

#### **Polyplex USA LLC**

In 2011, Polyplex incorporated Polyplex USA LLC and set up a green-field facility comprising of a thin PET film line (started in April 2013) and a PET Resin plant started in July 2014 in Decatur, Alabama. In July 2012, the Company has expanded its metallized product range by acquiring the metallized assets of Vacumet Corporation, a fully owned subsidiary of Scholle Corporation. PU employs about 175 people in manufacturing, sales and corporate operations.

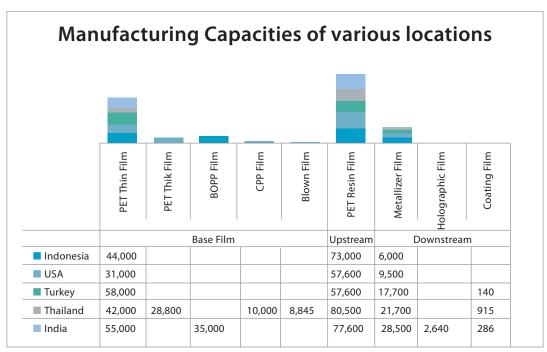


Figure 3: Manufacturing Capacities of various locations

Notes:

1. Except Coated Films where the capacity is in Million SQM per annum, the capacity of all other product lines is in MT per annum.

2. The above graph includes the proposed investments in Blown PP Line-2 in Thailand (which has been commissioned and became operational in July 2018), Silicon coating Line-3 in Thailand, a new replacement metallizer in USA, 3 Holographic lines in India, Offline Coater 2 in India and the greenfield PET Film line alongwith Metallizer & Resin project in Indonesia which are under implementation.

#### **1.3. Our Products**

Polyplex offers an ever expanding range of plastic film across several substrates which include both standard plain films as well as a range of value added films with offline coating and metallizing capabilities.

The key product line of Polyplex continues to be its Sarafil range of plastic films which is the mainstay business activity for Polyplex. With plants across 5 different locations, Polyplex is among the top six global producers and plastic film manufacturers of thin PET films. Over the past few years, Polyplex has also entered into PP based films which has enabled it to offer a variety of products and solutions to its customers. When complemented with investments in specialty coatings and metallizing, the in-house availability of various base films has enable Polyplex to offer products for various applications. The following are the products of Polyplex.

Product	Sub types	End use
Brand: Sarafil		
PET Films	<ul> <li>Transparent thin BOPET films</li> <li>Metallized BOPET films Specialty Films</li> <li>Bio Degradable PET Film</li> <li>Bio PET FilmCoated Films (From offline coater)</li> </ul>	<ul> <li>Packaging - Outer and middle layer of the flexible packaging such as coffee bag, snack bag, softener bag, detergent bag and general purpose packaging for Oxo-biodegradable properties</li> <li>Industrial -Hot stamping foils, flexible air-conditioning ducts, labels/ ID cards lamination</li> <li>Electrical - Wire and cable wrap</li> </ul>
BOPP Film	<ul> <li>Transparent BOPP Film</li> <li>Metallized BOPP Film</li> <li>Specialty BOPP Film</li> </ul>	<ul> <li>Packaging - Outer and middle layer of the flexible packaging such as coffee bag, snack bag, softener bag, detergent bag and general purpose packaging for Oxo-biodegradable properties</li> <li>Tape and Textile applications</li> </ul>
CPP Film	<ul> <li>Lamination and Conversion grade film for packag- ing</li> <li>Metallizable CPP film</li> <li>Metallized CPP films</li> <li>Twist grade film</li> <li>Retort grade film</li> <li>BiodegradableCPP film</li> </ul>	<ul> <li>Packaging – Inner most layer in food packaging, Textile, health care products and general purpose packaging and lamination applications</li> <li>Industrial – Hot fill bags &amp; liners, Industrial adhesive tapes, Interior automotive trim panels</li> </ul>
Brand: Saracote		
Silicone Coated Film	<ul> <li>Silicone Coated BOPET Film</li> <li>Silicone Coated Polypropylene</li> </ul>	<ul> <li>Shingle roofing tapes</li> <li>Release liner in pressure sensitive labels</li> <li>Release liner in pressure sensitive adhesive tapes</li> <li>Release liner in medical and hygiene products</li> <li>Tailor-made release liner for 'Peel &amp; Stick' water-proofing underlay- ment/membrane</li> </ul>
Brand: Saraprint		
non tearable polyester film	Chemically coated BOPET Film	<ul> <li>Digital print media segment for photo album</li> <li>Commercial printing</li> <li>Promotional &amp; customized digital printing</li> <li>Label and flexible packaging applications</li> </ul>
Green Film Products	<ul> <li>Alternates/Replacements: Antimony Free (Eco PET), PVC Replacements (GW), PVDC Replacements (BT160)         <ul> <li>Alu-Foil Replacements: MT5000</li> </ul> </li> <li>Renewables/Recyclables: Bio degradablePET, BioPET, and rPET</li> <li>Source Reduction: Down gauged products upto 8 micron, replacing 3 layer structures to 2 layer</li> </ul>	<ul> <li>Packaging – General purpose packaging and lamination application with lower environmental foot prints for twist, high barrier and foil replacement</li> <li>Packaging – General purpose packaging and lamination application with lower environmental foot prints and renewable, biodegradable / and from PCR inputs</li> </ul>
Brand: Saralam		
Thermal Lamination film	<ul> <li>Gloss PET Thermal Film</li> <li>MATTE PET Thermal Film</li> <li>BOPP Thermal Film</li> <li>Metallized Thermal Film</li> </ul>	<ul> <li>Thermal Lamination of documents or printed media</li> <li>Reflective Insulation</li> <li>Flexible packaging</li> <li>Rigid packing using printed corrugated carton board</li> </ul>

Figure 4 Our Products

#### The product applications of Polyplex include

- → Packaging Applications: Packaging of Food, Juices and Liquid food, Health and personnel care product, Cosmetics, Confectionaries, wafer & bakery products, Retort & Microwave food, Lidding applications, Sauces and noodles, Anti-fog Packaging etc.
- → Industrial Application: Label and stickers, Smart Cards, Holography & security stickers, Embossing, Yarn, Duct Insulation, Release Liners, Automobiles, Magnetic Tape, Bar code label, Adhesive tape, and many other applications.
- → Electrical & Electronics Applications: Insulations, Cable insulation, Antistatic Bags, Solar panels, Capacitor, Flexible Circuits, Screens and membranes switch, etc.
- → **Printing and Imaging:** Print media, Phot Album, Product broachers, Posters, Offset printing, Laser Printing etc.
- → **Thermal Lamination:** Book Cover lamination, Carton Lamination, Document Lamination, Reflective Insulation with EPE/XPE foam.

#### **FLEXIBLE PACKAGING**

#### High Barrier Film for Food Packaging





Transparent Barrier : See thorugh pouches/window applications



**Transparent Barrier : Food Packaging** 



#### Liquid packaging .i.e Juice, Shampoos, liquid detergents





#### Heat Sealable PET film for Food Packaging



#### Anti-fog Films for Fresh foods, vegetables, Salad and fruit display packaging





#### **Lidding Application for food pack**



#### Food grains/ rice, Pet Food packaging





#### Twist wrap Filmsfor Candy Packaging



#### Wafer & bakery products packaging





#### **Retort and Microwave Packaging**



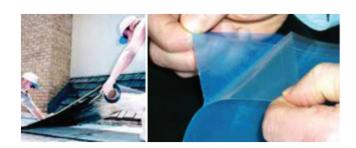




**Smart Cards** 

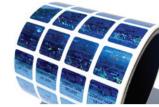


**Release liners** 



Holography and Security Stickers





#### **Bar Code labels**

**Duct insulations** 



#### Yarn Application







#### **ELECTRICAL & ELECTRONICS APPLICATIONS**

#### Wire and Cable Insulation





#### **Flexible Circuits**





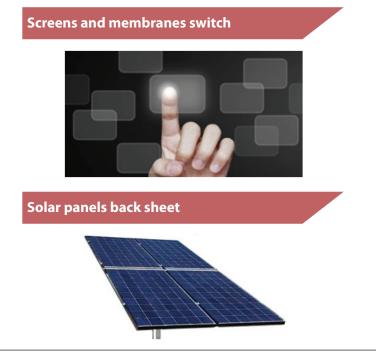


Figure 5: Product applications of Polyplex

#### **1.4 Research and Development**

Polyplex's Research and Developmentcenter has a 'lean innovation model' to endure value for customers. It has a well-defined customer engagement process to align innovations with customer requirements. Polyplex also focuses on developing applications and replacing the existing products with alternative solutions.

- → Commitment to open innovation: Polyplex leverages the concept of co-creation while working on various innovation programmes with its stakeholders – customers, brand owners, packaging designers, suppliers and adhesive manufacturers. On the basis of this, it classifies customer engagement initiatives as V+ (value plus), W2 (win-win) and P1 (power of one).
- → Initiatives in the field of growth: Polyplex's innovation model revolves around developing new products and applications and embracing new technologies which not only cover existing but also new growth segments.

The Company offers innovative solutions to its partners. Consequently, Polyplex has successfully adopted the 3R (reduce, reuse and recycle) concept while coming up with new-age packaging substrate solutions. The Company has taken various initiatives to recycle waste, save energy and use clean technology to reassert its environmental commitment. Polyplex continually strives to manufacture sustainable products which gain global acceptance, for example green candy wraps, direct digital printable films, transparent chlorine-free highbarrier films, UV printable carton lamination films, shrink sleeve wraps and label films, etc.

Leading its way to a sustainable future, Polyplex has come up with several projects focusing on CO2 footprint reduction. Digital printing offers high-quality graphics without the usage of solvents unlike conventional printing techniques such as Flexo and Rotogravure. With a lot of technologies available for digital printing itself, Polyplex has been able to develop products for most segments suitable for different digital technologies such as inkjet, dry toner andliquid electro-photography. Another project focused on sustainability was an attempt to convert general packaging laminate structures from 3 layers to 2 layers, which basically contributes to both source reduction as well as CO2 footprint reduction. With this idea in mind, Polyplex now has a high barrier PE which is successfully being used in shampoo and detergent packaging where it essentially converted a 3 layer structure to 2 layers.

#### **1.5 Product Sustainability**

Polyplex has made a name for itself by routinely introducing specialty products with various innovative applications and uses. Recent examples include films for back sheets of solar panels, thick films for electrical and electronic appliances, easy-to-tear packaging films for food and cosmetics, foldable films for medical and industrial uses, high-barrier high-adhesion films for metallic surfaces, transparent barrier films for food packaging, especially-coated PET films and specialized films for print media suitable for digital printable and UV inks, among others. Our innovations include various bio based films also known as green PET films which are produced using bio-sustainable inputs and recycled materials. We have replaced out PVC twist warp with green PET wrap in confectionary. We have a dedicated recycling unit partnered with Rafcycle in Thailand with production capacity of 1300 MT per month. It produces rPET resin using post-consumer waste. This unit is also a member of CEFLEX.

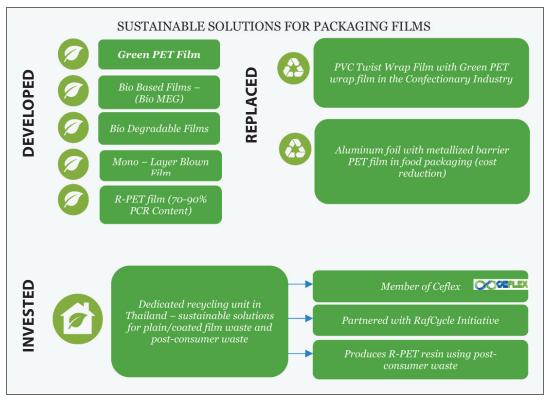


Figure 6: Innovations in Packaging film

Polyplex has developed rPET Polyester film with up to 90% Post-consumer PET water bottle flakes contents. The rPET films produced are suitable for direct food contact and are compliant to FDA, EU and other related regulations.Sarafil rPET resin is produced in-house through chemical recycling process .This technology consists of de-polymerization of Post-consumer recycled (PCR) bottle flakes to feedstock/monomers which are further polymerized and up cycled to produce virgin quality of PCR PET resin.

The high collection rates for PET bottles provides a steady flow of feedstock for rPET resin production. The use of PCR content in BOPET film provides another outlet for rPET resin thus produced, besides PET fiber and bottles. Polyplex's source of PCR bottle flakes is from our pre-approved vendors. After rigorous pre-input quality evaluation, flakes are fed to our modified polymerization

plant along with other process inputs. This innovative technology allows us to produce PET films from alternate sources other than fossil resources, reduce substantial GHG emissions and support the growth of recycling streams by providing an alternative end-of-life solution. The use of rPET in production of BOPET films allows a significant reduction of carbon footprint up to 60 percent.

Polyplex rPET films offer many advantages, not only to the environment, but also as a sustainable source of packaging by using consumer waste and turning into a useful virgin-like material. It drastically lowers the volume of PET plastic waste leaking into the land and oceans. It also reduces landfill, and emissions from incinerators, thereby protecting our environment. Currently, all standard PET film types are available also in rPET version, offering the same high quality level as standard films. There is also no compromise to be done on the shelf life of the packed food products.

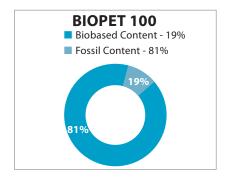
We are rapidly implementing this technology at all its manufacturing locations to provide PCR PET films to its

global customer base. Our European distribution partner Transparent Paper Ltd. (TPL) is already offering R-PET films with 70% PCR content for immediate delivery from their warehouse in Antwerp, Belgium, making many rPET films types easily available.



EcoBlue is a Polyplex-promoted venture to provide Sustainable Solutions for Flexible Packaging.

One of the products developed by our innovation team is **bioPET100**. Our SarafilBioPET is manufactured using feedstock and has 32 percent bio component. It has helped us reduce our CO2 emissions by 20 percent and reduced our carbon footprint.



We have also **GD100**, a biodegradable PET film which has a biodegradation potential of 55.9 pe rcent in 1,605 days and **BioRex100** developed from hybrid of plant PET and rPET which has 20 percent PCR and 6 percent bio content.

Figure 7: Innovations in Flexible Packaging

We have developed Transferred Metallized paper through a process in which a very thin layer of aluminum is vacuum deposited onto a release lacquer coated PET film, which is then adhesive-laminated to the substrate like paper and board. The environmental benefits of this product includes reduction in package weight by 5 percent, reduction in solid waste and reduction in carbon foot print. It is easily recyclable along with conventional paper or board and can be used as a carrier PET film multiple times. It is also biodegradable and conserves high energy over conventional packaging.

#### 1.6 Enhancing Customer Experience

At Polyplex, we provide our intermediaries, customers and their consumers' innovative packaging substrate solutions addressing their everyday needs. What makes us different is the passion that we bring to finding ways to continuously improve and service customers better through enhanced solutions.

Polyplex is focused on product innovation to address growing customer demands and cost-effectiveness from brand owners seeking to enhance product performance, enhance sales and reduce costs. With a view to remain proactive, we work collaboratively and proactively with our customers. Today, our customers comprise some of the world's largest and most respected packaging conglomerates and leaders in several industrial end-use markets. Some of the popular, everyday consumer goods that our global-class packaging keeps safe, fresh, hygienic and cost-effective include milk, tea, coffee, potato chips, butter cubes, shampoo, toothpaste, cookies, etc. Most of our products are 'food safe', enjoying FDA compliance certifications.

Today, consumers have become highly demanding and are looking for more and more convenience features in packaging formats. "Reclosability", "Easy to tear" and "Save for later" have become regular concepts in the packaging market.

- → Polyplex's 'Easy and Straight' tear PET film has facilitated customer convenience through easy opening of pouches.
- → Polyplex's "Twist N Wrap" is one such development which is seen on the market shelves for leading chocolate brands globally. The concept of "Twist N Wrap" is seen as the most innovative and important feature and Polyplex's innovation has made it possible to bring it to the consumer. Apart from this, the above-mentioned innovation has made possible the conversion from a 3 layer laminate to a 2 layer laminate structure.
- → Polyplex is also working actively on nylon film replacement project with its Thermo-formable grades.
- → Polyplex has also come up with specialty coated products for aesthetically pleasing packaging structures. They are targeted to impart a more natural

and paper-like look for a soft and subtle appearance.

- → With the current discussions around sustainability, Company has dedicated enough resources solely for the development of environment friendly alternatives. PCR PET with 90% recyclable content is one such development.
- → The Company has already Biodegradable PET in the product portfolio and currently there is a lot of work going on for developing Biodegradable sealant layer options as well such as Blown PE/PP and CPP. The Company intends to work in collaboration with adhesive manufacturers and converters in order to develop a fully biodegradable bilayer laminate which will be intended for use in Packaging applications.
- → The Company has been consistently working on developing mono-polymer structures for packaging applications. With polymeric modifications we were able to develop Heat Sealable PET films with high seal strength of upto 2kg/25mm. Such films are instrumental in designing mono-polymer PET laminates where PET films can also be used as sealant layers.

#### **CASE STUDY**



#### IMPROVING CUSTOMER SATISFACTION

Installation of Heater and Blower to reduce watermark

There were consumer complaints regarding the watermark in plastics. The team at PTL then decided to address this problem via installation of hot air blower.

Implementation of hot air blower eliminated the water mark and led to lot of savings as well as satisfied the customers.

Figure 8: Initiative to improve Customer Satisfaction

#### 1.7 Awards, Certifications and Membership

#### International Management System Standards

Polyplex recognizes the importance adopting management practices detailed under the international

standards such as ISO 9001, ISO 14001, OHSAS 18001, ISO 50001 and BRC. We have adopted the following standards which has helped us to create and organizational culture which engages our employees in a continuous cycle of self-evaluation, correction and improvement of our operations through management leadership, commitment and employee awareness.

Management System International Standards	PCL - Khatima	PCL - Bazpur	PTL - Thailand	PE - Turkey	PU
	Certified since 1996	Certified since 2010	Certified since 2004	Certified since 2006	Certified since 2018
14001	Certified since 2002	Certified since 2010	Certified Since 2004	Certified since 2009	Certified since 2018
(PHSAS) 18001	Certified since 2004	Certified since 2012	Certified since 2008	Certified since 2009	
	Certified since 2008 (ISO 22000)	Certified since 2012 (ISO 22000)	Certified since 2009 (ISO 22000)	Certified since 2006 (BRC-IOP)	
	Certified since 2013		Under implementation	Certified since 2014	

Table 1: Management System International Standards adopted at various Polyplex's office

### Sustainability Assessment through Ecovadis & SEDEX platforms:

Since its commencement, Polyplex group has not faced any significant problems related to environment and inspection is carried out by various regulatory authorities in a timely manner. This has resulted in not only causing no environmental impact by company's operations but also in gaining global and national recognition. We have also taken many initiatives for community as a part of our CSR activity which has gained appreciation. Some of our awards include Ecovadis CSR ratings Silver awards to our Turkey management and Ecovadis CSR ratings Bronze awards to our Thailand management.



Figure 9: Ecovadis CSR Rating Awards Silver to Turkey and Bronze to Thailand Operations



Figure 10: EIA Monitoring awards to Thailand Operations

#### **Certifications and membership**

Our Cast Poly Propylene plant, Metallized Cast Poly Propylene plant, Polyester Film plant and Metallized Polyester Film plant in Thailand are certified by Thai Kashrut Services as Kosher Parve. The Polyethylene Terephthalate Film produced for food contact-package by Polyplex are certified by Japan Hygienic Olefinand Styrene Plastics Association (JHOPSA), a voluntary standard for the use of plastic resins and resin additives in food contact materials.



Figure 11: Our Certifications and Memberships

### 2

# Stakeholder Engagement and Materiality Assessment

Strengthening channels of open communication and facilitating constructive dialogues with our stakeholders,

reinforces our understanding of their perspectives about our organization and their concerns. We see it as an opportunity to further improve our engagement with stakeholders and develop mutually beneficial ecosystem.



#### 2.1 Connecting with our Stakeholders

There is an equal amount of collaboration in a competitive World. In fact, it is the collaborative spirit that binds us and moves us, together, forward. As we move ahead into a rapidly changing world, collaboration will be crucial towards addressing collective concerns around climate change, social welfare and security. At Polyplex group, we develop partnerships and explore possibilities to create, preserve and enhance value for all of our stakeholders.

Being a responsible corporate,

we consider it our duty to foster inclusive growth and meet the sustainability needs of the nation. Our approach to stakeholder engagement is a blend of formal modes that are regularized and planned, and informal modes, which arise out of everyday interactions between business units and their stakeholders. While structured engagements, allow us to systematically obtain feedback, create awareness and build partnerships with stakeholders, informal channels provide an avenue to tap into their pulse.

#### 2.2 Identification of Stakeholders

We have identified our internal and external stakeholders. Our internal stakeholders are our executives and employees, and our external stakeholders comprises of customers, contractors, vendors, business partners, regulatory bodies, insurers, service providers, equipment providers and local communities.



#### 2.3 Stakeholder Engagement Framework

Embedded within our business processes are systematic channels of interaction with our stakeholders using diverse modes of engagement such as one to one meetings, Annual General Meetings, trainings, group discussions, surveys, supplier & customer meets and grievance redressal mechanisms. Issues raised by stakeholders are evaluated for consideration at a strategic level. For the purpose of preparation of this sustainability report, we have analyzed the concerns that have a potentially high significance both from external stakeholders perspective as well as from business view point. It is our endeavor to continually improve our stakeholder engagement mechanism and enhance stakeholder participation. Meeting the expectations of our stakeholders is crucial to our success and the stakeholder engagement framework depicts our approach to interacting with them and addressing their key concerns.



Figure 12: Stakeholder engagement workshop in progress

The table below lists out the various stakeholder groups engaged directly or indirectly with Polyplex along with their modes of engagement, key concerns & the company's response towards the same.

Stakeholder Group	Mode of Engagement	Key Concerns	Our Responses	
Customers/ Brand owners	Meetings/emails/ telecommunication	Product stewardship, post- consumer waste		
	Supplier meets			
	Industry forums			
Investors	Financial results/ investor calls	Business growth/ profitability	Enterprise Risk Management	
	Meetings	Newer opportunities	Policy and system enables systemic approach to address	
	Analyst reports	Risk management, Governance	various types of risk.	
Government and	Engagement on a need basis	Compliance	Active collaboration and	
regulators	Industry level consultations	Sustainable practices	participation with regulatory agencies	
	Participation in forums	Inclusive growth	agencies	
Employees	JWC Meetings, Safety Committee Meetings,	Workplace safety, Employee welfare, IR issues	Polyplex has been transparent HR policies and working on	
	Employee surveys	Professional growth, Employee benefits & other facilities,	improving workplace conditions and providing the required resources and training.	
	Team building workshops	Diversity at the workplace		
	Capacity building and training	Leadership connect sessions		
	Annual appraisals	Professional growth		
	Employee newsletters	Equal opportunities		
	Rewards and recognitions	Work-life balance		
	Volunteering opportunities	Wages and benefits		

suppliers and service Direct D	Contract agreements	Payment processing cycles	Enabling systems & policies	
	Direct interactions	Business ethics & transparency	have been put in place by the management to address the requirements	
	Supplier meets	Sustainability performance	requirements	
	Industry associations	Regulatory compliances		
Communities & NGO's	Direct engagement	Infrastructure development	Actively engaged with the local	
	Dedicated CSR team	Education & healthcare	communities through several ongoing programmes across	
	CSR projects and initiatives	Vocational training	areas of education, healthcare,	
	Visits and camps	Employment opportunities	livelihood and sanitation	
	Needs assessments	Human rights		

Table 2: Various stakeholder groups considered for the materiality assessment exercise

#### 2.4 Materiality assessment

The materiality assessment process serves us as a base for defining our focus towards our sustainability priorities. We were able to record materiality responses from the selected employees through classroom sessions conducted at our facilities in India. We reached out to our employees at other locations (Turkey, Thailand and USA) and external stakeholders through an online survey tool. We asked them to rate in order of priority the list of 18 identified sustainability topics (aspects). Furthermore, we provided them with narratives and additional guidance for each sustainability topic, providing suitable explanations and definitions.

The list of sustainability topics for the materiality assessment was prepared by taking into consideration sector specific sustainability issues, the macro-business environment, benchmarking with peer groups and brainstorming session within the sustainability core working group. Subsequently, we identified an exhaustive list of 18 sustainability topics relevant to Polyplex Group and the industry at large. The table maps out the material sustainability aspects that were identified through a materiality assessment to their corresponding GRI Standards and its reporting boundary:

Rank	Material Sustainability Aspect	Report Chapter	SDG/UNGC	GRI Standards	Boundary
1	Product quality assurance	About Polyplex	SDG 12	417, 419	Internal
2	Customer support services	About Polyplex	-	102, 418	Internal
3	Occupational health & safety	Workplace Safety	SDG 3	403	Internal
4	Human rights	Our Workforce	UNGC Principle 1: Human Rights	412	Internal and External
5	Corporate governance	Corporate Governance	SDG 16	102 -18	Internal
6	New product development	About Polyplex	SDG 9	102 -2	Internal
7	Regulatory compliance	Corporate Governance	SDG 16, UNGC Principle 10: Anti-corruption	307, 419	Internal
8	Economic growth/ profitability	Our Economic Performance and Strategic Leadership	SDG 1	201	Internal and External
9	Material management	Environmental Stewardship and Energy Management	SDG 2, UNGC Principle 8: Environment	301	Internal
10	Employee/ labour relations	Our Workforce	SDG 8, UNGC Principle 3: Labour	402, 407, 408, 409	Internal
11	Energy & GHG emissions	Environmental Stewardship and Energy Management	SDG 7, UNGC Principle 8: Environment	302, 305	Internal
12	Water management	Environmental Stewardship and Energy Management	SDG 3, UNGC Principle 7: Environment	303	Internal

13	Talent development	Our Workforce	SDG 4	-	Internal
14	CSR/ community development	Our Community Initiatives	UNGC Principle 1: Human Rights	413	Internal and External
15	Disaster management	-	SDG 3	-	Internal
16	Technology upgradation	-	SDG 8	-	Internal
17	Biodiversity	Environmental Stewardship and Energy Management	SDG 14, SDG 15, SDG 16	304	Internal and External
18	Supplier management	-	SDG 8	406, 414	Internal

Table 3: Material sustainability aspects of Polyplex

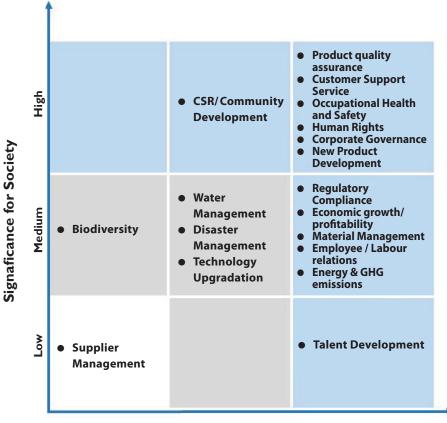


Figure 13: Materiality map of Polyplex Group

The material issues important for Polyplex as per the assessment are Product Quality assurance, Customer Support Service, Occupational Health and Safety, Human Rights, Corporate Governance and New Product Development. Polyplex understands that integrating the material determination process into management processes can improve the efficiency and effectiveness. We plan to embed these aspects in relevant operations and processes as much as possible.



### **Corporate Governance**

Polyplex believes that internal control is an essential element for Corporate Governance and remains committed in ensuring an effective internal control environment that provides assurance to the Board of Directors, Audit Committee and the management.

The quintessential elements of Corporate Governance of Polyplex are fairness, transparency, accountability and responsibility. As we employ social and environmental resources, the governance should be that they are utilized as per stakeholders and societal expectations. We promote a culture of high ethical standards, transparency and accountability. To ensure sustainability in Polyplex's corporate governance the triple bottom line principles (People, Planet and Profit) are embedded in our business strategies and plans. We ensure that our business transactions are in compliance with all laws and regulations and have established internal control mechanism to ensure conformance to the norms of corporate governance. Polyplex follows a philosophy that shareholders value can be protected with increased transparency and strong governance policies. At Polyplex, the emphasis is on:

- → Enhancement of Shareholder value.
- $\rightarrow\,$  Protection of the interest of the public shareholders.
- → Long-term financial health of the Company.
- → Providing customers with quality products and services at competitive prices.
- → Environment friendly production methods.
- → Providing for fair wage and safe working conditions for employees and inviting inputs from employees in decision-making.
- → Contribution to the socio-economic development of the local community.

#### **3.1 Board of Directors**



Mr. Sanjiv Saraf Chairman

Mr. Jitender

Balakrishnan

Independent

Director



Mr. Pranay Kothari CEO

**Dr. Suresh** 

**Inderchand Surana** 

Independent

Director



Mr. Sanjiv Chadha Non- Executive Director



Mr. Ranjit Singh Independent Director



**Mr. Brij Kishore Soni** Independent Director



Pooja Haldea Independent Director



#### **Board, Committees and Directors Evaluation**

The Board consists of Eight Directors of which One is Executive Director and Seven are Non-Executive Directors including One Woman Director. More than one half of the Board of Directors are Independent.

Mr. Pranay Kothari is an Executive Director of the Company.

**Mr. Sanjiv Saraf** and **Mr. Sanjiv Chadha** are from Promoters' Category and are Non-Executive and Non-Independent Directors.

Mr. Jitender Balakrishnan, Mr. Brij Kishore Soni, Dr. Suresh Inderchand Surana, Ms. Pooja Haldea and Mr. Ranjit Singh are Non-Executive Independent Directors. Independent Directors bring independent judgement in the Board's deliberations and decisions.

**Mr. Sanjiv Saraf**, a Non-Executive Director from the Promoters' Category is the Chairman of the Company.

None of the Directors is related to any other Director of the Company. Company has issued formal Letters of Appointment to Independent Directors and terms and conditions of appointment are disclosed on the website of the Company at www.polyplex.com.

The performance of the Board and Committees was evaluated by the Board after seeking inputs from all the directors on the basis of following criteria:

- $\rightarrow$  Degree of achievement of key responsibilities.
- → Structure and Composition.
- → Establishment and delineation of responsibilities to Committees.
- → Effectiveness of Board processes, information and functioning.
- $\rightarrow$  Board culture and dynamics.
- → Quality of relationship between Board and Management.
- $\rightarrow$  Efficacy of communication with external stakeholders.

#### **Board Committees**

Pursuant to the requirements under the regulations, the Board of Directors have constituted various committees of Board such as

→ Audit Committee: The Audit Committee performed duties under the delegation of authority set out by the Board of Directors. Among the Audit Committee's responsibilities are to review the quarterly / annual financial results of the company, supervise whether the company was in compliance with the rules and regulations, ensure the transparency of the accounting system, review of internal control systems and promote good corporate governance practices.

- → Nomination and Remuneration Committee: The Nomination and Remuneration Committee (NRC) constituted by the Board of Directors has laid down the criteria and process of identification/ appointment of Directors and payment of remuneration. These include possession of requisite qualification, experience, ethics, integrity and values, absence of conflict with present or potential business operations of the company, maturity of judgement, willingness to devote sufficient time and energy, high level of leadership, vision and ability to articulate a clear direction for an organization.
- → Stakeholder's Relationship Committee: The Committee, inter alia, looks into matters relating to issue of duplicate/split of old share certificates, nonreceipt of annual report and non-receipt of declared dividends and Shareholders'/ Investors' Grievances.
- → Corporate Social Responsibility Committee: The Role and functions of the CSR Committee are to formulate and recommend to the Board, a Corporate Social Responsibility Policy which shall indicate the activities to be undertaken by the company, recommend to the Board the CSR budget and the CSR activities to be conducted in the year. The committee also monitors the CSR policy of the Company from time to time, report to the Board on policy updates and assist in making the relevant disclosures in the Director's report of the board.

#### **3.2 Risk Management**

Polyplex's integrated risk management approach comprises compliance with prudential norms, structured reporting and effective controls. A combination of centrally-issued policies and locally-sensitized procedures has helped enhance process robustness, ensuring that business risks are effectively addressed.

The Company's business model is designed to moderate volatility in earnings and build long-term competitiveness. Its multi-locational manufacturing assets lend it the ability to service key regional markets while minimizing logistics costs. A well-distributed manufacturing presence and diversified product portfolio provides better access to global markets and allows it to maintain a more balanced sales profile across regions, products, customers and currencies. Over the past five years, the Company's share of value-added films in the total film sales turnover has increased from 35% in FY 2013-14 to 49% in FY 2017-18. Value-added films comprise those product types which are a specialty either from the production/process perspective or from the margin perspective or both.

The Company monitors global and local input price trends carefully and determines its procurement plans accordingly. Moreover, unpredictable price movements of raw materials affect all industry participants and thus does not put Polyplex in a materially advantageous or disadvantageous position vis-à-vis its competitors. The prices of downstream products like silicone coating, extrusion-coating and other specialty films are less susceptible to changes in raw material prices and thus reduce the Company's vulnerability in the face of volatile resin costs.

The Company has sufficient cash reserves exceeding the debt level. Cash and equivalents together with undrawn credit lines (excluding project financing) and liquid investments (current and non-current) aggregated to more than USD 222.276 million as on March 31st 2018. Free cash flows along with large unutilized credit lines available at Polyplex's disposal are expected to be quite adequate to deal with unforeseen contingences.

#### **3.3 Internal Control Systems**

The Company believes that internal control is an essential element for Corporate Governance. It remains committed in ensuring an effective internal control environment that provides assurance to the Board of Directors, Audit Committee and the management that there is a structured system for:

- → Active and close supervision by audit committee
- → Ensuring statutory compliance framework and its effectiveness
- → Evaluating and managing risks on the basis of predefined risk control matrix as per Internal Financial Control (IFC) guidelines
- → Outsourcing of risks through various insurance products.
- → Review of business plans and goals
- $\rightarrow$  Safeguarding the Company's assets against

#### unauthorized usage

- $\rightarrow$  Prevention and detection of fraud and error
- → Compliance of policies and delegation of authority
- → Validation of IT security controls
- → Timely preparation of reliable financial statements/ information

The Company has an overall framework for managing risks in terms of its Enterprise Risk Management (ERM) policy. Interrelated control systems covering all financial and operating functions assure the fulfillment of these objectives. Significant features of these control systems include:

- → Organization planning system to ensures drawing up of challenging goals and formulation of detailed plans for achieving these goals.
- → Risk assessment system to accounts for all likely threats to the achievement of the plans, and draws up contingency plans to mitigate all kinds of risks.
- → Internal review mechanism that tracks the progress of the plan and ensure that timely remedial actions are taken, to minimize deviations from the plan.

The internal auditor reports are reviewed and discussed in Audit Committee and Board meetings on a quarterly basis. Besides, the Company uses Enterprise Resource Planning (ERP) which is supported by in-built IT controls on all major business processes that ensure reliable and timely financial reporting. The Company continuously upgrades its internal control system by measures such as strengthening of IT infrastructure and use of external management assurance services. Moreover, companywide adherence to best practices is achieved through a combination of internal audits, management reviews and Audit Committee interventions.

#### **3.4 Policies**

Polyplex has formulated following Policies and Codes of Conduct in terms of the regulatory requirements which are available of company's website. These Policies and Codes are available are

→ Corporate Social Responsibility (CSR) Policy: Polyplex is committed to operate and grow its business in a socially responsible manner with the vision to grow its business whilst reducing the environmental impact of its operations and increasing its positive social impact.

This policy outlines Corporate Social Responsibility agenda of the Company. Company's aim is to achieve responsible growth by laying down this policy and encouraging its employees to take small everyday actions that add up to make a big difference. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/PCLCSRPolicy.pdf)

- → Nomination & Remuneration Policy: Polyplex has constituted Remuneration Committee comprising of three nonexecutive directors as required under Listing Agreement. In order to align with the provisions of the Companies Act, 2013 and the amended Listing Agreement from time to time, the Board on August 13, 2014 renamed the "Remuneration Committee" as "Nomination and Remuneration Committee". This Policy is formulated in compliance with Section 178 of the Companies Act, 2013 read along with the applicable rules thereto and Clause 49 of the Listing Agreement. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/PCLNRCPolicy.pdf)
- → Whistle Blower Policy: Polyplex is committed to conducting its business in accordance with applicable laws, rules and regulations and the highest standards of business ethics, honesty, integrity and ethical conduct. To maintain these standards, the Company encourages its Employees/Directors who have concerns about suspected misconduct to come forward and express these concerns without fear of punishment or unfair treatment. Company recognizes timely reporting is crucial for early detection. Any actual or potential violation of the Code/Policies, howsoever insignificant or perceived as such, would be a matter of serious concern for the Company. Failure to report any reasonable belief that a violation is likely to occur, has occurred or is occurring is itself a violation of Company's Policy and that such failure could be addressed with appropriate disciplinary action, including possible termination of employment. The role of the Directors/Employees in pointing out such violations of the Code/Policies cannot be undermined. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/PCLWhistleBlowerPolicy.pdf)
- → Policy on Related Party Transactions: The objective of this Policy is to define and lay down procedures to deal with the identification, approval and disclosure of Transactions with Related Parties so that such transactions are in the best interests of the Company, in conformity with the requirements of Companies Act, 2013 and Rules made thereunder, applicable Accounting Standards, Listing Agreement with respect to Corporate Governance. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/PCLRelatedPartyTransactionsPolicy.pdf)
- → Policy for determining 'Material Subsidiaries': The Board of Directors of has, in pursuance of the Listing Agreement and other applicable provisions, adopted the following policy for laying down a criterion for determining "Material Subsidiaries" and their governance. This Policy is intended to augment and work in conjunction with regulatory provisions and other company policies. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdffiles/PCLPOLICYFORDETERMININGMATERIALSUBSIDIARIES.pdf)
- → Code of Conduct for Board Members and Senior Management: Code of Corporate Disclosure Practices is to disseminate price sensitive information to Stock Exchanges on a continuous and immediate basis; to Improve investor access to the public announcements by supplementing information released to Stock Exchanges; to make timely and adequate disclosure of shareholdings or ownership by major shareholders and changes therein as provided under any regulations under the SEBI Act and the Listing Agreement (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/CodeofConductforBoardMembersandSeniorManagement.pdf)
- → Familiarisation programme for Independent Directors: The objectives of this programme is to provide insights into the Company, to enable the Independent Directors to understand the Company, its operations, business, industry and environment in which it functions and the regulatory environment applicable to it; to update the Directors on a continuing basis of any significant changes therein, to take well-informed and timely decisions. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/Familiarisation\_Programme.pdf)

- Practices And Procedures For Fair Disclosure Of Unpublished Price Sensitive information has been approved by the Board of Directors pursuant to Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015 and comes into force w.e.f. May 15, 2015 and replaces Company's earlier Code of Corporate Disclosure Practices for Prevention of Insider Trading framed pursuant to Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 1992 Objective of the Code of Corporate Disclosure Practices is to disseminate price sensitive information to Stock Exchanges on a continuous and immediate basis; to improve investor access to the public announcements by supplementing information released to Stock Exchanges and; to make timely and adequate disclosure of shareholdings/ ownership by major shareholders and changes therein as provided under any regulations under the SEBI Act and the Listing Agreements. (The policy can be accessed at: https://www.nseprimeir.com/z Polyplex/pdf-files/Code of Practices2015.pdf)
- ightarrow Code Of Internal Procedures and Conduct for Regulating, Monitoring and Reporting of Trading by Insiders: This Code of Internal Procedures and Conduct for Regulating, Monitoring and Reporting of Trading by Insiders has been approved by the Board of Directors pursuant to Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015 and comes into force w.e.f. May 15, 2015 and replaces Company's earlier Code of Conduct for Prevention of Insider Trading framed pursuant to Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 1992. (The policy can be accessed at:

https://www.nseprimeir.com/z\_Polyplex/pdf-files/CODE\_OF\_INTERNAL\_PROCEDURES\_AND\_CONDUCT\_FOR\_REGULATING.pdf)

- → Policy for preservation and archival of documents: The purpose of this Policy is to ensure that all the necessary documents and records of the Company are adequately protected and preserved as per the statutory requirements and to ensure that the records of the Company which are no longer needed or are of no value are archived or discarded after following the due process for discarding the same. This Policy is also for the purpose of aiding employees of the Company in understanding their obligations in retaining and preserving the documents and records which are required to be maintained as per the applicable statutory and regulatory requirements. (The policy can be accessed at: https://www.nseprimeir.com/z\_Polyplex/pdf-files/PCL\_Policy\_for\_Preservation\_of\_Documents.pdf)
- Dividend Distribution Policy: The objective of Dividend Distribution Policy is to lay down guiding principles for declaration of Dividend while striking a balance between profits earned and dividend payout, expectations of shareholders and adhering to legal provisions contained in the Companies Act, 2013 ("the Act") and Rules framed thereunder, as amended from time to time. (The policy can be accessed at:

https://www.nseprimeir.com/z\_Polyplex/pdf-files/Dividend\_Distributioin\_Policy\_25072017.pdf)

### 4

### Our Economic Performance and Strategic Leadership

#### **4.1 The Global Scenario**

The global PET Film market is expected to grow at a CAGR of 5% to 7% over the forecast period of 2018-2026. The global PET Film market is majorly fragmented over four dominant regions, which are North America, Europe, Asia Pacific, and Rest of the World. Asia Pacific dominated the global market in 2017 and is anticipated to grow at the highest CAGR over the next few years.

Polyplex has sixth largest global capacity for polyester (PET) film with a globalized asset and resource base. The Company has a unique model of on-shore, off-shore and near-shore business locations in combination with other strengths like customer relationship, access & intimacy offers wide variety of specialty, innovative and value added products.

We funded all the capex through a judicious mix of internal accruals and debt, making it possible to create a low-cost, high-quality asset base that sustains our relevance across all market cycles in a competitive business. At Polyplex, our integrated and global asset base, technology orientation, vertical integration, diverse product base, expansive client profile and strong financial strength make it possible to lead the global PET film industry and create a future-ready platform of profitability and sustainability.

Higher cash flows from operations and a strong balance sheet provides financial flexibility to access growth opportunities. The Company will be commissioning a new greenfield facility near Jakarta in Indonesia for setting up the world's largest width PET film line, an integrated PET resin plant on direct melt technology as also a downstream metallizer with start-up scheduled for the second quarter of FY 2019-20. The Thai subsidiary is also adding a second (third in the Group) silicone coating line to enable further inroads into specific value added applications. A slowdown in the pace of capacity addition has helped demand supply become more balanced with consequent increase in utilization rates globally. While this would inevitably lead to creation of additional capacity in the future to cater to the demand growth, we believe that growth in supply would be more moderate and rational as compared to the past.

The Company remains financially strong and confident about the future of this industry. A geographically diversified presence along with an extensive product offering and a widespread customer base has helped it to ensure higher sustainability in earnings. A new metallizer in the US, a second Blown Polypropylene film line in Thailand and new Offline Coater in India have been commissioned in 2018 and provide further impetus to operations and margins.

There are growing concerns, in general, on the usage of single-use plastics. Flexible packaging is held to be a more environment friendly form of packaging as compared to traditional formats due to its lower packaging weight to product ratio with a significantly lower carbon footprint (GHG emissions). However, its recyclability is an issue arising from technical challenges and lack of efficient & economic collection mechanism for post-consumer waste. The industry is working towards finding effective solutions. The recycling plant in Thailand is our initiative to address these concerns.

#### 4.2 Financial Impact of Climate Change

#### **Physical risks**

There are physical risks to the supply chain distribution due to changing weather patterns exacerbated due to climate change. Climate change also has potential to impact crop production and our Indian plants dpends on rice husk to fuel our oil heating plant. A disruption in local rice production due to weather changes will result in us having to revert to conventional fuel, increasing the GHG intensity of our product and our fuel costs.

#### **Regulatory risks**

Regulatory compliance is a key consideration for the PET industry. In order to ensure the safety of food that is packaged and consumed, extensive regulations have been put in place by various regulatory bodies like the USFDA, the EEC, among others. We generate most of our revenue from the sale of manufactured products that are used in a wide variety of fast moving consumer and industrial applications and the potential of product liability exposure could be significant. The role of regulations on extended producer responsibility may lead to major hit in our business. Analysis of GHG inventories in past indicate that our energy consumptions and associated GHG emissions are relatively low. Any new regulation, which can add transportation-related carbon tax in terms of raw material procurements and export, could raise the cost of our operations significantly.

### Opportunities related to sustainability and climate change

Our innovation and operations group is spearheading efforts to transition to renewable raw materials, low emission direct energy and improved water consumption for our conversion processes by selection and introduction of energy-efficient state-of-the-art machines. We are working to improve the carbon foot print of the organization by monitoring it.

The Indian packaging industry is prone to certain environmental and sustainability risks. Government notified latest updates with Plastic Waste Management Rules 2016 and Solid Waste Management Rules 2016 defining responsibilities and action plan which was extended to municipal authorities, manufacturers, dealers and brand owners. Amendments to these rules made in March 2018 relaxed the regulations on usage of multilayer plastics factoring lack of alternatives. Several states have also come up with directives on limiting the usage of plastics in packaging, these are broadly not applicable to multilayer plastics for flexible packaging.

The current legislative framework has clarified that every producer or brand owner shall be responsible for safe disposal of plastic waste generated either in their premises or through post-consumer packaging material. They will have to register themselves with concerned authorities like SPCB/ CPCB and their agencies who will be disposing of above material. At Global level also, there are increasing concerns on the usage of plastics in general especially to low rates of recycling of postconsumer waste and lack of efficient collection and sorting systems.

#### 4.3 Snapshot of Economic Performance

The top-10 customers of Polyplex contributed 24% of revenues in FY 2017- 18. Almost 66% of the Company's revenues were from PET films (Thin and Thick) in FY 2017- 18. Of the total sales of the group, 62% was accounted by end-users leading to further diversification on risk.

Direct economic value generated and distributed	(in thousand USD)	
	Standalone	Consolidated
Direct economic value generated (A) : Total	173,702.35	555,694.21
Net sales	166,150.00	550,878.35
Revenue from investments	7,530.40	4,714.81
Sale of assets	21.95	101.05
Economic value distributed (B) : Total	179,095.03	526,967.12
Operating costs	158,083.16	467,715.98
Employee wages and benefits	10,849.67	47,039.51
Payments to providers of capital	6,946.28	6,946.28
Payments to government	3,215.92	5,265.37
Community investments	0.00	0.00
Economic Value Retained = (A - B)	5,392.68	28,727.09

Figure 15: Financial Performance during the last three years

Year	Total Amount paid (in USD)
2015-16	420,230.99
2016-17	186,414.97
2017-18	308,699.91

Figure 16: Total pension paid by the organization in the last three years

#### **4.4 Strategic Initiatives**

Polyplex seeks to maximize long-term returns following a differentiated approach that responds proactively to business and environmental changes. The key elements of this strategy are as under:

- → Manufacturing and distribution presence in key regional markets (India, Thailand, Turkey and USA and by 2019 in Indonesia) and distribution operations in two countries (China and the Netherlands). The warehouses in Poland, Spain, Germany, Mexico and Italy and liaison offices in Malaysia and Korea with Japan added in 2018 have strengthened our global delivery capabilities.
- → Diversification has helped the Company to establish itself as a complete packaging substrate provider. The investments into CPP line, Thick PET film line and Blown PP lines in Thailand and BOPP line in India were steps in this direction.
- → The Company accelerated investments in niche downstream products to exploit synergies, broadbase the portfolio and provide a scalable platform. The setting up of Extrusion Coating lines in Thailand, Silicone Coating lines in India and Thailand, Offline Coaters in Turkey for packaging and in India for the digital print media segment comprised such downstream investments.
- → The ongoing investments in Holography machines and paper metallizing business in India will further provide opportunities for wider range of value added products.

- → In order to increasing the sales of specialty film and reduction in wastage, modifications have been done and more upgrades are planned in existing manufacturing lines at India, Thailand and Turkey.
- → The integrated manufacturing facilities complemented with high productivity assets enhance competitiveness
- → Continuous improvements (productivity and cost optimization) were made through the use of rice husk boilers for heating instead of expensive furnace oil, packing and freight cost reductions, quality improvements and waste reduction and standardization of business processes, etc.
- → Systems have been created and strengthened to enhance cross-learning and sharing best practices/ benchmarking across various units and businesses of the Group to enhance efficiency and synergy.
- → Technical services and new products are being developed by leveraging in-house R&D capabilities and experience.
- → Focus on innovation and collaborative application development helps the Company become a preferred supplier/partner with several large multinational customers.
- → A liquid and strong Balance Sheet enhances flexibility to address growth opportunities.
- → A plant in Thailand helps recycling in-house and sourced plastic waste addressing growing concerns and for directional needs of our businesses.

### 5

# Environmental Stewardship and Energy Management

Polyplex is committed to continually improve its environmental performance in order to have a positive impact on society, the economy and a sustainable future. In order to make its operations sustainable, the Company ensures optimum utilization of energy and other resources, waste management through recovery, recycle and re-use of material, reduction in emissions and effluents, enhancement of awareness amongst the employees through effective communication and training.

Being a global polyester film manufacturer, we have been conscious of the manner in which environmental and social parameters will shape our company and industry.Wherever possible, Polyplex recycles and reuses the material in the production of new products. We try to minimize our environmental impact through use of more than 99% polyester waste generated during production system, recycled material grades, energy efficient machinery and efficient transportation strategy. This decreases our organizational carbon footprint. We also have a mechanism to receive complaints against environmental issues and take correct actions accordingly. Wherever required we communicate with stakeholders. No significant fines and non-monetary sanctions on the organization for non-compliance with any of the environmental laws and/or regulations during the last three years.

Our five manufacturing plants across the globe have attained ISO 14001 environment management system certification. We believe that the environmental management system certification would help us to analyse and reduce environmental impact andstandardize the process of being complaint to a range of legislative requirements. The certifications have provided us a framework which enables us to review our environmental performance and identify the sites outperforming from others so that we can implement similar initiatives across the group. Our aim is to minimize our carbon footprint by reducing the energy consumed per ton of production and reduce our consumption of virgin raw material per ton of production.

#### **5.1 Materials Management**

Our primary products are Biaxial Oriented PET Film (BOPET), , Biaxial Oriented Polypropylene Film (BOPP) and Cast Polypropylene Film (CPP). BOPET films are manufactured from a PET resin that consists of two basic raw materials – Purified Terephthalic Acid (PTA) and Mono Ethylene Glycol (MEG). PTA and MEG are subjected to melt polymerization along with other chemicals, additives and catalysts to form the PET resin which is used as raw material to produce BOPET film. BOPP and CPP are manufactured from homo polymer and co polymer resins, which we purchasing directly from our suppliers.

Polyplex is making efforts to use resources more efficiently and to diversify its supplies with recycled materials. We want to address the risks of depletion of resources caused by growing demand and the environmental impact caused by the extraction of raw materials and usage of plastics. Our recycling efforts are based on the policy that after the natural resource has been extracted, it should be used with better quality and minimum environmental impact. We are coming out with various innovations in redesigningour products to use less material, use more recycled contents and use more bio based material while maintaining the structure and performance characteristics of the products.

#### **Raw materials used**

The raw material to produce PET resin includes PTA, MEG, additives and catalysts, Polypropylene resin (homopolymer and co-polymer) consumed to produce BOPP and CPP film, Chemicals used for film coating, aluminum wire used for metallized coating of films.

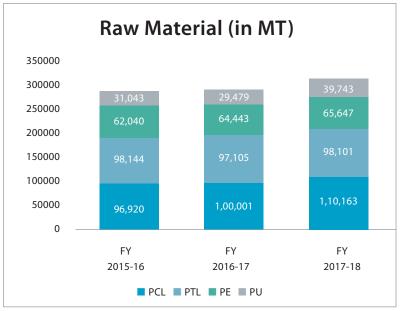


Figure 17: Raw materials Consumption trend of all the locations

Major Raw materials for the Biaxial Oriented Polypropylene (BOPP) and Cast Polypropylene (CPP) Film production: The major raw materials for the BOPP and CPP film production are Homo Polymer and Co-Polymer.

**Major Raw materials for the Extrusion Coated Film production:** Apart from PET film, which comes mostly from the company's in house production, the major raw materials for the Extrusion Coated film production are BOPP base film and Coating chemicals such as LDPE and EVA.

**Major Raw materials for the Silicone Coated Film production:** For the Silicone Coating line, the main raw material is PET film and Blown PP Film which is transferred from the Company's in house production and also imported from the Parent company in India at Arm's length pricing. Silicone and other chemicals are being imported from USA and Europe from leading suppliers.

Major Raw materials for the Blown PP Film production:

For Blown PP film line, the main raw material is PP resins (Homopolymer, Co-Polymer and PP Color master batches). These are sourced from local suppliers as well as imports from within this region.

#### Associated materials used

The associated materials used for the production includes all types of Lubricating oil and grease, Thermic Fluid (Therminol 66) and Ceramic Boat. The following graph shows the trend in consumption of associated materials.

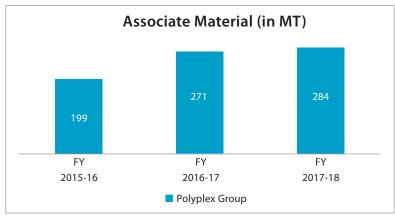


Figure 18: Associated Materials consumption trend of all the locations

#### Packaging materials used

The packaging material used by Polyplex includes wooden pallet, paper cores, ply fitment, PVC Cup,

Jumbo bags, Liner Bags, Silica Gel/Dry, PET strapping, foam fitment, corrugated box and sheet, Edge protector, bubble films, stretch wrap film and polythene roll.

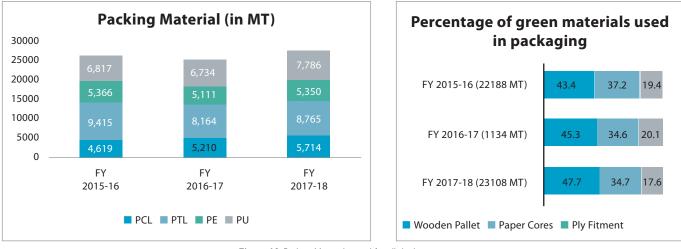


Figure 19: Packing Materials trend for all the locations

#### Initiatives to reduce the raw material

Although the raw material prices have increased, the impact has been passed on the customer due to improved demand supply situation. We have come up with various initiatives of reducing the raw material and using the post-consumer and process waste as a raw material.

We have initiated programs to look at substitutes that will reduce our dependence on virgin material. Efforts are underway to introduce our sustainable range of products with bio-ethanol-based input materials. We are also working with our customers to down-gauge our films so that we use lesser input material for the same function.

#### **CASE STUDY**

#### PROCESSING WASTE RECYCLE ANS RESUE AS RAW MATERIAL





As a step for implementation of 3 R's, the management planned to internally utilize the lumps waste after recycling as raw materials in the polyester film production. The average lump waste recycled and reused by 386.4 MT per year at PTL.

This practice not only decreased raw materials requirement but also resulted in cost savings of USD 356,820 per year. The same practices are deployed at other operations.

Similarly, we also internally recycle and reuse the process sweeping waste as raw materials in the polyester film production.

This practice not only decreased the waste generated and raw materials required but also resulted in cost savings of USD 78,947per year.



Figure 20: Lump and Sweeping waste recycle and reuse

#### **5.2 Energy Management**

As the environmental footprint of an organization is directly proportional to its energy consumption and has a direct bearing on our operational costs, we try to adopt the best practices for our energy management and energy savings.Both of our plants in India and our operations in Thailand and in Europe have attained ISO 50001, energy management system certification. To meet our major objective of maximizing energy efficiency throughout our facilities, in the year 2017-18 we improved our energy consumption through sustained focus and investment in more energy efficient production as outlined below. We have formed cross functional team to reduce the electrical, thermal and cooling energy requirements. The team identified more than 110 projects to reduce various types of energy in the year 2017-18.

#### Energy Saving techniques adopted at Polyplex Group

- Installing Variable Speed Drives at UPS room
- Stopped the idle running of Inline Grinder of BOPET Plant
- Installing Variable Speed Drives at Winder & Slitter
- Installing Variable Speed Drives at BOPET Panel Room
- Installing Variable Speed Drives at BOPP units
- Installing Variable Speed Drives at Chilled Water Pump
- Conventional Tubes replaced with LED Tubes
- Installing Variable Speed Drives at cooling water pumps of cooling tower
- Plant Conventional Street replaced with Premium LED Street light

Figure 21: Reduction in Electricity Consumption due to various initiatives adopted at Polyplex

The traditional route for producing PET resin involves melting the polymer and then extracting resin from film which consumes a lot of energy. One of the key initiatives taken for saving considerable energy is the use of Direct Melt Casting Technology. We have already adopted this technologyat our Bazpur operation in India. This technology is further being deployed horizontally at PE and PTL operations.

Another imitative taken by us was the usage of Rice Husk as a fuel. The heat load completely transferred to a biowaste fuel. This resulted in 26% reduction in overall GHG emissions for the plant.

#### **ENERGY POLICY**

POLYPLEX commits itself to reduce the specific energy consumption for the production of Polyester Chips, Polyester Film and other value-added downstream production / conversion units.

#### This would be achieved by:

- Measuring and monitoring the specific power and fuel consumption.
- · Carrying out Internal and external Energy Audits at least once a year.
- Benchmarking the specific Power and Fuel consumptions against the best achieved in similar industry.
- Adopting technological changes and renewable energy sources wherever applicable.
- Training and motivating employees to ensure minimum wastage of Energy.
- Replacement of less efficient equipment with energy efficient equipment.

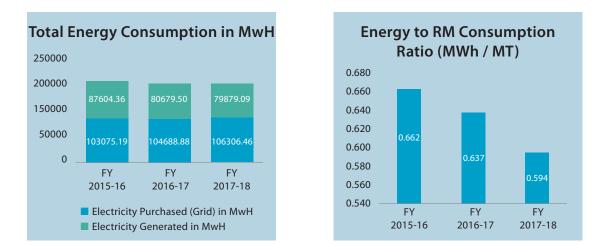


Figure 22: Snapshot of our Energy Policy

Figure 23: Consumption trend of purchased and generated electricity and at Polyplex group

#### **Optimizing our Energy Consumption**

We have adopted the following practices to reduce the energy usage across our operations. Even in its normal operations, wherever possible, an effort is made to switch to energy efficient alternatives. Some of the initiatives include investments in energy saving initiatives like Heat Recovery project and Twin-Screw Extruder.

Our plant teams came up with various schemes to cut their energy usage using software changes. The scheme include Machine Idealing, which is cutting load during stoppage, film cut to Cast Grinder in Mode 3, Pulley Swap on Resin blower, Correcting Logic for Co Ex feeding blower, Switching off Dust filtration blower when the Silo blowers are not running, Switching off Receiver Bin conveying blower with silo Level control, reducing the frequency of chilled water pump from 60 to 35 Hz. Machine idealing i.e. machine optimization due to software changes led to savings of 272,540 kWh in the year 2017-18. Feeding sequential optimization through software changes led to a total savings of 504,080 kWh in the year 2017-18.

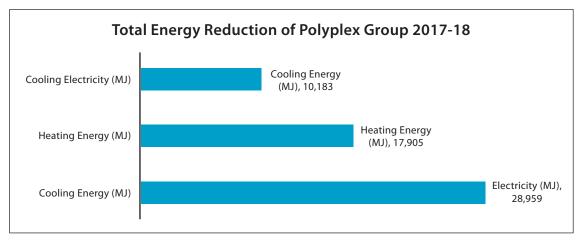


Figure 24: Reduction of Energy Consumption during the reporting period



#### **HEAT RECOVERY FROM FLUE GASES**

PE Team has implemented the idea of utilization of heat loss from flue gases of engine to heat the thermic fluid which is used for process heating.

Originally the flue gases from engine were passing through the steam boiler to generate the steam. In modified scheme a heat exchanger was provided at the exhaust of the engine and flue gas was passing through the heat exchanger to heat the oil and then passes through the steam boiler.

This system enables the energy of flue gasses to be utilized first in heating the oil and then to generate the steam. This reduced the natural gas consumption at PE by 13,48,908 metric cube per year and reduced the heat energy by 87,696 MJ.

Figure 25: Utilization of flue gases from engine to heat the thermic fluid

#### CASE STUDY

#### WASTE HEAT RECOVERY OF HOT WATER FROM ENGINES JACKET'S AND CHIPS PLANT COLUMN VAPOR



There was an estimation that after the "heat recovery project" at PE, steam generation would be reduced. In order to produce required amount of steam, two new hot water vam chiller machines have been bought to utilize the waste heat of the engines jacket water and Chips Plant column water. A new heat exchanger was installed at Chips Plant to utilize the heat of the vapors of the column to generate hot water to operate new vam chillers.

New chillers are operating with hot water instead of steam and it was estimated that, to fulfill the requirement of chilled water during the peak summer time, only one electrical chiller will be used. Not operating one electrical chiller in peak summer time would lead to savings of electricity consumption.

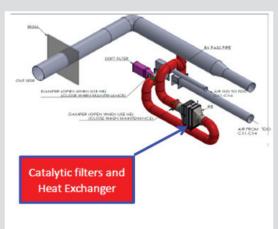
Chips Plant column vapors were being cooled in total condenser by using the cooling tower water. By utilizing the heat of column vapors to heat the water for chiller, it was expected to reduce the consumption of water from cooing tower. This project has led to savings of 24,360 kWh electricity and 10,709 m3 water yearly.

Figure 26: Utilization of waste heat of hot water from Engines Jacket

#### Using atmospheric air in winter to chill roll

"At winter season, the outside temperature is low in Turkey and fresh air can charge from outside to Chill roll and MDO areas of the PE plant". Based on this idea a project was implemented to use fresh air to charge the Chill roll Line 5 and MDO Area Line 6 at PE during winter. An additional exhaust fan was installed, and the absorbed air was directed outside using the exhaust fan. The mixing box with cold incoming air and hot return air decreased the temperature of the cooling coil. This led to decrease in AHU's cooling load and eliminated the chilled water consumption. The project saves approximately 239,170 kWh of electricity every year.

#### **CASE STUDY**



#### WASTE HEAT RECOVERY IN TDO

The high frequency of Energy wheel choked the Oligomer. The insufficient air from TDO Zone 1 to TDO Zone 4 directed the film to shrink and unflatter. This caused the film contamination and about three hours were spent in cleaning the wheel every month. This also resulted in high natural gas consumption of approximately 59,520 MMBtu annually.

The PTL team came up with a solution of using catalytic filters and heat exchanger which eliminated the Oligomer chock in heat exchanger system. The film was now produced without contamination due to sufficient air flow in TDO zone. No cleaning is required in the heat exchanger system and the natural gas consumption reduced to 50,760 MMBtu per year.

Figure 27: Waste Heat Recovery in Transfer direction Orientation

#### **5.3 Water Management**

The source of water for operations in Khatima and Bazpur plants in India as well as in our plant in Turkey is ground water. Our plant in Thailand and office in US uses municipal water.

At Polyplex, we follow safe waste water disposal practices across our operations. We treat the waste water generated from our polymer production process. We have Effluent Treatment Plants (ETP) at all our operational sites for water treatment. At our India operations, treated

water is primarily used for landscaping & horticultural purposes. In Thailand and Turkey, our ETP treats only the by-product water before discharge.

Waste water from both these plants are primarily treated in our plant ETP and thensent to their respective industrial zone ETPs for further treatment according to local regulations. In India the operations have zero discharge and in Thailand the plant is located in an industrial zone where common utility center provides and treats waterfurther. Similarly the Turkey plant is located in Trade Free zone.

In India, we have achieved zero water discharge at Khatima and Bazpur plant. There is no untreated water discharge at any of these locations. Our other two plants – Thailand & Turkey falls in industrial zones with common ETPs .

### Water Treatment System in Cooling Tower

To reduce the water consumption, we started using raw water in cooling tower instead of soft water in Khatima

plant. Although maintaining the cooling tower water parameters was a challenge we successfully ran a trail and the project was completed in a span of 3 months. This has helped us save 12,000 KL water every year we have also created replica of this project in Bazpur plant.

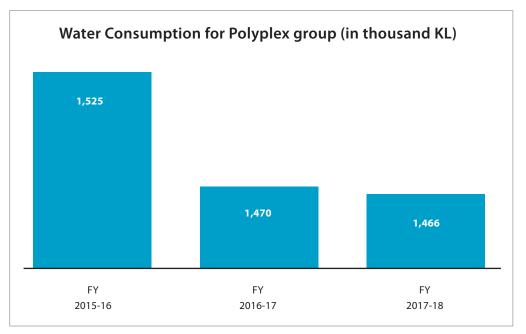
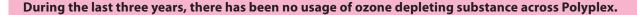


Figure 28: Trend of water consumption across the group

#### **5.4 Emissions**

In our efforts to improve the efficiency of our operations, we are targeting a reduction of our specific energy consumption; thereby bringing down our greenhouse gas (GHG) emissions. Initiatives such as the; near shoring business model reducing carbon footprint due to movement of material and the commissioning of a rice husk powered oil heating system at our Bazpurand Khatimaplant have helped us lower our consumption of fossil fuels and reduce our GHG emissions. The transmission over long distances creates power losses. We minimized this loss by bring our operations near the power plant. This has reduced our carbon footprint further.

#### There were no significant spills during the last three years.



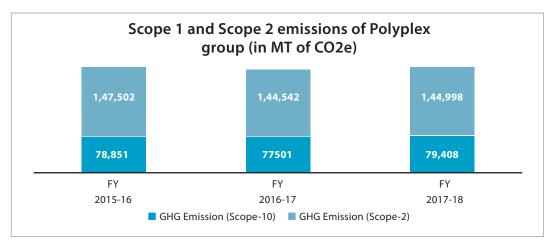
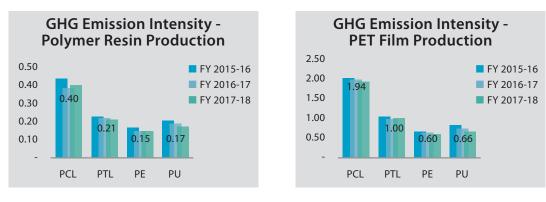


Figure 29: Scope I and Scope 2emission for the last three years



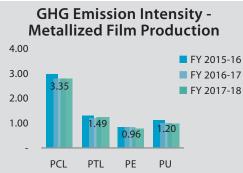


Figure 30: GHG emission intensity for the production of Polymer Resin, thin Pet Film and Metallized Film during the last four years (Note: The figures given in above graphs are emissions in MTCO2 equivalent per MT of production)

#### **5.5 Waste Management**

The waste management and recycling market is not only growing in size but in value as well. By 2030, there will be 3 billion additional consumers onto the global market. As resources are increasingly getting scarce, their value and circular economic importance are increasing.

Polyplex realizes the importance of caring for the environment and tries to minimize the waste through the implementation of 3 R's (Reuse, Reduce and Recycle). Our operations primarily generate three types of waste: waste from direct materials, waste from packing materials and waste from plant operations (hazardous and no nonhazardous). There is a negligible impact on environment caused from the polyester film production process since PET in both film and resins are generally recyclable. For its Polyester resin line we have the required EIA approval and submit regular reports required as per the Environmental Clearance to the concerned authorities.

#### Waste from Direct Material

This includes wastes like polyester chip lumps, polyester film lumps, waste trimmings, contaminated films, and

waste aluminium coated film. 99% of our plain PET film waste is recycled and reused. Waste, which cannot be used internally, is sold off to third party contractors. All of this waste is non-hazardous and never disposed in landfill.

#### Waste from Packaging Material

This includes wooden pallets, plastics, PVC cups, and paper cores as packaging material for both incoming material, as well as finished goods. Most of this waste is sold off to third parties. This waste is non-hazardous in nature.We are working towards minimizing the packaging waste by improving our process control and by reworking &reusing it.

#### Waste from plant operations

In the normalcourse of operations, we generate waste likesludge from ETP & tank bottom, oil & lubricants, scrap metal, batteries, chemical waste, and used drums. Much of this waste is non-hazardous in nature and is disposed off to third parties. Hazardous waste, if any, is disposed off to authorized vendors. The Company remains committed and will continue its effort in finding sustainable solution for rest of its waste as well as processed film waste.

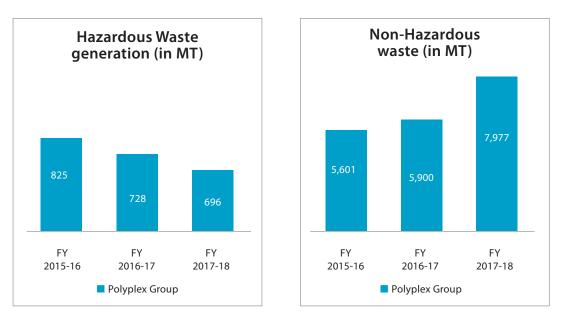


Figure 31: Hazardous and Non- Hazardous waste generation during the last three years

### *Recycling programs in partnership with Ecoblue*

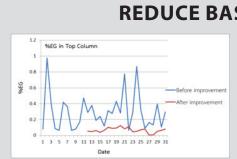
As a sustainability initiative, has invested in a project to recycle and provide sustainable solution for film based process waste and the project started commercial operations in December, 2013 in Thailand, under the Company's subsidiary - EcoBlue Limited. This subsidiary is in the process of implementing a project for a second recycling line. We are currently carrying out two recycling programmes: CircuLiner Program:partnered with UPM Raflatac & Avery Dennison for recycling of filmic liner waste and Strap2Strap program provides closed loop

CASE STUDY

#### solution for PET straps

### Optimizing the consumption of base film during the dryer heating

During the machine start up and heating process the coater used to run at 10 m per minute speed with consumption of base film. After adopting a modified process of putting the machine stationary for about 10 minutes at the start of heating process led to reducing consumption of base film at the time of dryer heating during each liner order start up. The new modified practice led to decrease 11540 kg of film wastage.



Comparison of % EG before and after improvement process

#### PROCESS OPTIMIZATION TO REDUCE BASE FILM WASTAGE

The percentage of ethylene glycol in top column of process water was inconsistent and a lot of ethylene glycol was lost with the waste water. PTL team decided to modify the Process Column with the objective of reducing energy in distillation of Ethylene Glycol Recovery, reducing the amount of Ethylene Glycol that is lost with water and decreasing Chemical Oxygen Demand (COD) of waste water.

The Process Column was modified which led to COD reduction of 63. 29 percent.

Figure 32: Process Optimization to reduce base film wastage

#### **5.6 Biodiversity**

Polyplex supports conservation of sensitive areas. Before commencement of an operation we review that they are not located in sensitive areas. We also review the location of operations every year as the governments update the protected area designation from time to time. No any manufacturing plant was located in or in the vicinity of any high bio-diversity areas for the year 2017-18.

#### **5.7 Best Practices**

#### **Expenditure on Environmental Protection**

The following graph shows the amount spent by Polyplex on Environmental Protection. During the year 2015-16

Polyplex group spend about 26,845 USD on activities related to environmental protection which includes the technological upgradation and compliance fees. For the year 2016-17 the total expenditure was 26,3210 USD and for the year 2017-18 this increased to 40,3165 USD.

The Khatima and Bazpur plants in India and the plant in Thailand spent its budget on treating and disposing solid waste, maintaining its pollution control equipment and lab testing and sampling. The plant in Turkey and US spent its budget treating and disposing solid waste, maintaining its pollution control equipment and lab testing and sampling and environmental education and training. The expenditure reduced by 8.2 percentage from FY 2015-16 to 2016-17 but increased by 53.2 percentage for the year 2017-18.

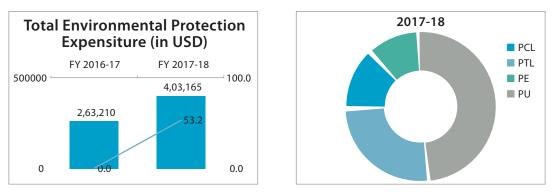


Figure 33: Total Expenditure on Environmental Protection by Polyplex group

## As a step towards sustainable global economy, we have undertaken following major environment related improvement initiatives:

- → Successful development of Green Pet film with a significant proportion of bio sustainable inputs and/ or usage of recyclate
- → Operationalized latest technologies to save power across plant locations which resulted in substantial improvements in terms of energy efficiency.
- → Switch over from **Furnace Oil to Rice Husk for oil heating system** in India which leads to reduction in greenhouse gases.

- → Dedicated recycling unit in Thailand which provided sustainable solution for plain and coated film waste.
- → Replaced PVC twist wrap in confectionary industry with green wrap PET film.
- → Replaced aluminium foil with metallized barrier PET film in food packing along with cost reduction.
- → Reduced waste generation through the re-use of process trims.
- → Switched to LED lighting across plants

#### **CASE STUDY**

#### INSTALLATION OF RICE HUSK BASED OIL HEATING UNIT



Management decided to install rice husk-based oil heating system as rice husk was available in plenty in this locality, so it was decided to use rice husk-based bio mass fuel as alternate.



The project took about 6 months' time to complete. It has led to reduction in Furnace Oil consumption, saving approximately 3,907.8 tonnes carbon dioxide per year. This similar project was already initiated at our Polyplex Bazpur operation in the year 2013

Figure 34: Rice Husk based Oil Heating

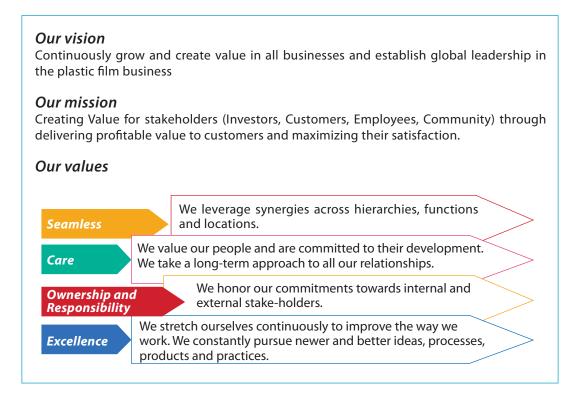
# 6 Our Workforce

At Polyplex, we treat our people as one of the most valuable asset in our organization and always strive to maintain a healthy relationship with them. We believe that the success of an organization is linked to its people and it is reflected in our vision, mission and values.

Polyplex is proud of its employees and the time and resources invested. We have a dedicated management team which delivers quick, flexible and high and quality customer service. The Group Head (Human Resources) is the highest authority for all human resources related issues and is supported by an HR team at all our plant locations. A quarterly review with all locations is conducted to discuss HR related issues like communication, worker participation and feedback.

The HR function of Polyplex influences the company's diverse portfolio to enrich employees with diverse

experience and challenges in various business context. We believe that everyone deserves to be treated with respect and trust and Polyplex provides an inclusive, collaborative and innovative environment to work. This means that each individual has the right to express their feelings professionally, including problems, complaints, suggestions or concerns.We have Management Systems Provisions in place covering management accountability for employees and the tracking and monitoring of applicable employment law and actively supporting our employees through trainings.



#### **6.1 Our Employees**

Polyplex understands the importance of people in gaining success in a challenging business environment. We have consistently developed a culture to attract,

develop and retain competent people. We have a total of 2451 employees which included 2002 permanent employees and 449 contract employees at the various manufacturing site and Corporate Heat Office as on 31st March 2018.

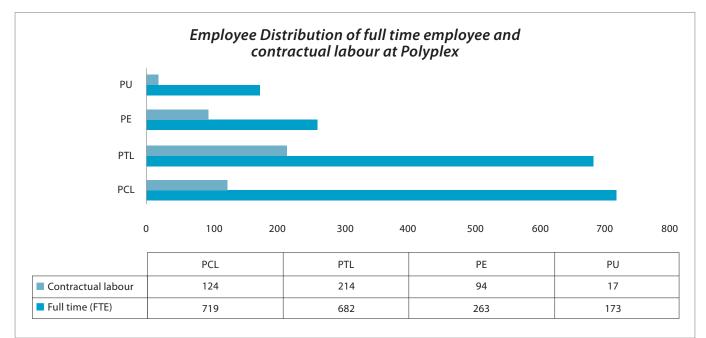


Figure 35: Employee Distribution of full-time employee and contractual labour at Polyplex

The average age of the employees at PCL is 35.5 years, PTL is 31.7 years, PE is 35.2 years and PU is 42 years as on 31st march 2018.

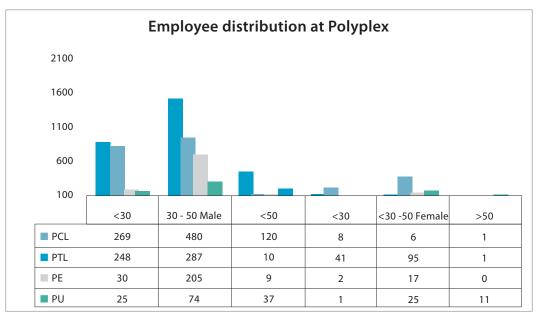


Figure 36: Employee Distribution by gender and age at various locations

#### **Employee Retention**

Polyplex is committed to boost the morale of the employees and retain them over the long term by providing those benefits and opportunities for career development. During the reporting period

A total of 339 people were recruited and 304 employees separated from the company. We conduct a

comprehensive exit interviews with the employees who resign. This helps Polyplex to improve the HR practices and employee retention programmes. The minimum notice period for the employees leaving the organization is as per contractual agreement made during employment which is in line with regulatory requirements. This information is typically communicated to employees prior to implementation of any significant change in the conditions of service that could affect them substantially.

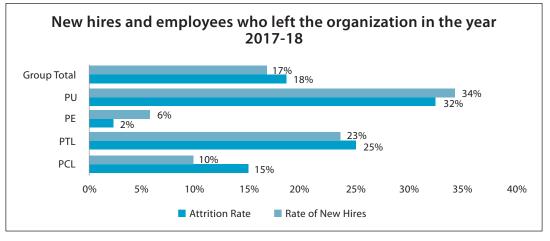


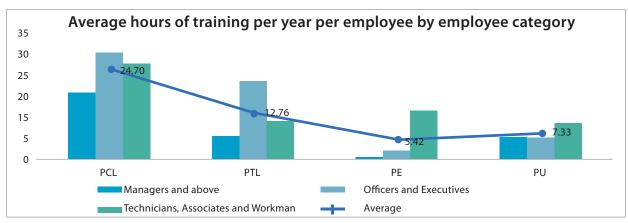
Figure 37: New hires and employees who left the organization during the year 2017-18

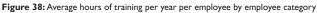
#### 6.2 Training and Skill Development

We have a separate People Development Cell (PDC) to identify function specific training need of the employees. Based on the need assessment, we provide class room trainings and on the job training to our employees.

Polyplex realizes the importance of its staff as they are valuable assets and play a major role in success and growth of the company. Therefore, we have a policy to develop the efficiency, knowledge and skills of its staff at all levels by having well organized training programs on a periodic basis. Training programs are designed to improve various aspects of work life like technical competence, quality assurance, team building, and enhancement of leadership skills, time management skills, safety awareness, basic firefighting etc. thereby improving operational efficiency as well as the quality of the working life of the employees.

For the FY 2017-18 the average training hours for male employee was 45 hours and female was 21 hours. The feedback of employees participating in such trainings is taken in order to help improvement of quality of seminars and trainings to be conducted in future.





Polyplex participated in "Interpack 2017", one of the world's leading trade fair for the packaging industry products, processes and machinery held in Dusseldorf (Germany) from 4th -10th May 2017. This was the third time we participated in Interpack and the response from customers was very encouraging. Besides renowned

European players in the packaging industry, the booth attracted customers from all over the world who showed interest in Polyplex products and solutions offerings. The PE Sales team managed the booth and were supported by our representatives.



Figure 39: Polyplex at Interpack Packing Fair

#### 6.3. Performance and Career Development

The percentage of employees' male and female who received formal performance appraisal for the total Polyplex group during the FY 2017-18 was 74 percent and 91 percent. PTL and PE employees had 100 percent formal performance appraisal for both the genders. We have open-door policy across the organization for employees to freely discuss their problems, aspirations and challenges with their supervisors. If the issues

are not resolved by the immediate supervisor, the HR department is also available for consultation and guidance.

During 2017-18, our operations in Turkey carried out Mentoring Programs for Lead Technicians which had 19 team leaders. The program had three training sessions on Sensing Manager, Understanding and Managing the Differences, Managers who train. The trainer Mr. Ilhan Gülertan trained the participants to improve their leadership skills.



Figure 40: Lead technician Mentoring Program 2017

#### 6.4 Employee Policies and **Schemes**

#### **Employee policies and schemes**

Our policies and schemes are outcomes of our commitment to our core values and that guide us in our day-to-day operations and help in governance. They continuously evolve with prevailing regulations and by interactions with stakeholders. We have a robust HR policy in place to help employees realize their full potential. As a company we encourage team work and establishing boundary less culture. We have the following policies for our employees.

#### A snapshot of our policies, schemes and benefits

•

•

•

- Equal Employment Opportunity
- Smoke Free Work Place
- Working Hours Policy
- Sexual Harassment Policy
- **IT Policy** •
- **Talent Review**
- **Employee Referral Scheme**
- Fund Scheme ESIC Scheme •

Flexi Benefit Plan

Gratuity Scheme

**Employee's Provident** 

- Superannuation Scheme •
- Housing Loan Interest Subsidy •
- Company Leased Accommodation
- Interview Travel Expense Reimburse-
- ment Group Personal Accident and Term
- Insurance
- Group Medical Insurance .
- Health Check-up .
- Subsidized Food Facility •
- Long Service Award •
- **Reward and Recognition**

#### 6.5 Activities for Employee well being

Polyplex group focuses on creating a stimulating work environment with support. We want our employees to have positive influence on all aspects, whether it's physical, mental or emotional. For this we carry out various activities for families of Polyplex employees throughout the year.

#### **Rewards and Recognition**

Our efforts start with the recruitment of candidates, career management, learningand development, and promotion and rewards for all employees. Polyplex not only offers its employees a career suited to their skills and experiences so that they can contribute value to the Company but also recognizes their efforts through rewards and recognitions. This encourages them to be a part of our growth over the long-term. We also reward our employees with long-term service awards on completion 0f 5, 10, 15, 20, 25, 30 and 35 years at Polyplex.



Figure 41: Rewards and Recognitions (Long Term Service Awards at PE and PU)

#### Physical fitness of the employees

Polyplex encourages employees to stay fit and promote stress management in the workplace for the improved health and well-being. Some of our programs include

access to fitness centers, participation in charity fitness challenges, company outings, community engagement opportunities, and team-building exercises involving badminton, cycling and yoga.



Figure 42: Snapshot of Fitness Centre and sports events at Polyplex (Fitness Centre at PCL, employees engaged in volley ball, dragon ball event, soft ball team, cycle race and marathon)

#### Engagement with communities

We drive engagement through employee volunteering and giving programs. Our efforts endure to grow, in part through our various programmes, which supports deserving local organizations through community investments. Our efforts are supported by local employee leadership teams that spearhead engagement opportunities in local communities.



Figure 43: Engagement with Communities

#### Employee families and festivals

Polyplex believes in fostering social bonds by serving as a destination for families, friends and communities. We identify and implement new activities that promotes employee well-being, which is extended to families. We also ensure that employees and their families are adequately covered during some key life events. During the year 2017-18, we celebrated employee birthdays, New Year, Children's day and other region specific festivals with our employees and their families.

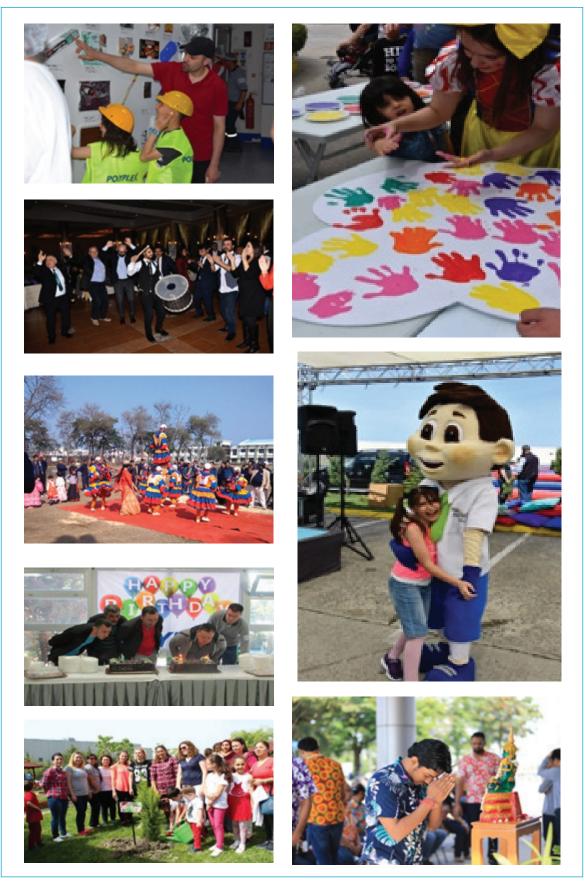


Figure 44: Employee families and festivals

#### **6.6 Integrity and Compliance**

#### Human Rights

At Polyplex, we take care that our transactions don't violate any human rights. We ensure the dignity and rights of the employees, consumers, vendors and all concerned stakeholders. We also believe that training our workforce on their human rights as well establishing permissible codes of conduct when dealing with our stakeholders is crucial. There were no case of human rights violation for the year 2017-18 in any of our operations.

#### Non-Discrimination

Polyplex is an equal opportunity employer and the effectiveness of the policy can be seen by the fact that we have not had any reported case of discrimination across any of our locations.

### Freedom of Association and Collective Bargaining

We believe that employees have a right to collectively represent themselves in front of management for certain matters and we are open to a negotiated process on such topics. At our operations in Khatima (India)more than one third of our employees are represented by the union. We have also formed various "Joint Welfare Committees" at all locations so that the short term, medium term and long term needs of all workers are brought to the attention of the management and resolved satisfactorily in a timely manner. Around 7 percent of our employees are covered by collective bargaining agreements.

#### Child forced and Compulsory Labour

Our recruitment and security systems ensure that children do not become part of our workforce. We strictly adhere to the National Child Labour (Prohibition and Regulation) laws of all the countries where we operate. We also do not support or promote forced or compulsory labour in any form. There have been no incidents of child or Forced Labour reported at any of our locations. Polyplex management will continue to conduct routine checks of original documents and maintains a copy of date of birth in the employee records of all personnel to ensure that operations continue to remain free of child and Forced Labour.

# 7 Workplace Safety

Polyplex believes that safe and healthy workplace is a basic right of every person and also a business imperative. We are committed to develop and maintain a safe, and healthy workplace to protect natural resources, human resources, plant and machinery.

At Polyplex we constantly aspire to provide a safe and healthy work environment for our employees. We have adopted best practices related to health and safety in all our operations.

We ensure that the Health and Safety standards at all our units are as per the legislations and also benchmark with the best international standards. Our approach is reflected in our EHS policy which emphasis on continuous improvement. All of our facilities are certified with OHSAS 18001:2007 certification on Occupational Health and Safety Management system. At all of our locations, respective business heads bear the responsibility of ensuring that all processes, equipment and facilities are operated and maintained in a safe manner, adhering to national, state, and local government regulations.

We have appointed a Safety Officers / Safety Manager at all of our manufacturing units to conduct safety audits and provide training on regular basis to our employees.

#### **ENVIRONMENT, HEALTH & SAFETY POLICY**

We are committed to develop and maintain and a safe, healthy and clean environment to protect natural resources, human resources, plant, machinery and environment by:

Continual improvement in the work practices and processes for prevention of pollution, injury and ill health and risk minimization through various objectives.

Compliance with applicable Safety, Health and Environmental Statutory requirements and needs of the interested parties.

Conservation of natural resources and waste reduction through involvement of personnel from all functions and levels in the organization

Figure 45: Snapshot of our EHS Policy at PCL

We also take support from external safety experts to conduct comprehensive safety audits, HAZOP analysis and thermography analysis, testing of pressure vessels, Lifting tools and tackles, etc.

#### Environmental, Health and Safety Policy

We have a separate EHS policy for all our operations. The policies are drafted such that they are aligned with the needs and regulations of the location. The snapshot of our EHS Policy in India is shown in the figure.

This policy is communicated to all our employees and displayed at various locations all across the plant.

#### 7.1 Health and Safety Committee

To address safety related issues, we has one APEX committee with four zonal committee in India and Plant level committee in Thailand, Turkey and US. The functions of the committee are to assist and cooperate with the management in achieving the aim & objective of health & safety policy and deal with all matters concerning health safety and to arrive at practicable solution to problems encounter. The committee is also engaged in creating safety awareness amongst all workers and undertaking educational, training and promotional activities.

The committee carries out a meeting every month to discuss the results of safety audit, risk assessment, emergency and disaster management plans and implementation status.

## 7.2 Workplace Safety and Management

#### Health and Safety Trainings

Our journey has transpired from compliance driven initiatives to a behavior centric safety culture. Our

operations are progressively working towards implementing behavior-based safety initiatives. To support this, we provide employees with various health and safety trainings regularly. Training needs are determined by Safety Specialist, as per local compliance requirement, process and activities specific competency requirement on industrial safety and based on Hazard identification and Risk assessment for individual process. We also maintain a yearly training calendar of safety trainings.

Polyplex has various training methodologies such as class room training from safety officer, class room training from expert external agencies, mock drills, On-The Job training and training with practical safety devises. If need technical experience such as fire control, first aid, it can be external training. Training is provided during paid working hours and it is mandatory for workers to attend. We also get feedback from the employees after class room the training.

During the year 2017-18 employees were provided trainings of Fire & Safety, First Aid, Gas Cylinder/Ammonia Handling, use of fire alarm panel, work permit system &LOTO, Electrical Safety, General Safety awareness, Environment protection, defensive driving, hydrant operation & fire control, Safety& Law, accident hierarchy & Near miss, Environmental Impact & Aspect and HIRA.



Figure 46: Health and Safety trainings at various locations of Polyplex

Polyplex also carries out voluntary services and programs aimed at addressing major non-work-related health risks among workers, including both physical and mental health-related risks. During the year 201718, PCL promoted non-smoking policy at workplace, PTL formed first aid teams with individual departments and PE organized blood donation camps.

#### **CASE STUDY**

#### IN HOUSE MODEL FOR MACHINE SAFETY



A team at Khatima plant has a vision of using innovation for improving safety. They decided and built a model of Silicon Coating Machine which was a replica of existing machine at Saracote Line 1 at Khatima.

This mini replica model which also has a handbook and is now used during induction period to train new employees. It includes all the safety equipment installed in the machine. Hence trainees can learn about operating the machine in a safe environment.

Polyplex also carries out health promotion programs such as driving safety program, Tobacco free day, Aids prevention promotion, hygiene and ergonomic trainings. PU has substance abuse facilities covered under the medical plan. For all employees an employee assistance program which is free for all employees. This program addresses the life/work issues of the employees. An employee can have in-person counseling sessions with the counselor. The counselor helps the employee with addiction, financial planning, divorce, child or elderly issues, etc.



Figure 47: Safety week celebration at Polyplex

#### **Emergency Preparedness**

At Polyplex each site has its own emergency preparedness plan. The plan covers basic Plant Information, Emergency Facilities available at the site, appointment of Key Personnel's & responsibility, methodologies for handling specific emergencies, first aid and medical management. It also has a list of key personnel phone number, trained first aiders, fire fighters, addresses and telephone directory of hospitals and telephone directory of the civic authorities. .

To check the applicability and shortcoming of our emergency case plan, Polyplex carried out mock drill exercise for their employees at various locations during the year 2017-18. During the exercise all personnel were gathered at assembly point area when hear the "evacuation siren – continuous siren".



Figure 48: Snapshot of Mock drill practice at Polyplex

#### Medical Centre and First Aid

To ensure the wellbeing of our employees we have medical centers across all our operations. We have first aid kits available at various sites and have trained our employees on using it to reduce the potential hazards. When employees are hired they go through health and safety discussions by the training department. A preventive health examination is carried out for the employees before joining the organization followed by annual physical examination.

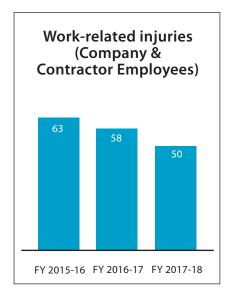
There were no work related health issues during the year 2017-18 and Audiometry and Spirometry test was conducted regularly to check the employees' health. The health records of the employees are maintained by external agency who conducts health checkups and one copy retained by HR department which is only accessible by concerned employee.

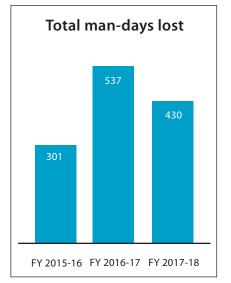


Figure 49: Snapshot of Fitness Centre, medical room and fitness camps

#### Occupational Health and Safety performance

During the year 2017-18 there were 82 cases of near miss and 43 work related injuries. The injuries were mostly cut injuries, stuck injuries, hit injuries, sprain and strain. Number of near misses are more in the year 2017-18 compared to the previous years due to more awareness amongst employee to report the near miss cases. The number of recordable work-related injury declined by 8.51 percent from the previous years. There were no highconsequence work-related injuries or fatalities during the last three years.





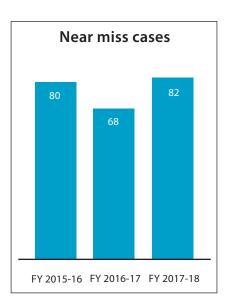


Figure 50: Work related injuries during the last three years

## 8

# **Our Community Initiatives**

For Polyplex CSR begins by being aware of the impact of its business on society. As operators in an industry that potentially has a high impact on the environment, Polyplex is conscious of its corporate responsibility towards habitat and communities. Polyplex specifically highlights the commitment towards society at large by making a meaningful difference in the lives of people.

### 8.1. Contributing towards the community

Polyplex realizes and cares for the safety of society, environment and quality of life of people. It places priority on activities relating to the community and the society and also by compliance of applicable laws and regulations relating to the same. In line with the requirements of Companies Act 2013, Polyplex has also constituted a CSR Committee with dedicated focus on achieving the desired objectives. This Committee is committed to deliver a positive impact across social, economic and environmental parameters.

Polyplex have been working towards the benefit of community and some of its measures include running a school since last two decades which has 1600 students in Khatima. We are closely integrated into local communities through sustained social programmes such as blood-donation drives at all its facilities across the world, free Eye Check-ups and Inoculation Camps in collaboration with local hospitals, installation of potable water coolers in public spaces, and active support to flood relief efforts in India and Thailand.

In Rayong, our group has collaborated with the Department of Fisheries for releasing shrimps into the Dok-Krai reservoir to generate local employment. We have also contributed to the Rekhta Foundation, in India established to promote and disseminate Urdu literature. The company periodically organizes Blood donation camps and encourages employees to donate blood. Apart from this, the Company also contributes donations both in cash and in-kind from time to time, to organizations engaged in various community services.



Figure 51: Students from local community in Khatima studying at School supported by Polyplex

## 8.2 Overview of Polyplex's CSR initiatives

**Overview of Polyplex's CSR initiatives during 2017 - 18** PCL India carried out social activities for the community throughout the year such as blood donation, Tree Plantation, Health Awareness Programs, awareness programmes in local community about hygiene etc. Under a P.P.P. (Public Private Partnership) model at Bazpur and Khatima, we have also adopted two local schools and provided them with infrastructure and furnishing.



Figure 52: Tree plantation and health awareness program at PCL Bazpur

PTL spent its CSR budget on blood donation camp, children's day activities, social welfare and Tree Planation Program. PTL staff's representative joined the national children day at Banmaenumkoo school maenumkoo Pluakdaeng Rayong. We donated scholarships fund for students get good grades in the classroom and stationary and also provided lunch with deserts to the children. The CSR team carried out a Love & Happiness sharing project to share love to our fellow humans by making a donations to help HIV-infected and orphaned children at Wat Phrabat Nampu, also known as the AIDS temple.

The CSR team of PTL conducted a project of charity for Elderly People at the Elderly Club, Map Yang Phon, Pluagdeang, Rayong. The objective of this project is to support the supplying and purchasing of medicines for the care of older people.. We also carried out a tree planting and save the sea project at Thai Island and Sea Natural History Museum and Samae San Island (Koh Samae San), Sattahip, Chon Buri. This project was conducted to encourage the PTL staffs to participate in the preservation of natural resources and Thai sea and to increase green areas in Thailand. The activity look smooth and the PTL staffs have cooperated very well.



Figure 53: Celebrations of Children's day, tree plantation, love and happiness program and charity for elderly people

PE donated old computers which were in good condition to nearby schools and also donated the old furniture which are not being used anymore to nearby charity societies. They also held blood donation camps for the employees.



Figure 54: Employees donating blood at PE

Everyone has dealt with cancer in some way, family, friends, and co-workers. PU supported American Cancer society for their automatic positive recognition through "Relay for Life", a great cause that helps in the treatment and prevention of cancer. Through "Dragon Boat" initiative in collaboration with Decatur Morgan Hospital Foundation, PU is providing local people what they did in getting the right health needs, recruiting

doctors/medical staff, and programs to affordability to health care. PU in collaboration with Salvation Army is providing nonperishable items for Church Cooperation and carrying out Backpackers feeding programs in Decatur City and Morgan County Schools through a programme called "Barrels of Love". PU also provides children with toys, clothing and shoes during Christmas.



Figure 55: CSR activies carried out by PU - dragon boat race, relay for life and Christmas celebrations for unprivileged kids

#### CSR Expenditure for the year 2017-18

For the reporting period, Polyplex spent 124,931 USD on CSR activities including education, healthcare, community welfare etc.

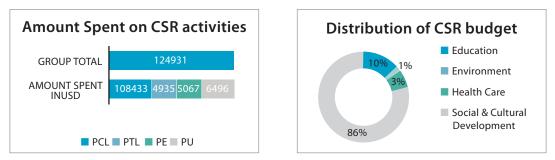


Figure 56: Amount spent on CSR activities by various units during the year 2017-18

# **GRI Content Index**

Disclosure Number	Disclosure Title	Chapter Name	Externally Assured		
	Organiza	tional Profile			
102-1	Name of the organization	About Polyplex, Overview	02		
102-2	Activities, brands, products, and services	About Polyplex, Our Products	10-19		
102-3	Location of headquarters	About Polyplex, Overview	02		
102-4	Location of operations	About Polyplex, Global Presence	10-11		
102-5	Ownership and legal form	About Polyplex	11-12		
102-6	Markets served	About Polyplex, Global Presence	10-12		
102-7	Scale of the organization		11-12		
102-8	Information on employees and other workers	Our Workforce, Our Employees	48		
102-9	Supply chain	-	10-13		
102-10	Significant changes to the organization and its supply chain	Our Economic Performance and Strategic Leadership, Financial Impact of Climate Change	32		
102-11	Precautionary Principle or approach	Corporate Governance, Risk Management	28-29		
102-12	External initiatives	Our Economic Performance and Strategic Leadership, Strategic Initiatives	34		
102-13	Membership of associations	About Polyplex, Awards, Certifications and Memberships	22		
	Strategy				
102-14	Statement from senior decision-maker	Message from CEO	6		
102-15	Key impacts, risks, and opportunities	Our Economic Performance and Strategic Leadership, Strategic Initiatives	34		
	Ethics a	nd Integrity			
102-16	Values, principles, standards, and norms of behavior	Corporate Governance, Internal Control Systems	29		
102-17	Mechanisms for advice and concerns about ethics	Corporate Governance, Internal Control Systems	29		
	Gov	ernance			
102-18	Governance structure				
102-19	Delegating authority		20		
102-20	Executive-level responsibility for economic, environmental, and social topics	Corporate Governance, Board of Directors	28		
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder Engagement and Materiality Assessment, Connecting with our Stakeholders	23		

102-22	Composition of the highest		
102-22	governance body and its committees		
102-23	Chair of the highest governance body	Corporate Governance, Board of Directors	28
102-24	Nominating and selecting the highest governance body		
102-25	Conflicts of interest	Stakeholder Engagement and Materiality Assessment	23
102-26	Role of highest governance body in setting purpose, values, and strategy	Our Economic Performance and Strategic	34
102-27	Collective knowledge of highest governance body	Leadership, Strategic Initiatives	
102-28	Evaluating the highest governance body's performance	Corporate Governance, Internal Control Systems Corporate Governance, Policies	29
102-29	Identifying and managing economic, environmental, and social impacts	Stakeholder Engagement and Materiality Assessment	23
102-30	Effectiveness of risk management processes		
102-31	Review of economic, environmental, and social topics	Stakeholder and Materiality Assessment	25
102-32	Highest governance body's role in sustainability reporting	Stakeholder and Materiality Assessment, Materiality Assessment	23
102-33	Communicating critical concerns		
102-34	Nature and total number of critical concerns		
102-35	Remuneration policies		
102-36	Process for determining remuneration	Corporate Governance, Policies	20
102-37	Stakeholders involvement in remuneration	Corporate Governance, Policies	29
	Stakeholde	er Engagement	
102-40	List of stakeholder groups	Stakeholder and Materiality Assessment, Identification of Stakeholders	23
102-41	Collective bargaining agreements	Our Workforce, Integrity and Compliance	54
102-42	Identifying and selecting stakeholders	Stakeholder and Materiality Assessment, Identification of Stakeholders	23
102-43	Approach to stakeholder engagement	Stakeholder and Materiality Assessment, Stakeholder Engagement Framework	24
102-44	Key topics and concerns raised	Stakeholder and Materiality Assessment, Materiality Assessment	24
Reporting Practice			
102-45	Entities included in the consolidated financial statements		
102-46	Defining report content and topic Boundaries	What is covered in the Report?	02
102-47	List of material topics	Stakeholder and Materiality Assessment, Materiality Assessment	24

102-48	Restatements of information		
102-49	Changes in reporting		
102-50	Reporting period		
102-51	Date of most recent report		
102-52	Reporting cycle	What is covered in the Report?	02
102-53	Contact point for questions regarding the report		
102-54	Claims of reporting in accordance with the GRI Standards		
102-55	GRI content index	GRI Content Index	64-73
102-56	External assurance		
	Economic	Performance	
103-1	Explanation of the material topic and its Boundary	Our Economic Performance and Strategic relationships	32
103-2	The management approach and its components	Our Economic Performance and Strategic relationships, Snapshot of our Economic	
103-3	Evaluation of the management approach	Performance Our Economic Performance and Strategic relationships, Strategic initiatives	32-34
	GRI 201: Econo	omic Performance	
201-1	Direct economic value generated and distributed		
201-2	Financial implications and other risks and opportunities due to climate change	Our Economic Performance and Strategic relationships, Snapshot of our Economic Performance	32-34
201-3	Defined benefit plan obligations and other retirement plans	Our Economic Performance and Strategic relationships, Strategic initiatives	
201-4	Financial assistance received from government	i clationships, stategie initiatives	
	Marke	t Presence	
103-1	Explanation of the material topic and its Boundary	About Polyplex, Global Presence	10-11
103-2	The management approach and its components	Our Economic Performance and Strategic	32-34
103-3	Evaluation of the management approach	relationships, Snapshot of our Economic Performance	
	GRI 202: M	arket Presence	
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	-	
202-2	Proportion of senior management		

	Indirect Economic Impacts			
103-1	Explanation of the material topic and			
	its Boundary	Our Economic Derformance and Strategic		
103-2	The management approach and its components	Our Economic Performance and Strategic relationships, Financial impact of Climate Change	32	
103-3	Evaluation of the management approach	Change		
	GRI 203: Indirec	t Economic Impacts		
203-1	Infrastructure investments and services supported	Our Economic Performance and Strategic relationships, Financial impact of Climate	32	
203-2	Significant indirect economic impacts	Change		
	Procurem	ent Practices		
103-1	Explanation of the material topic and its Boundary	Corporate Governance, Risk Management	28	
103-2	The management approach and its components	Corporate Governance, Risk Management	28	
103-3	Evaluation of the management approach	Corporate Governance, Risk Management	28	
		Our Economic Performance and Strategic relationships, Financial impact of Climate Change	32	
	GRI 204: Proc	urement Practices		
204-1	Proportion of spending on local suppliers	-		
Anti-Corruption				
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Corporate Governance, Policies	29	
103-3	Evaluation of the management approach			
	GRI 205: A	nti-Corruption		
205-1	Operations assessed for risks related to corruption	-		
205-2	Communication and training about anti-corruption policies and procedures	-		
205-3	Confirmed incidents of corruption and actions taken	-		
	E	nergy		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Environmental Stewardship and Energy Management, Energy Management		
103-3	Evaluation of the management approach			

GRI 302: Energy			
302-1	Energy consumption within the organization		
302-2	Energy consumption outside of the organization	Environmental Stewardship and Energy	38
302-3	Energy intensity	Management, Energy Management	
302-4	Reduction of energy consumption		
302-5	Reductions in energy requirements of products and services		
	V	Vater	
103-1	Explanation of the material topic and its Boundary		
103-2	The management approach and its components	Environmental Stewardship and Energy Management, Water Management	42
103-3	Evaluation of the management approach		
	GRI 3	03: Water	
303-1	Water withdrawal by source		
303-2	Water sources significantly affected by withdrawal of water	Environmental Stewardship and Energy Management, Water Management	42
303-3	Water recycled and reused		
	Bioc	liversity	
103-1	Explanation of the material topic and its Boundary		
103-2	The management approach and its components	Environmental Stewardship and Energy Management, Biodiversity	45
103-3	Evaluation of the management approach		
	GRI 304:	Biodiversity	
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		
304-2	Significant impacts of activities, products, and services on biodiversity	Environmental Stewardship and Energy Management, Biodiversity	45
304-3	Habitats protected or restored		
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations		
		issions	
103-1	Explanation of the material topic and its Boundary		
103-2	The management approach and its components	Environmental Stewardship and Energy	43
103-3	Evaluation of the management approach	Management, Emissions	

	GRI 305: Emissions			
305-1	Direct (Scope 1) GHG emissions			
305-2	Energy indirect (Scope 2) GHG emissions	Environmental Stewardship and Energy		
305-3	Other indirect (Scope 3) GHG emissions		43	
305-5	Reduction of GHG emissions	Management, Emissions	15	
305-6	Emissions of ozone-depleting substances (ODS)			
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions			
	Effluent	s and Waste		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Environmental Stewardship and Energy	44-45	
103-3	Evaluation of the management approach	Management, Waste Management		
	GRI 306: Effl	uents and Waste		
306-1	Water discharge by quality and destination	Environmental Stewardship and Energy	44-45	
306-2	Waste by type and disposal method	Management, Waste Management		
306-3	Significant spills			
Environmental Compliance				
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Environmental Stewardship and Energy Management, Best Practices	45-46	
103-3	Evaluation of the management approach			
	GRI 307: Enviror	nmental Compliance		
307-1	Non-compliance with environmental laws and regulations	Environmental Stewardship and Energy Management	45-46	
	Emp	loyment		
103-1	Explanation of the material topic and its Boundary	Our Workforce, Our Employees		
103-2	The management approach and its components	Our Workforce, Employee Scheme and Policies	51-53	
103-3	Evaluation of the management approach	Our Workforce, Activities for Employee well being		
	GRI 401:	Employment		
401-1	New employee hires and employee turnover			
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Our Workforce, Our Employees	48-49	

	Labour/ Mana	gement Relations		
103-1	Explanation of the material topic and	Our Workforce, Our Employees		
100 1	its Boundary			
103-2	The management approach and its components	Our Workforce, Employee Scheme and Policies	51-53	
103-3	Evaluation of the management approach	Our Workforce, Activities for Employee well being		
	GRI 402: Labour/ M	Nanagement Relations		
402-1	Minimum notice periods regarding	21 days or as per statutory notification of the		
	operational changes	labour department		
		Health and Safety		
103	Explanation of the material topic and its Boundary	Workplace Safety	55	
	The management approach and its components	Workplace Safety, Health and Safety Committee	55	
	Evaluation of the management approach	Workplace Safety, Workplace Safety and Management	55-59	
	GRI 403: Occupatio	onal Health and Safety		
403-1	Workers representation in formal joint management-worker health and safety committees	Workplace Safety, Health and Safety Committee	55	
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work- related fatalities	Workplace Safety, Workplace Safety and Management	55-59	
	Training a	and Education		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Training and Skill Development	49	
103-3	Evaluation of the management approach			
	GRI 404: Train	ing and Education		
404-1	Average hours of training per year per employee			
404-2	Programs for upgrading employee skills and transition assistance programs	Our Workforce, Training and Skill Development	49	
404-3	Percentage of employees receiving regular performance and career development reviews	Our Workforce, Performance and Career Development	50	
	Diversity and Equal Opportunity			
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			

	GRI 405: Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees			
405-2	Ratio of basic salary and remuneration of women to men	Our Workforce, Integrity and Compliance	54	
	Non-Dis	crimination		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 406: Nor	n-Discrimination		
406-1	Incidents of discrimination and corrective actions taken	Our Workforce, Integrity and Compliance	54	
	Freedom of Associatior	and Collective Bargaining		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 407: Freedom of Associ	ation and Collective Bargaining		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Our Workforce, Integrity and Compliance	54	
	Child	l Labour		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 408:	Child Labour		
408-1	Operations and suppliers at significant risk for incidents of child labor	Our Workforce, Integrity and Compliance	54	
	Forced or Co	mpulsory Labour		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 409: Forced o	r Compulsory Labour		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Our Workforce, Integrity and Compliance	54	

	Security Practices			
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 410: Se	curity Practices		
410-1	Security personnel trained in human rights policies or procedures	-		
	Rights of Inc	ligenous People		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 411: Rights o	f Indigenous People		
411-1	Incidents of violations involving rights of indigenous peoples	Our Workforce, Integrity and Compliance	54	
	Human Rig	hts Assessment		
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our Workforce, Integrity and Compliance	54	
103-3	Evaluation of the management approach			
	GRI 412: Human	Rights Assessment		
412-1	Operations that have been subject to human rights reviews or impact assessments			
412-2	Employee training on human rights policies or procedures	-		
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening			
	Local Communities			
103-1	Explanation of the material topic and its Boundary	Our Community Initiatives	60	
103-2	The management approach and its components	Our Community Initiatives, Contributing towards the community	60	
103-3	Evaluation of the management approach	Our Community Initiatives, Overview of Polyplex's CSR initiatives	60-63	

	GRI 413: Local Communities			
413-1	Operations with local community engagement, impact assessments, and development programs	Our Community Initiatives, Overview of Polyplex's CSR initiatives	60-63	
413-2	Operations with significant actual and potential negative impacts on local communities	Our Community Initiatives, Overview of Polyplex's CSR initiatives		
	Socio-economic Compliance			
103-1	Explanation of the material topic and its Boundary			
103-2	The management approach and its components	Our workforce	54	
103-3	Evaluation of the management approach			
GRI 419: Socio-economic Compliance				
419-1	Non-compliance with laws and regulations in the social and economic area	Our Workforce, Integrity and Compliance	54	



#### **Polyplex Corporation Limited**

Corporate Office: B-37, Sector - 1, Noida - 201 301 Gautam Budh Nagar, Uttar Pradesh, India Tel: +91-120-2443716 to 19 Fax: +91-120-2443723