

Management Discussion & Analysis Report

ECONOMIC/INDUSTRIAL OVERVIEW

Globally, FY 2019-20 remained a year of slowdown economic activities, mainly caused by extended US-China trade war and Brexit concerns. From last quarter of FY 20 onwards, the Covid-19 pandemic and the resultant economic shutdown in most part of the globe has disrupted billions of lives and are jeopardizing decades of development progress. As per World Economic Outlook Report of International Monetary Fund (IMF), as a result of the pandemic, the global economy is projected to contract by negative 3 percent in 2020. Further, as per IMF's report, the global economy is predicted to grow by 5.8 percent in 2021 as economic activity normalizes. This estimate is based on the premise that this pandemic fades in the later part of 2020 and containment efforts can be gradually unwound.

Indian economy too faced the slow growth trend and liquidity challenges with the start of FY 20. In response, the Government reduced corporate tax rates, taken steps towards bank consolidation, to add robustness to the banking system and improve flow of credit to private sector. Additionally, the Reserve Bank of India cut its benchmark rates by 0.85% to stimulate private investment. To jack up the economy further and in order to convert the Covid-19 crisis as an opportunity to achieve economic self-reliance, recently Indian Government announced the Atmanirbhar Bharat Abhiyan (or Self-reliant India Mission)- an economic package -worth Rs. 20 lakh crore or about 10% of India's GDP.

Amid the Covid-19 pandemic, India's GDP growth forecast for the fiscal year 2020 is estimated at 1.9% by the IMF who also have projected India's GDP growth forecast to 7.4 percent for fiscal year 2021.

India's further improved its ranking in the World Bank's Ease of Doing Business Index by 14 places in the 2019 edition to reach 63rd position. This is despite the fact that in 2019, private consumption, private investments and exports slowed down.

As per report published by McKinsey & Company in February, 2020 titled "The Indian chemical industry: Unleashing the next wave of growth", India's chemicals story is one of outperformance and promise. A consistent value creator with positive outlook, the chemical industry remains an attractive hub of opportunities even in an environment of global uncertainties. Worldwide trends affecting the global chemical industry could lead to near-term opportunities for chemical companies in India. As per FICCI report, India's chemical industry is one of the fastest growing in the world. Chemicals industry in India is highly diversified, covering more than 80,000 commercial products. It is broadly classified into Bulk chemicals, Specialty chemicals and Agrochemicals, Petrochemicals, Polymers and Fertilizers. Between 2006 and 2019, the compound annual growth rate (CAGR) in total returns to shareholders (TRS) for India's chemical companies was 15 percent, much higher than the global chemical-industry return, with a CAGR of 8 percent, and the overall global equity market, with a CAGR of 6 percent. The Indian chemicals industry is projected to reach \$ 304 billion by 2025. Indian chemical industry (excluding pharmaceutical products) rank 14th in exports globally. More than 2 million people are employed with this Industry in India.

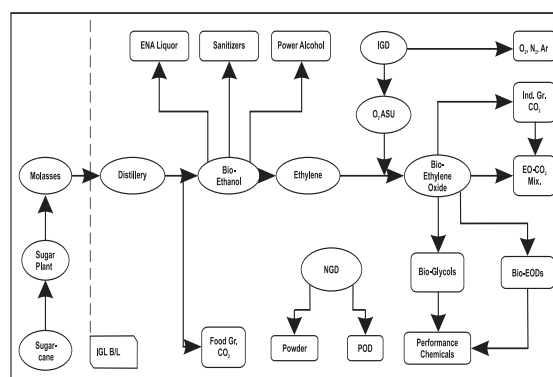
India Glycols Limited being the only green petrochemical Company of its kind, figures in the list of leading chemical manufacturers in the country.

PRODUCTS

INDIA GLYCOLS LIMITED is one of the leading manufacturers of Glycols, Ethylene Oxide Derivatives viz., surfactants and speciality chemicals, Ethyl Alcohol (Potable), Natural Gum & Derivatives, Herbals/ Nutraceuticals and Industrial Gases. Our belief in providing the desired products with the help of the best technology is reflected in our state-of-the-art integrated manufacturing facilities.

The manufacturing building blocks are as presented below:

Manufacturing Building Blocks



The Company has organised its business into:

A. Chemicals having following segments:-

- Glycols (MEG, DEG, TEG and Heavy Glycols).
- Ethylene Oxide Derivatives (EODs) viz. Speciality Chemicals and Ethoxylate.
- Power Alcohol, Industrial Gases, Natural Gum etc.

B. Ethyl Alcohol (Potable) and Extra Neutral Alcohol (ENA).

C. Nutraceuticals (previously termed as Herbal).

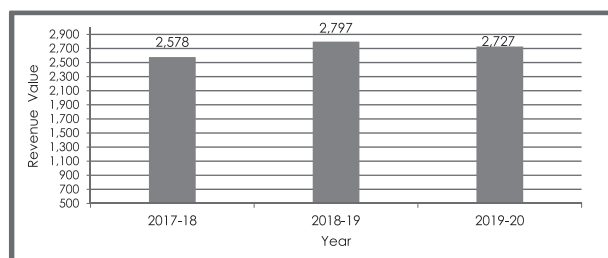
The segment wise business share is indicated as below:-

| Segment | Gross Revenue 2019-20 (₹ In Crores) (Domestic + Exports) | % Share |
|-----------------------------------|---|---------------|
| A. CHEMICALS | 2,727 | 45.82 |
| B. ETHYL ALCOHOL (POTABLE) | 3,041 | 51.10 |
| C. NUTRACEUTICALS | 183 | 3.08 |
| TOTAL | 5,951 | 100.00 |

CHEMICAL SEGMENT

Gross revenue in chemical segment has decreased from ₹ 2,797 Crores in FY 2018-19 to ₹ 2,727 Crores in FY 2019-20. This segment has contributed about 45.82% of the gross revenue of the Company.

| FY | 2017-18 | 2018-19 | 2019-20 |
|---|---------|---------|---------|
| Chemical Gross Revenue (₹ in Crores) | 2,578 | 2,797 | 2,727 |



GLYCOLS

Sales of Glycols [Monoethylene Glycol (MEG), Diethylene Glycol (DEG), Triethylene Glycol (TEG), Heavy Glycols and Glycols Ether] has decreased from 1,53,004 MT in FY 18-19 to 1,04,779 MT in FY 19-20 and resultantly, the sales value also decreased from ₹1,448 Crores to ₹1,114 Crores, respectively. In domestic market, the sales of MEG was restricted due to low prevailing MEG prices and realization. Also there was some reduction in exports sales volume, due to low offtake by our Bio-MEG customers. The sales was affected primarily in Glycol Ethers & Acetates segment due to surplus availability of low priced Butyl Glycol & PMA, in the International market.

The Company always believes in innovations and, therefore, under the crisis time of Covid-19 pandemic, the Company introduced range of sanitization/disinfectants products under the Brand HandSantol™ to contain the spread of the Covid-19 pandemic and thus, successfully converted this crisis into an opportunity even before the same was envisaged by the Atma-nirbhar Bharat Abhiyan.

With this, the Company is not only serving its social responsibility through making available these social hygiene products to the society but also will be in the position to strengthen its business as these products will obviously garner more revenue in times to come.

Ethylene Oxide Derivatives (EODs)

Sales under Ethylene Oxide Derivatives (EOD/Specialty Chemicals & Ethoxylate) business was increased from 69,363 MT in FY 18-19 to 74,037 MT during FY 19-20 and whereas the sales value was registered as ₹ 735 Crores and ₹ 752 Crores, respectively.

Ethylene Oxide Derivatives produced by the Company are used by diverse industries like Textile, Agrochemicals, Detergents, Pharmaceuticals & Personal Care, Oil Field and Automotive industry, paint & coating industry etc.

The Company aims to further increase its business by developing new products and applications especially in areas of Home Care, Personal Care, Hygiene & Disinfectant applications, as also in areas of textile

chemicals, oil field chemicals, paper chemicals etc. The thrust would be in line with the strategy to maximise EODs business in view of increasing the usage of EO for EO Derivatives for improved margins.

Surfactants And Speciality Chemicals

In order to meet the requirements of various industry sectors, India Glycols has been developing specialty surfactants as well as specialty chemicals for niche applications. These products are sold based mainly on their performance.

Bio-Ethoxylates

Bio-Ethoxylates in the international market are gaining acceptability and can be a good opportunity for better realisation in the niche market segments, where customers are looking for eco-friendly products. The Company has been successful in inducting large corporates into its customer base which is gradually growing globally.

OPPORTUNITIES & CHALLENGES

MEG consumption for polyester industry for 2019-20 has been around 2.90 million tonnes. The limiting factor in the growth was the lower demand in the market resulting in overall growth of about 6-7% in Polyester Industry. Also, there was addition of new capacities and expansion in Polyester Film & POY segment leading to increased price competition in India. Globally, the trade restrictions imposed by China & US on each other and addition of around 2 Million capacity of MEG has further led to intense competition in price and easy availability of MEG stocks world over.

Domestic production of MEG was around 1.80 million tonnes primarily from Reliance & IOC and balance demand has been met through imports. Overall demand supply balance has not been favourable for MEG producers in the world market in 2019-20 with prices averaging around US\$ 550 during the financial year ended 31st March, 2020.

In order to ensure that the new products are delivered in time as per the needs of the customers, we have identified new growth areas and introduced new products such as Hand Sanitizers and Disinfectants in our product portfolio. Also, improvements in cost of many of our large-volume products were done through process validation to improve yield, production efficiency and usage of alternative Raw Materials. In addition, multiple initiatives have been taken to develop more Green products to meet the rising demand of environment-friendly surfactants and specialty chemicals based on renewable resources.

We are promoting our Glycols as Bio/ Green MEG to potential customers interested in meeting their objective of using environment friendly chemicals made from natural renewable resources. We have converted this concept into a good business opportunity which will enable higher capacity utilisation with better realisation. The Company is also embarking upon manufacturing Amine based

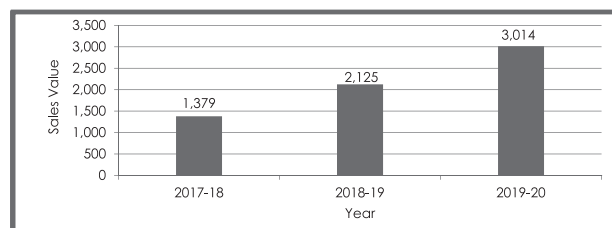
EO derivatives in near future. This will further add to the diversified portfolio of the Company and will give a competitive edge.

ETHYL ALCOHOL (POTABLE), EXTRA NEUTRAL ALCOHOL (ENA)

During the year, your Company registered total sales value of ₹ 3,014 Crores as compared to ₹ 2,125 Crores last year in the Ethyl Alcohol (Potable) division. Due to persistent efforts for export of high quality Extra Neutral Alcohol (ENA), the Company has gained the position of a premium supplier of quality ENA in the international markets. The Company has been certified by CONTROLUNION, an International certifying agency, for “Bonsucro MB ‘Chain of Custody’ Standard” for ENA- Special Sprit.

During the year under review, the Company launched Indian Made Foreign Liquor (IMFL) brands namely ‘IGL Bunt Vodka Green Apple’ and ‘IGL Salute Premium Whisky’ in Tetra Pack – 180 ML, a Premium Vodka & Whisky in semi-premium segment in the State of Uttar Pradesh in addition to existing Brands which are available in the States of Uttarakhand, Uttar Pradesh, Delhi and Himachal Pradesh. The Company plans to produce IMFL brands soon from its Gorakhpur Unit.

| FY | 2017-18 | 2018-19 | 2019-20 |
|-------------------------------|---------|---------|---------|
| ENA Sales Value (₹ In Crores) | 1,379 | 2,125 | 3,014 |



POWER ALCOHOL

In our continued thrust towards manufacturing sustainable/ renewable components, the Company has set-up Power Alcohol plants at Kashipur and Gorakhpur units each with a capacity of 100 KL per day. During the year under review, consequent to receipt of necessary approvals, production and supplies of Power Alcohol to Oil Manufacturing companies (“OMC’s”) for blending in Petrol as per Govt. Policy were also started by the Company from its Gorakhpur Unit. Kashipur Unit has already producing and supplying the same for some time now. The Company registered a revenue of ₹ 143 Crores from sale of Power Alcohol during the financial year 2019-20.

INDUSTRIAL GASES

During the year under review, the Company, from its Air separation unit, produced 18,098 MT of Liquid Oxygen and 1,171 MT of Liquid Nitrogen. Both Liquid Oxygen and Liquid Nitrogen were sold in the market and also used for in-house requirements. In addition, Argon of 2,441 MT

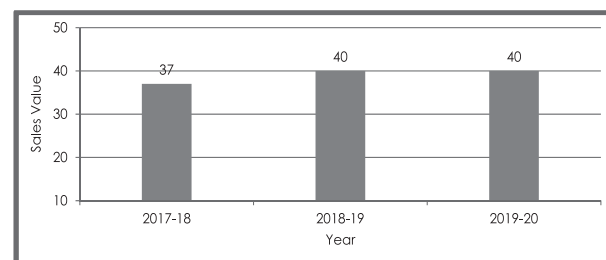
was also produced and its sales were 2,451 MT.

Industrial Gas Division also produced Beverage and Industrial Grade Liquid Carbon Di-oxide (LCO₂) at Kashipur. During the year, your Company has produced 35,907 MT of LCO₂ and its sale was 33,678 MT.

Your Company also produced ETO (Ethylene Oxide & Carbon Dioxide Gas Mixtures) under the trade name IGL-STERI GAS at its Kashipur Plant. It is suitable for sterilization of Disposable Surgical & Medical Devices, spices and packing substances like rubber, plastic etc. The Company has in-house facilities for production of EO and LCO₂ which are used in production of ETO and as such it is the only plant in India to have such manufacturing facility, which gives us a distinct edge over other suppliers in the market. During the year under review, the Company has sold 1,132 MT of STERI Gas as compared to 1,062 MT in the last year.

Further, the Industrial Gases segment registered total sales of all gases of ₹ 40 Crores as compared to ₹ 40 Crores during the last year.

| FY | 2017-18 | 2018-19 | 2019-20 |
|---------------------------|---------|---------|---------|
| Sales Value (₹ In Crores) | 37 | 40 | 40 |



NUTRACEUTICALS (PREVIOUSLY TERMED AS HERBALS)

During the year, your Company registered sale value of ₹ 178 Crores as compared to ₹ 160 Crores last year in the Ennature Bio-pharma (Nutraceuticals) division.

Some of the products developed successfully in the recent past include Liquid Nicotine & various salts, for the cigarette replacement therapy. Additionally, the Company has developed another good molecule Asiaticoside/ Madecassosides apart from existing Centella Asiatica for skin repair and poised to do well. The Company has also launched maxicuma (a curcumin formulation) in nanotized form which is more bioavailable than curcumin itself, proven in the preclinical trials on animal models. This segment is growth & result oriented with an objective & concern for environment, transforming lives through green technology for isolation & purification of phytochemicals.

EXPORTS

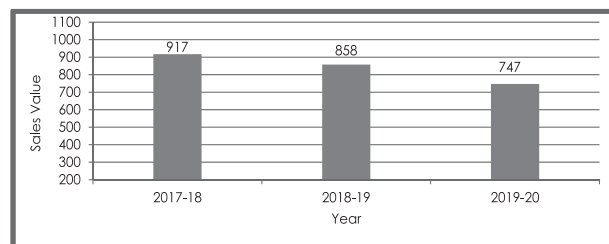
With an eye on the environment conscious green chemicals global market, for the past few years the Company has been focusing on exports as one of its key segments for future growth. The Company has positioned itself as a 'Green Chemicals' Company in the international market and is today a well-known supplier of bio-glycols and bio-ethoxylates. This is being done as a planned strategy to cater to the global niche green market of Multinationals & Large Corporates, who have a special concern for the environment and have their internal CSR objectives of moving towards green products. The Company has been able to find a stronghold in the Bio-MEG/Bio-PET segment where its products are being used by large corporates worldwide.

The Company already has a well established position in the domestic speciality ethoxylates market segment. The Company intends to use its wide experience in this segment in the domestic market to give thrust to exports of similar products in the international market. The Company has leveraged its competitive advantage as one of the very few companies worldwide in the space of bio-based ethoxylates/ surfactants.

The global chemical trade remained adversely affected by US-China trade war and low crude oil prices leading to surplus availability in SE Asia, China and Far East. The Bio-MEG sales grew in Far East markets but experienced a slowdown in US/European markets. Sales of Glycol Ethers also showed a dip due to low petro based EO prices which led to decline in EOD prices in SE Asia and China. Bio-Ethoxylate segment did show a good growth and this market is expected to grow further in coming years.

During the year under review, your Company has recorded export sales value of ₹ 747 Crores as compared to ₹858 Crores during last year. The Company continues to hold the 'Three Star Export House' status as granted by Government of India.

| FY | 2017-18 | 2018-19 | 2019-20 |
|--------------------------------------|---------|---------|---------|
| Exports Sales Value (₹ In Crores) | 917 | 858 | 747 |



FINANCIAL REVIEW

Despite the challenging economic conditions during the Financial Year 2019-20, the Company's overall performance remained good. During the FY 2019-20 on a standalone basis, your Company recorded total revenue of

₹ 5,963 Crores as compared to ₹ 5,133 Crores in FY 2018-19, an increase of about 16%. Whereas, the profits after depreciation and tax for the FY 2019-20 were ₹128 Crores as compared to ₹ 148 Crores during the FY 2018-19.

The liquor business of the Company continued to perform well and supported the bottom line. The year gone by witnessed the prolonged US-China trade war, continued low crude prices and Covid-19 spread in China. All this, led to low demand and prices of MEG internationally and impacted the revenue and profits of the Chemical business marginally. The nutraceutical business registered a growth of over 10% in revenue over the previous year and continued its trend of good profit margins.

The Company steadily procured its green feedstock molasses throughout the year at good prices to keep its inventory under control. Also, the Company continued to import its principal raw material-ethyl alcohol at an attractive price resulting savings in cost.

During the year under review, the Gross Fixed Assets has increased to ₹ 2,453 Crores in FY 2019-20 from ₹ 2,340 Crores in FY 2018-19.

The Company has been regular in meeting its obligations towards timely payment of principal/interest to the financial Institutions and Banks.

Details of significant changes in key financial ratios:

- Net profit margin ratio was reduced to 2.16 % as compared to last year of 2.90 % due to decline in Bio MEG prices globally and resultantly lower sales value.
- Debtors turnover ratio was 10.36 % in comparison of 15.52 % during last year. The increase in debtors was largely due to impact of lockdown as imposed by the Government of India/State Governments.

Except the above, there is no significant changes in the key financial ratios of the Company during FY 20.

For the Company, Ind-AS is applicable from 1st April, 2016 with a transition date of 1st April, 2015. The financial statements have been prepared in accordance with the recognition and measurement principles laid down under Ind-AS as presented under Section 133 of the Companies Act, 2013 read with the relevant rules issued thereunder and the other accounting principles generally accepted in India, as applicable.

COVID- 19 PANDEMIC IMPACT

The Company's operations were disrupted for short duration as a consequence of the outbreak of Covid-19 Pandemic followed by the imposition of nationwide lockdown by the Government of India. All Plants resumed operations in phased manner after shutdown with all safety measures in place and are operational presently. The Company enabled work from Home for its employees and offices are being resumed with full safety measures and as per government directions.

On the basis of evaluation and current indicators of future economic conditions, the Company does not anticipate

any major challenge in respect of liquidity position in the year 20-21, to meet its commitments.

A definitive assessment of the future impact on our operations at this stage would be premature. Also, the impact assessment of Covid-19 is a continuing process, given the uncertainties associated with its nature and duration. The Company will continue to monitor any material changes to future economic conditions and is confident about adapting to the changing business environment and respond suitably to fulfil the needs of its customers.

OUTLOOK

India ranks 14th in export and 8th in import of chemicals (excluding pharmaceutical products) globally and the demand for chemical products is expected to grow at approximately 9% p.a. over the next 5 years. The Company has leveraged its competitive advantage as one of the very few companies worldwide in the space of bio-based ethoxylates/ surfactants. The lower carbon footprint and the use of green feedstock for production by the Company finds a mass appeal with many major global companies. The focus for the future would remain in the area of marketing Bio-MEG, Bio Ethoxylates and performance chemicals such as specialty surfactants and specialty chemicals to niche markets.

During Q4/FY 20, when Covid-19 Pandemic started showing its presence in India, the Company converted the challenging time into a business opportunity by start producing Alcohol based Hand Sanitizer, post obtaining all the requisite approvals, a definitive booster to the revenue in the future time.

Also, with increasing environment related concerns across globe in recent times and rising demand for green and environment friendly products, IGL, being the only green petrochemical Company of its kind, would have better business opportunities in different industry sectors in the time to come.

SUSTAINABILITY: HEALTH, SAFETY, ENVIRONMENT & MANAGEMENT SYSTEMS

India Glycols Limited prioritize employee's Safety, Health and Environment to enhance its reputation as a responsible corporate. The Company has signed on to Responsible Care® Guiding Principles to become signatory to Indian Chemical Council's Responsible Care® initiative. These Principles apply to the Company globally. Being a Responsible Care® signatory, Company is committed for continual improvement of the performances in the fields of environmental protection, occupational safety and health protection, process safety, product stewardship and logistics, as well as to continuously improve dialog with the neighbours and the public.

HEALTH

Your Company accords very high priority to provide healthy and safe working environment. Company has a medical centre at factory site with basic amenities; two qualified and experienced doctors with trained and experienced para-medical personnel are available round the clock to meet any contingency. The Company also has a qualified Occupational Health Physician. Company

also has an ambulance to provide necessary assistance in case of any emergency. All employees are required to undergo annual medical check-up for early diagnosis of any health problem. Company has made arrangements for treatment of employees and their dependents under the mediclaim insurance policy, which allows employee to avail treatment from any of the listed hospitals without having to make any immediate cash payments. This provides the employees much needed emotional and financial security. The Company organizes blood donation camp as part of community welfare activities.

The Company also organizes medical camps at nearby villages and organize/assist in National health related programs in the nearby villages as part of community welfare activities.

SAFETY

Your Company has set up elaborate safety systems to ensure proper safe work environment. Emphasis is given to prevention of any accident. As a result of strict safety norms being followed Company has been able to maintain good safety record and has received various prestigious national and international safety awards recognizing the safe working environment available at the factory.

A Central Safety Committee has been constituted to continuously review and upgrade the safe working practices. Emergency management plan is in place for mitigating any kind of emergency. Proper systems have been set up to record and report any accident, which is thoroughly investigated and corrective action taken for future prevention.

At work place appropriate protective equipment and gears are provided to the employees and usage of the same is strictly monitored to ensure high level of safety. Safety training programs are regularly conducted for training the employees in proper use of safety equipment and following the safe work practices.

The Company always encourage internal and external stakeholder by conducting motivational program on safety by celebration of National Safety day, Fire Service Day and Transport safety awareness program to promote safe work practices and environment inside and outside premises.

Various incentive schemes are in operation for motivating the employees to ensure working in the safe environment. The Company has its own Fire Station fully equipped with Fire Tenders, modern communication facilities and elaborate auto fire hydrant system and other equipment which are manned and supervised by trained experts. There is also auto fire alarm system covering all the areas. Live fire training drills are organized to provide hands-on training to the employees.

ENVIRONMENTAL STEWARDSHIP

Environmental stewardship refers to responsible use and protection of the natural environment through conservation and sustainable practices.

Your Company uses molasses, residue product of sugar mills generated in the process of manufacturing of sugar. The molasses converted into alcohol in the captive distillery and thereafter used in the process to make ethylene oxide

and its products. Company has set up elaborate systems by making substantial capital investments for proper treatment of the effluent generated and meets all the requirements in this regard. Company has also installed Rain Water Harvesting systems and keeps on working for reduction of water footprint (WFP).

To make the system more environmental friendly, Company has developed a green belt all around its factory by growing approx. 1,20,000 trees of different species some of which are fruit bearing in addition to providing green cover. All possible efforts are being made to preserve the environment and improve the same as far as possible.

The Company has already achieved zero effluent discharge from their Ethanol Plants by having concentrated effluent burning in specially designed Boilers.

The liquid effluent from Distillery is concentrated in the evaporator system to generate concentrated spent wash (slop). The Slop (concentrated spent wash) from the evaporator is used as fuel for the generation of steam and electricity. This is a novel boiler that has been developed for utilization of concentrated spent wash and generation of steam there from.

SUSTAINABLE ENVIRONMENT AND CLIMATE CHANGE INITIATIVES

India Glycols Sustainable Solutions makes it easy for customers to identify, evaluate and select the right materials.

There are number of sustainable solutions and product grades. The raw material, properties, performance and/or content of these materials make a significant contribution to reduced environmental impact, from lowering carbon emissions and minimize use of the earth's limited resources.

Sustainable solutions are based on number of defined action plans and standard based on Life Cycle Assessment (LCA) methodologies. India Glycols Sustainable Solutions enable customers to confidently choose high-performance materials that advance their environmental and business goals.

Your Company is continuously working for integrating the life cycle perspective in management system, as per revised Environmental Management System for bringing product and process in a more sustainable direction.

The Company believes in life cycle approach which directs business to consider responsibility on environmental protection from raw material procurement to product use. Company has conducted comparative Life Cycle Assessment (LCA) study of Bio-Mono Ethylene Glycol (Bio-MEG) based on ISO 14044-2006 standards and determining several Environmental Impacts (including Carbon Foot-Print) from its Renewable Manufacturing Approaches and conclude that "Manufacturing MEG through Renewable based raw materials is a better option than adopting Conventional Petro route approaches in India, US and Europe". The LCA study was conducted on a purchased software-SIMAPRO and report of "LCA on Bio-MEG" got Peer Reviewed.

In continuation Company has also conducted Life Cycle Assessment (LCA) study for its other products as Bio-Ethanol, Bio-Ethylene Oxide, Bio-Glycols and Bio-Poly Ethylene Glycols etc. Company is working continuous on Life Cycle Assessment (LCA) study for its other products as Ethylene Oxide derivatives and specialty chemicals.

The Company always encourages stakeholders' by conducting motivational program on environment by celebration of World Environmental Day. The focus of the World Environment Day Program was to promote environmental stewardship practices. Special campaign was taken up with communities, employees and individuals to come together and explore sustainable alternatives to Beat Air Pollution and encourage to participate in water conservation practices. The Company has taken up several initiatives in promoting climate change and environment-sustainable projects. Company's Gorakhpur plant has got its Large scale CDM project (Title: Biomass based Cogeneration Project activity taken up by IGL at Gorakhpur, U.P.; Annual CERs: 110,157 MT CO₂ equivalent) registered at UNFCCC.

MANAGEMENT SYSTEMS

• INTEGRATED MANAGEMENT SYSTEM

Your Company is having Integrated Management System (IMS) comprising of Quality Management System, Environmental Management System, Occupational Health & Safety Management System, Food Safety Management System, Food Safety System Certificate, Energy Management System and Social Accountability. Your Company is successfully certified against the new revised High Level Structure (HLS) of Quality Management System (ISO 9001:2015) and Environmental Management System (ISO 14001:2015) and other standards as Occupational Health & Safety Management System (OHSAS 18001:2007) is replaces with new HLS standard (ISO 45001:2018), Food Safety Management System (ISO 22000:2005), Food Safety System Certificate (FSSC 22000). Energy Management System is upgraded to new HLS standard (ISO 50001:2018) comprised under Integrated Management System by M/s DNVGL, a renowned certification agency. Your Company has upgraded Social Accountability certification to new revised SA 8000:2014 standard and gets certified by M/s DNV-GL.

Special emphasis on risk-based thinking has been the new focus of Quality Management System & Environmental Management System. This risk based thinking enables to determine the factors that could cause deviation in processes and thereby in management systems, which may pose business risk in turn. This risk-based thinking offers opportunity to put necessary controls, to mitigate and minimize the premature risks, in place. Furthermore, preventive actions can be implemented to avoid any potential business risk. Value addition to Environmental Management System is its new focus and emphasis on Life Cycle Perspective to achieve sustainable development by balancing three pillars Environment, Society and Economy which is essential to meet the present day need of sustainable business without compromising ability of future

generation and rendering them impaired. Integrated Management System has been upgraded to cover RC 14001:2015 standard. Responsible Care helps companies to not only improve their environmental, health, safety and security performance, but also to improve their business operations. As per requirement of the standard, emphasis on risk-based thinking is given. Focus for security is also considered in addition to Quality, Health, Safety & Environment system. The Company also has HALAL and KOSHER certificates for the defined products. The Company has worked for “Bonsucro MB ‘Chain of Custody’ Standard” for the Extra Neutral Alcohol (ENA)- Special Sprit and successfully certified by CONTROLUNION. Your Company received consecutively for second time, the prestigious Award for ‘Efficiency in Energy Usage’ from FICCI at ‘India Chemical & Petrochemical Awards 2019’, based on Energy Management System, Energy Conservation Projects and Carbon Foot Print reduction analysis. The Company uses an established ERP system of SAP S/4 HANA which is built on a robust IBM hardware platform and has helped the Company to achieve inter-alia, faster performance, improved user experience through simplified data structure, smaller data footprint & embedded analytics. The Company has successfully launched and implemented Behavior Based Safety (BBS) naming it with an appropriate name, derived by open forum consensus “BHAVISHYA BANAYE SURAKSHIT”.

• PROCESS SAFETY MANAGEMENT SYSTEM

India Glycols is working towards implementation of Process Safety Management (PSM) along with RC in the organization to ensure systematic and high level Process Safety by elaborating its specific elements and ensuring the safety of employees, environment and physical plant assets in the event of any unexpected process excursion. Company has digitized one of the key pillars of PSM as Management of Change in SAP system and now it is successfully operational. It helps to compile process safety information and changes as another key pillar of PSM.

LEAN MANAGEMENT

Your Company is adopting a systematic approach to identifying and eliminating non-value-added activities through continuous improvement by following the product through flow processes based on a signal from the customers (internal & external). India Glycols Ltd. uses the building blocks of – standardized work, optimization of manpower, workplace organization 5S & visual controls, material handling systems, effective plant layout, improved operational and maintenance practices, quality at the source, batch cycle time reduction, customer demand-based manufacturing, point of use storage, quick changeover, cellular manufacturing, process improvements, Kaizen, world class manufacturing, synchronous manufacturing and inventory management. We are committed to work towards continual improvement of Quality, Environment, Health & Safety, Food Safety, Energy Performance and Social accountability and we discourage discrimination of any kind in any form.

RESEARCH & DEVELOPMENT CENTRE (R&D) FOCUS ON CUSTOMER-ORIENTED INNOVATION

R&D Centre of India Glycols was approved by DSIR, Govt. of India (Deptt. Of Scientific and Industrial Research) in the year of 1993. Ever since then, the approval has been renewed based on it out-come oriented Research every three years. Latest renewal has been received the period of three years starting from April 2019 to March 2022. This distinction is also received based on the State-of-the-Art of facilities as well as the out-come of the Research carried out in the past. By virtue of this approval, R&D activities of India Glycols are recognized by Government as of high standard. This also provide us with an opportunity to collaborate and corporate with Govt. Institution even for strategic areas. The efforts of the R&D has always been to value create and value add through New Product Development for Sustainability of the Company. During the year of 2019-2020, the focus of R&D was to delivered New and Nobel Products with Green Chemistry and Green Technology.

The rapidly changing scenario has put a lot of demand on R&D to ensure that areas such as Environment Protection, Control of Water Pollution and Energy Efficiency. Thus, R&D focus on innovative solutions through GREEN CHEMISTRY which has also been is a key focus area of India Glycols. New ranges of products developed during this period are based on Green chemistry and Green Technology. Customized value-added products and processes, with emphasis on “Sustainable” approaches via use of renewable RMs and savings of energy as well as water, were designed. In order to ensure that India Glycols remain ahead of its competitors, these products were developed as per global standards using renewable resources. All these products and processes met most of the international standards and accreditation of GOTS, Oeko-tex, REACH/ HALAL etc. Here, are the notable developments to be reported:-

1. Development of Surfactants from alternative feedstock's

- Development of a 100% Biodegradable Industrial Chemicals and Surfactants derived from renewable feedstock's.

2. Textile Processing (Fibre & Fabric processing)

- Enzyme base Products for Desizing/Scouring & Peroxide bleaching process.
- Bio- polishing enzyme based product.
- New generation silicon base finishing agent.

3. Crop-Protection Business

- Environment friendly surfactants for “ZC” formulations
- Biodegradable dispersing agents for the broad range of the Fungicide and Insecticides.
- Eco-friendly adjuvants for micronutrients to stabilised in aqueous medium.
- Surfactants for capsule suspension-Controlled Release Applications.
- Surfactant for special Combo formulation.

4. Oil & Gas Industry

- New generation Low temperature & low dose demulsifier for crude oil.

- Unique and innovative, New Generation Surfactant for Enhance oil recovery.
- Specialty amines for Refineries.

5. Emulsion Polymerization & Paint Industries

- Eco-friendly surfactant (Vegetable oil based) for pigment dispersion.
- Universal colorant for water & oil based paint
- APEO free surfactant for Emulsion Polymerization/ paints.

6. Paper Industry / Leather

- Universal cooking aid.
- Eco-friendly deinking chemicals.

7. Automobile industry / Metal Working chemicals

- New generation high performance Borate-Ester -Brake fluid oil component.
- Bio –brake fluid oil.

8. Detergent / Personal care Industries

- Sodium Isethionate for skin care.
- Eco-friendly and biodegradable amphoteric surfactant for personal care products.
- Bio- Ester for personal care products.
- Surfactant for hard surface cleaning agent
- Unique and Skin friendly Green Surfactant for Bath soap formulations.

9. Construction Chemicals

- Specialty green Ethoxylate for Poly carboxylate as water reducing agent & strength improver.
- Green surfactant for Bitumen emulsification for Road Construction.

10. Guar based specialty Chemicals

- Guar base Eco-friendly and biodegradable surfactant used in Oil –Gas application as Enhance Oil Recovery.
- Guar base Eco-friendly and biodegradable surfactant used in Personal care application.
- Specialty reprivatized Guar for various applications like Effluent treatment, Oil-Gas and Personal Care.

During the last quarter of the year-2019-20, the major focus of R & D has been own products related to Covid -19. To deal with Covid -19, R & D Centre of India Glycols Limited has come up with a series of products for the Sanitization. The impact of Covid -19 has created lock down of the industries globally and Pharmaceutical industries are not exception of this. R & D centre of India Glycols Limited not only help the Human Race by launching these Sanitization products within a very short period of time but also helps to continue its manufacturing in this critical time.

The Company intends to launch various products to deal with Covid 19 Pandemic, in the category of Handsanitizer, Floorsanitizer, fumigation and multipurposes cleaning among others.

INTERNAL FINANCIAL CONTROLS AND THEIR ADEQUACY, RISK MANAGEMENT

The Company has in place adequate internal financial controls commensurate with the size, scale and complexity of its operations. The Company periodically discusses and reviews at its Audit Committee and with its auditors the effectiveness of the internal financial control measures implemented by the Company including with reference to the Financial Statements of the Company.

The Company has a proper and adequate system of internal financial controls which includes the policies and procedures for ensuring the orderly and efficient conduct of its business, including adherence to Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information.

The systems, procedures, checks and controls are routinely tested and certified by our Statutory as well as Internal Auditors. Moreover, Company continuously upgrades these systems in line with best practices and standards on internal control systems and procedures.

The Company has constituted a Risk Management Committee consisting of Directors and the senior management personnel of the Company to monitor the Risk Management Plan, to identify and mitigate the risks attached to the business of the Company.

Your Company's objective of risk management is to have a meaningful identification, measurement, prioritization of risks or exposures to potential losses on a continual basis through active participation of all members of the Company and accordingly establish controls and procedures to build a visible & structured enterprise-wide risk management framework; reduce the risk levels and mitigate their effects in the likelihood of a risk event with an aim to protect our Company from harm; and have a contingency plan to manage risks having high probability and high impact.

Risk management framework is created to ensure that risk management principles are implemented and integrated all over the organization and that information retrieved from the risk management process are correctly reported. This framework provides a stable foundation for the risk management work, orient the organizational arrangements properly in order to have a clear risk strategy across the organization & share information, experiences amongst different sites of the Company.

Considering the importance of keeping the risk management process dynamic, a quarterly review of the risks is carried out across sites and departments for necessary key risks and risk management strategies are communicated to the Board of Directors for their assessment for minimization of effects of risk.

HUMAN RESOURCE/INDUSTRIAL RELATIONS

Company continues to focus on training its employees on a continuous basis both on the job and through training program to face challenges in the business/industry. During the year, industrial relations have been cordial. Total Number of Employees on Company's role has been around 1,370 (including 58 apprentice).

CAUTIONARY STATEMENT

The statement made in this report describing the Company's expectations and estimations may be a forward looking statement within the meaning of applicable securities laws and regulations. Actual results may differ from those expressed or implied in this report due to the influence of external and internal factors which are beyond the control of the Company.