Executive Summary

Report

Sustainability is the Future of the Chemical Industry

Executive Summary Report

PREPARED BY

Pukka Partners

ABOUT PUKKA PARTNERS

Pukka Partners provide customized intelligence solutions to C-suite executives and functional growth leaders, with sound expertise in business research, strategy consulting, advisory, business intelligence, and data analytics.

We offer advisory and actionable insights around public policies, investment tracking along with the obstacles faced by investors, innovation and strategy impact monitoring, identification of industry potential, and technology mapping through comprehensive and standardized research methodology and tools.

We deploy our solutions to solve prioritized and critical business challenges by leveraging our in-house expertise as well as continuous engagement with industry thought leaders in the business ecosystem.

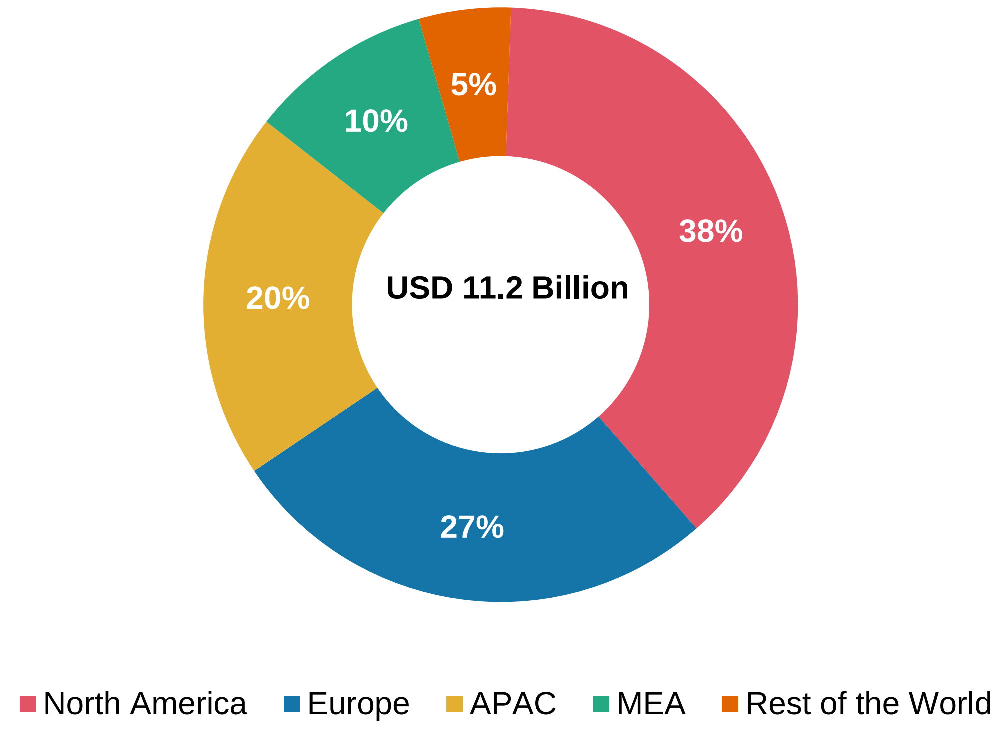
In a short span of time, our consultants have had the opportunity to engage and deliver domain & sector specific tailor-made strategic projects to top executives and functional growth leaders, empowering them to make informed business decisions.

Our success is directly linked to our client's growth, and we ensure to exceed it every time we engage with our existing clients and future prospects. We aim to be a knowledge partner for our customers and gradually become their trusted intelligence provider.

Sustainability – Global Market Overview

Pukka Partners

Market Size, 2020 (in USD)



- As of 2020 the green technology and sustainability market stands at $11.2 billion. It is expected to grow with a CAGR of ~27% and reach ~$74 billion by 2028.

- USA accounts for the largest market share as of 2020 majorly because of its broad base in green technology and sustainability vendors in the region. The adoption of high-end technology is expected to boost the growth of green technology solutions in North America.

- The APAC is expected to be a favorable market for investments and has the highest CAGR during the forecast period. The APAC economies are expected to offer new market opportunities to the vendors operating in green technology and sustainability market, leading to adoption of green technology solution in the region. This growth can be attributed to the focus of developing countries, such as China, India, and Singapore, on the integration of advanced technologies to enhance business processes.

Key Applications / End-User – High Level Market Split

30%

Energy Sector

Burning of coal and oil, for energy and fuel, making products like plastic contribute to highest GHG emission in this sector. Emissions from this sector is steadily increasing at 1.7% annually

18%

Agriculture Sector

Emissions from agriculture is further divided into 5.8% by Livestock & manure, 4.1% synthetic nitrogen fertilizers are applied to soils, 3.5% from crop burning, 2.2% from deforestation.

16%

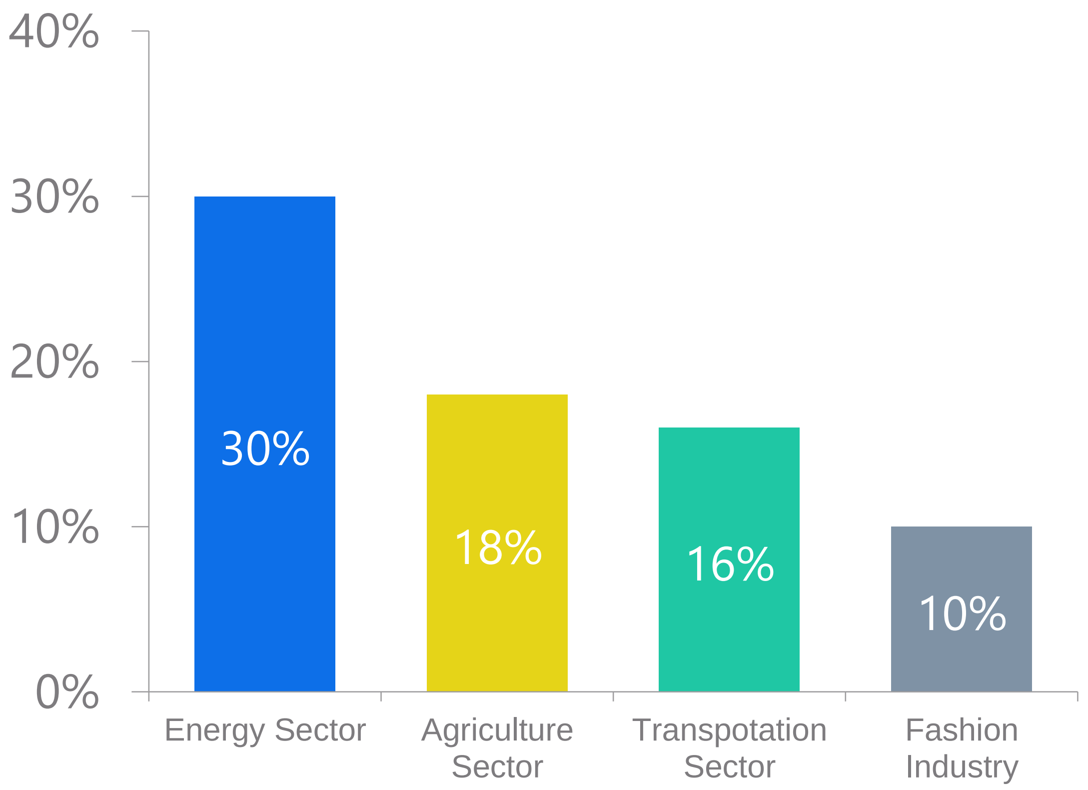
Transportation Sector

Passenger vehicles emit an average of 4.6 metric CO_2 per year. Road transportation has caused 12% of the emissions comes from road transport, 2% from aviation, long haul flight, 1.7% from shipping.

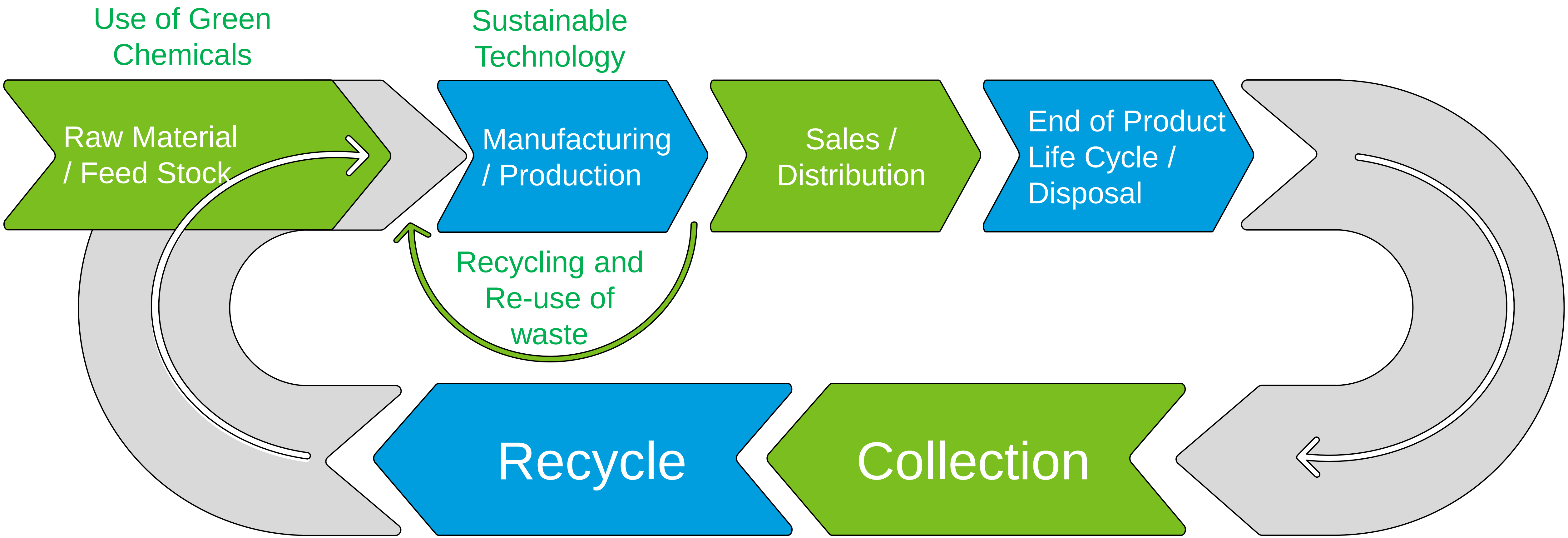
10%

Fashion Industry

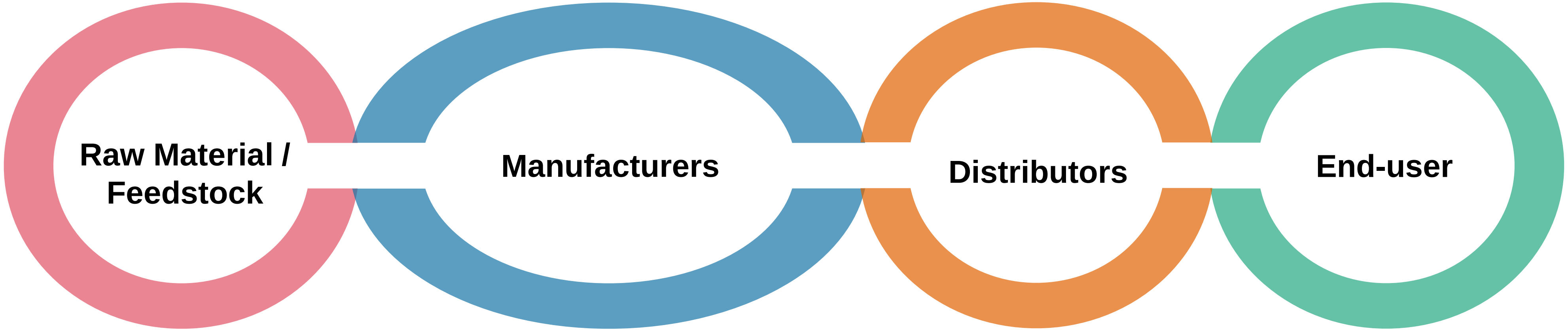
20% industrial water pollution, 23% of all chemical produce year, 85% of human made debris on shorelines, 90% of wastewater discharge into rivers in developing countries are caused by Fashion industry



Sustainability Value Chain Process



Key Companies Operating Under Each Nodes of the Value Chain



- Glencore
- China MinMetals Corporation
- ArcelorMittal
- POSCO
- BHP
- Rio Tinto
- Vale SA

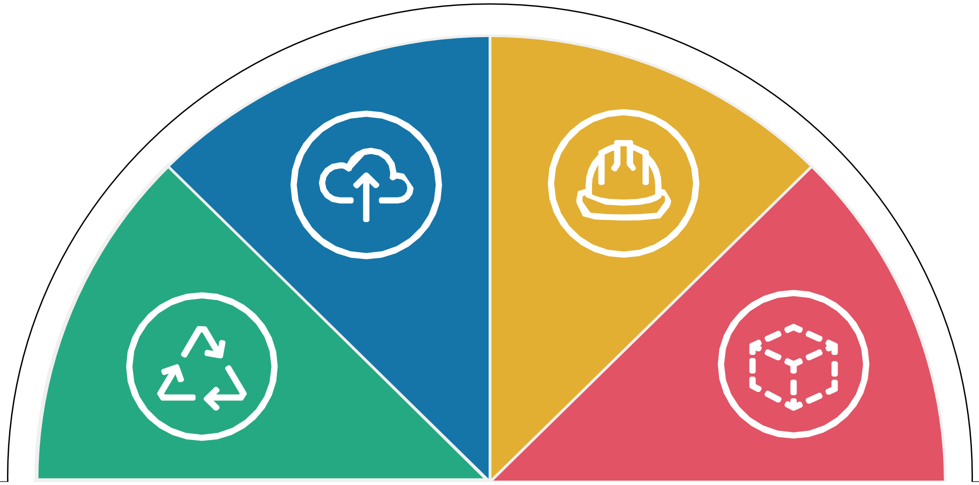
- BASF
- Sinopec
- Dow Chemicals
- INEOS
- Mitsubishi Chemical
- Shanti Inorgochem
- Pidilite Industries Ltd
- Tata Chemicals Ltd

- ABB Group
- Sinochem
- ChemChina
- SABIC
- DowDuPont
- Deere & Co

- Brenntag Group
- Univar
- HELM
- NEXEO Solutions
- ICC Chemical
- Azelis
- IMCD Group

- L’Oréal
- Unilever
- Proctor and Gamble
- Estée Lauder
- Johnson & Johnson
- Pfizer
- AstraZeneca

Market Dynamics – Trends & Drivers (1/2)



Market Trends

Driving the Industry

Sustainability	Digitalisation	Portfolio Diversity	Consumer Awareness
The chemicals industry and its served end markets are evolving along with the growing emphasis on sustainability, and new industrial ecosystems are emerging.	40% of chemical companies are using digital technologies to increase efficiency and 32% are applying digital technologies to drive growth. But only 11% are doing both.	Succeed in a time of uncertainty and rapid change, it's essential to stay agile — to adjust portfolios, extend value chains upstream and/or downstream, keep operations flexible, shed assets and capture growth opportunities.	Consumer trends have a significant impact on the drive for sustainability. Consumers are better-informed, and the younger generation is demanding more openness and accountability.

Market Dynamics – Opportunities (2/2)

Pukka Partners

1 – Increased Demand for Value-Added Products

The demand for biodegradable polymers, performance plastics, and other value-added chemical products is expected to increase in the coming time because of the various environmental concerns. This would be a good opportunity for the chemical companies to start attending to the increasing needs of value-added chemical products.

2 – Decarbonization/ carbon capture

Moves to decarbonize energy inputs on a large scale are some way off but, as the cost of renewable energy falls, there are signs that companies are recognizing the advantage of supplementing fossil fuel sources with renewable generation.

3 – Digitalization

Blending technologies to create differentiated customer experiences could be a major driver of new sales. In fact, according to our research, digitalization could unlock up to $550 billion for the chemical industry over the next decade.

4 – Green Chemicals

The market size of green chemical is of $ 9,540 million. It is projected to grow with a CAGR of 6.6% and is expected to reach the market size of $ 18,474.2 million by 2030.

Strategic Focus of Market Players

Pukka Partners

What are Major Players Doing?

Sinopec is planning to build a 20,000 tonnes per year green hydrogen plant in Kuqa city in China's northwestern region Xinjiang, powered by a 1,000 MW solar power station.

Dow, LyondellBasell and NOVA Chemicals – have established the Closed Loop Circular Plastics Fund. The goal is to even deploy $100 million. Fund aims to recycle over 500 million pounds of plastic.

The CEOs of BASF and RWE signed a letter of intent covering a wide-ranging cooperation for renewable electricity and the use of innovative technologies for climate protection.

TCS: Net Zero Emissions by 2030 TCS has laid down the roadmap towards net zero emission by 2030. Tata Chemicals takes charge for lowering CO2 emissions.

Mitsubishi Chemical Corp & its subsidiary Mitsubishi Chemical Methacrylates Japan Co., Ltd plan to construct verification plant for chemical recycling.

RIL Chairman and MD Mukesh Ambani says the company's aim to become Net Carbon Zero by 2035 is part of a wider ambition to achieve best-in-class ESG standards.

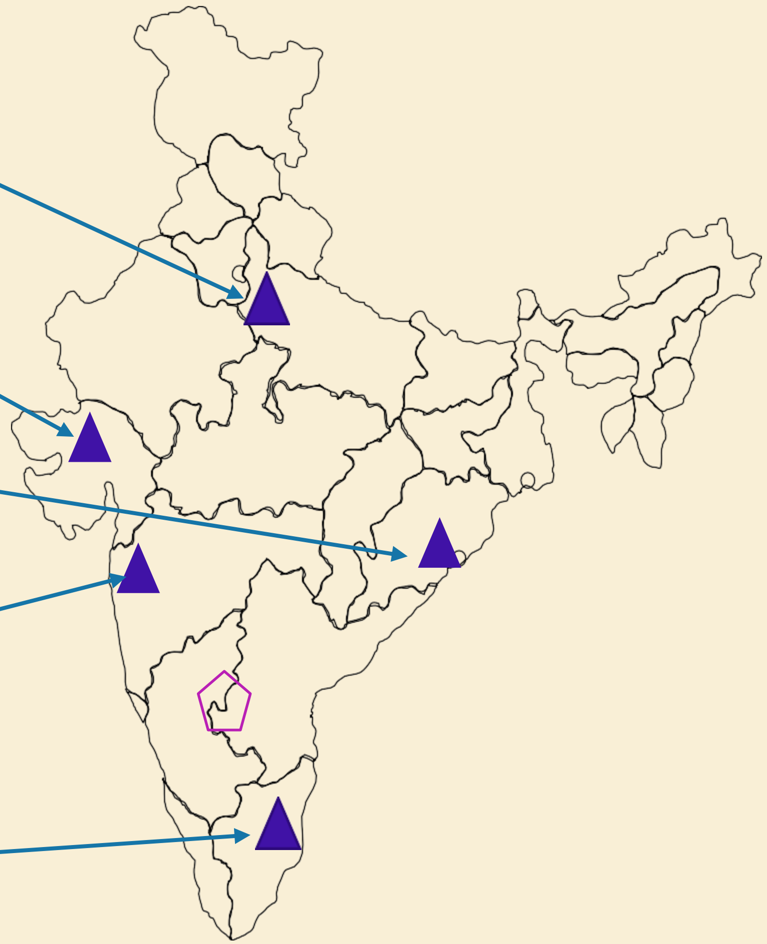
Notable Developments

- During 2020 period, 32.55% of Dow Chemicals' sales were from USA, 33.65% from Europe, Middle East, Africa and India and 33.8% from rest of the world
- Singapore — Sinopec plans to import 17.4 million mt of LNG in 2021 and produce 34 Bcm of natural gas, including about 12 Bcm of shale gas, in an effort to meet domestic demand
- BASF Group are forecasting slightly higher sales in the Surface Technologies, Chemicals, Agricultural Solutions and Nutrition & Care segments, and a slight year-on-year decline in the
- Sabic said "Even without Covid-19 impact, supply still exceeds demand for our key products, which will continue to pressure product prices and margins for the foreseeable future,"
- LG chemical and battery maker, whose wholly-owned battery subsidiary LG Energy Solution supplies Tesla Inc & General Motors Co, posted operating profit of 1.4 trillion.
- LyondellBasell recorded the revenue generated in 2020 to be least in past 10 years. Imports of raw material fell in US market, especially as volumes from China have collapsed since last summer.

India Advantage

Steps taken by State Government

- Uttar Pradesh has major chemical producing companies, from Industrial chemicals, Agro chemicals, to polymers, resins and rubbers
- Gujarat is chemical hub of the country contributing 62% of Petrochemical production, 53% of chemical production and 45% of Pharmaceuticals production.
- Orissa provides Incentives for PCPIR, like 10%-25% capital subside for plant and machinery, Power tariff reimbursement, 100% SGST reimbursement.
- Global chemical giants like Dow Chemical, BASF, Pidilite Industries all have their corporate offices and manufacturing units in Mumbai, Maharashtra.
- The chemical exports from Tamil Nadu grew at a CAGR of 13.5% between 2013-14 & 2017-18. It is emerging as a major exporter of basic chemicals.



Central Government Policies & Schemes

- Government to invest Rs 8 lakh crore in Chemical Industry by 2025 under PLI scheme
- The government plans to implement PLI system with 10-20% output incentives for the agrochemical sector
- Union Budget 2021-22, allocated Rs. 233.14 crore to the Department of Chemicals and Petrochemicals.
- 100% FDI is allowed for chemicals sector with few exceptions that include hazardous chemicals.
- 100% Income Tax exemption on export income for SEZ units for the first five years
- Under new PCPIR Policy 2020-35, a combined investment of Rs. 10 lakh crore is targeted by 2025, Rs. 15 lakh crore by 2030 and Rs. 20 lakh crore by 2035 in all PCPIRs across the country.

Conclusion

The start of last decade saw a shift in chemical industry towards the sustainability. A decade later, covid 19 pandemic has accelerated the shift, change in the investor sentiment towards Chemical industry is a proof of that. There is an increased awareness among the young generation towards sustainability. The senior management of the companies have analysed this trend and are making their companies policies accordingly. The sustainability in the policies of the company is seen majorly in the new chemical start-ups. Among the companies which are making new sustainability policies 45% are companies with revenue ranging between $ 500 – $ 1 billion, 40% are companies with revenue ranging between $ 1 billion - $ 10 billion and 15% are companies with revenue over $ 10 billion.

The industry is going through a major global disruption in supply chain. China which is a global leader in chemical raw material, due to its new environmental policies, has shut down many mining and chemical industries, leading to reduction in global supply of raw material. Therefore, the global companies are moving towards sustainability, green economy and circular economy supply Chain.

Increasing uncertainty in the industry has made the players to diversify their portfolio. Companies can grow earnings in different operating environments if they build a product portfolio that can withstand changes in macroeconomic trends.
Companies should focus on divestments of noncore or underperforming assets to raise cash during the economic downturn, industry players that are well-prepared and have robust balance sheets can look at making smart acquisitions that create greater long-term shareholder value.

In the coming year, chemical companies should keep an eye on these larger trends shaping consumer preferences and the end-market environment in order to focus on new growth opportunities and extract more value from current resources and assets.

THANK YOU

Contact Details

Asia Pacific

Pukka Partners

Jaymala Business Court, 1st Floor, E-Wing,
Solapur Pune-Hwy, Pune, Maharashtra – 412307

Phone: +91 70226 21355 / +1 858 939 9252
Email: engage@pukkapartners.com