

81st ANNUAL REPORT

2021 - 2022



Indian Chemical Council

Full Member of



Table of Contents

	Page No
1 Message from ICC Leadership	01
2 About Indian Chemical Council	03
- Board of Directors	
- Office Bearers	
- Executive Committee & Expert Committees	
- Affiliate Members	
- ICC Secretariat	
- ICC Offices	
3 Report of the Executive Committee	10
- Flagship Events	
- Important Activities	
4 Trade Related Activities	50
5 Responsible Care Activities	54
6 Nicer Globe Activities	57
7 CWC Activities	58

MESSAGE FROM ICC LEADERSHIP



MR. RAVI GOENKA
President



MR. BIMAL GOCULDAS
Vice President



MR. RAJEN MARIWALA
Addl. Vice President

Dear Members,

2021-22 was an important year for Indian Chemical Council and you will be pleased to know of the various initiatives undertaken by ICC during this year despite the pandemic.

We are extremely proud to announce that ICC became a **full member of International Council of Chemical Associations (ICCA)** whose members account for more than 90 percent of Global Chemical Sales. ICC now represents ICCA at the ICCA Board. In addition to this, member companies and association staff have found place in the ICCA Leadership Groups and Task Forces.

ICC has taken up with Government of India ('GoI'), requesting the Department of Chemicals & Petrochemicals ('DCPC') to include **Production Linked Incentive Scheme ('PLI')** and granting **Remission of Duties and Taxes on Exported Products ('RoDTEP')** rates for the Chemical Sector and we are very glad to learn that DCPC is taking steps to introduce PLI to Chemical Sector. ICC has also strongly taken up with the Department of Chemicals & Petrochemicals, the serious challenges faced by the Chemical industry whenever incidents involving safety, health, and environment takes place.

Under the guidance of Ms. Arti Ahuja, Secretary, Department of Chemicals & Petrochemicals, ICC has been entrusted with important projects such as **Perspective Plan 2040** for Chemical Industry; Developing **Training Courses on Safety and Environment for MSME units** in the Chemical Sector; Training Modules Focused on 7 Codes of Responsible Care (RC) and "Chintan Shivir": **Opportunities in Specialty Chemicals**. ICC is working with reputed organisations such as **McKinsey & Co., Avalon Consulting and Institute of Chemical Technology (ICT)**, Mumbai towards executing these projects.

You will be happy to know that during the last two years, although the Pandemic had affected our daily lives, ICC has shown high enthusiasm in conducting all the events virtually without any interruption. ICC's 56th Annual Awards Presentation function which was held on 24 September 2021 was a grand success with participation of more than 500 Delegates. We were honoured by the presence of **Dr. Mansukh Mandaviya**, Hon'ble Minister for Health & Family Welfare and Minister for Chemicals & Fertilizers, Government of India as the Chief Guest and **Dr. Martin Brudermüller**, President – ICCA (International Council of Chemical Associations) and Chairman of the Board of Executive Directors, BASF SE, as the Chief Guest representing Global Chemical Industry. **Mr. Samir Kumar Biswas**, I.A.S, Additional Secretary – DCPC (also Director General, CIPET), Government of India graced the occasion as Guest of Honour.

The Council's 3rd Edition of Sustainability Conclave was successfully organised on 2-3 December 2021 with a participation of more than 550 delegates. This Conclave was very well appreciated by the industry. **Mr. Shrikant Madhav Vaidya**, Chairman, IOCL gave the Key Note Address and **Ms. Sheila Aggarwal-Khan**, Director, Economy Division, UNEP gave the Special Address.

We are also happy to inform you that the 15th Annual India Chemical Industry Outlook Conference was organized on 1 – 2 March 2022. **Ms. Arti Ahuja I.A.S.**, Secretary Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India was the Guest of Honour. Around 400 Industry Delegates and 50 Exhibitors participated in the event. The Concept Paper on "**Accelerating India's Sustainability Journey in Chemicals**" prepared by McKinsey was released during the Conference. In the evening of the first day of the Conference, **CEO Roundtable** was organized which was attended by more than 70 CEOs. The theme of the CEO Roundtable was "**India's Turning Point: Increasing Indian Exports of Chemicals by 3x from 40 Bn \$ to 120 Bn \$ by 2030** and its Implications on Value Chains, Self Sufficiency and ESG for Indian Chemical Companies".

You may be aware that ICC's objectives evolve around Sustainability and there were many activities initiated by Responsible Care (RC) and Nicer Globe groups during this year. We are happy to inform you that 8 member companies have become RC Logo Holders this year. Responsible Care group conducted various training programs, conferences for the members of the Chemical industry throughout the year. An **Awareness program** on GHS was also conducted for the Government Officials. A successful event of Nicer Globe – **NG LogNext 2022** was conducted under the Nicer Globe vertical during the year.

We are very glad to inform you that under the aegis of T&E Expert Committee, ICC had initiated a **Series of Webinars on important topics** such as Hydrogen Economy, Carbon Capture and Utilization, ESG and many more which were very well appreciated by the participants. The **Basic Course on Chemical Laboratory Safety Practices** curated by ICC under the aegis of R&D Subcommittee had an overwhelming response. ICC in association with the National Authority, Chemical Weapons Convention, Cabinet Secretariat, Government of India has organised a number of **Webinars on Chemical Weapons Convention (CWC)** in this year.

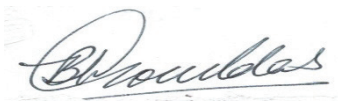
ICC continues to share Articles, Latest news, Economic reviews, various activities & developments in Chemical Industry through its monthly magazine, Chemical News which became more popular in the industry.

Indian Chemical Industry is at an inflection point and is bound to grow further in an accelerated manner and Indian Chemical Council (ICC) will continue to play a very important role for the development of the industry and the Indian Economy.

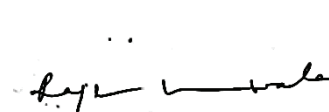
We take this opportunity to thank the members for their full support towards various initiatives of ICC and we earnestly look forward for their continued support in future as well.



Ravi Goenka
President



Bimal Goculdas
Vice President



Rajen Mariwala
Addl. Vice President

ABOUT INDIAN CHEMICAL COUNCIL

Board of Directors



MR RAVI GOENKA
Chairman and Managing Director
LAXMI ORGANIC INDUSTRIES LTD



MR BIMAL L GOCULDAS
Managing Director & CEO
THE DHARAMSI MORARJI CHEMICAL CO. LTD



MR RAVI KAPOOR
Managing Director
HEUBACH COLOUR PVT LTD



MR VIJAY SANKAR
Deputy Chairman
THE SANMAR GROUP

ICC Office Bearers

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MR RAVI GOENKA
Chairman and Managing Director
LAXMI ORGANIC INDUSTRIES LTD

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Managing Director & CEO
THE DHARAMSI MORARJI CHEMICAL CO. LTD.

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Managing Director
ETERNIS FINE CHEMICALS LTD.

CHAIRMAN - WESTERN REGION



MR VINOD PAREMAL
President & Mg. Director - India Region
EVONIK INDIA PVT. LTD.

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JUBILANT INGREVIA LTD

CHAIRPERSON - SOUTHERN REGION



MRS. RAMYA BHARATHRAM
Managing Director & CFO
THIRUMALAI CHEMICALS LTD

CHAIRMAN - EASTERN REGION



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Sr. Vice President-Head
Marketing & Commodity Business
HALDIA PETROCHEMICALS LTD.

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Vice President

Mr. B. L. Goculdas, Managing Director & CEO, The Dharamsi Morarji Chemical Co Ltd

Additional Vice President

Mr. Rajen K. Mariwala, Managing Director, Eternis Fine Chemicals Ltd.

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Northern Region

Mr. Rajesh Srivastava, CEO & MD, Jubilant Ingrevia Ltd

Southern Region

Mrs. Ramya Bharathram, Managing Director & CFO, Thirumalai Chemicals Ltd

Eastern Region

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Mr. Janardhanan Ramanujalu, Chairman, Sabc Innovative Plastics India Pvt. Ltd.

Mr. Vikram Singhal, Managing Director, Gulbrandsen Technologies (India) Pvt Ltd

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Mr. Prakash Raman, Managing Director, Silox India Private Limited

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Mr. Arjun B Kothari, Managing Director, Kothari Petrochemicals Ltd

Mr. Chandrakant Nayak, Country Head & CEO, DOW India

Mr. Samir S. Somaiya, Chairman & Managing Director, Godavari Biorefineries Ltd.

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Mr. Krishnamohan Narayan, Managing Director, BASF India Limited

Mr. Rajendra V. Gogri, Chairman & Managing Director, Aarti Industries Ltd

Mr. Ajay Shah, President – Polymers, Elastomers & Cracker, Reliance Industries Ltd

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Mr. Anand Srinivasan, Managing Director, Head of Engineering Plastics ISC, Covestro (India) Private Limited

Mr. Radhesh R. Welling, Managing Director, Navin Fluorine International Limited

Mr. Maulik Mehta, CEO & Executive Director, Deepak Nitrite Ltd

Mr. Sameer Hiremath, Managing Director, HIKAL Ltd

Mr. Ravi Ashwin Shroff, Managing Director, Excel Industries Ltd

Mr. Harshvardhan Goenka, Sr. Vice President – Business Development, Laxmi Organic Industries Ltd

Mr. Suneet Yogesh Kothari, Alkyl Amines Chemicals Ltd

Mr. R. S. Jalan, Managing Director, GHCL Limited

Mr. Aditya A Shriram, Executive Director – Chemicals, DCM Shriram Ltd.

Mr. Jayanti Patel, Group Chairman, Meghmani Group of Companies

Mr. Narendra K Shah, Director & Site Manager, Bayer Vapi Private Limited

Mr. Prakash Hiranandani, Dy. General Manager – Marketing, Aegis Logistics Ltd

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Mr. Partap Singh, Head – Technology, Nayara Energy Limited

Mr. Jayant V. Dhobley, Business Head and CEO - Global Chemicals, Fashion Yarn, & Insulators, Aditya Birla Group

Mr. Rabin Mukhopadhyay, Head – Procurement, Technology, HSEF, New Projects, HR & IT, Executive Vice President, Haldia Petrochemicals Limited

Mr. S. C. Mudgerikar, Chairman & Managing Director, Rashtriya Chemicals & Fertilizers Ltd.

Mr. Amit Chaturvedi, Head – Supply Chain Management, Reliance Industries Ltd

Mr. Ramakrishnan Mukundan, Managing Director & CEO, Tata Chemicals Ltd

Mrs. Sandra R. Shroff, Vice Chairman, UPL Ltd

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Mr. Kamal P. Nanavaty, President- Strategy Development, Reliance Industries Ltd

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Sustainability Expert Committee

Mr Vikram Singhal – Managing Director, Gulbrandsen Technologies (India) Pvt Ltd

Nicer Globe Expert Sub-Committee

Mr B. Vivek Shetty – Chairman, Viswaat Chemicals Ltd

Environment – Expert Sub-Committee

Mr Sameer Hiremath

Responsible Care Expert Sub-Committee

Mr. Rajen K. Mariwala, Managing Director, Eternis Fine Chemicals Ltd.

Safety Expert Committee

Mr. S. R. Deo, Managing Director, NOCIL Ltd.

Technology & Energy Expert Committee

Ms (Dr) Achala Danait – Managing Director – Clariant India Ltd

R&D Expert Sub-Committee

Mr. N. Krishnamoorthy, Executive Director – Commercial, Chemplast Sanmar Limited

Trade & Business Development Expert Committee

Mr. S. Ganesan, Vice President – Policy Affairs, UPL Limited

International Treaties Expert Committee

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Mr. Jai Hiremath, Chairman & Managing Director, Hikal Limited

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Mr. O. P. Malhotra

Mr. K. V. Mariwala, Director, Eternis Fine Chemicals Ltd.

Mr. Atmaram Saraogi, Founder Trustee & Honorary Director, International Centre Calcutta

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Mr. Raghavan Sridharan, President, All India Printing Ink Manufacturers' Association Ltd.

Mr. Kapil Malhotra, President, Alkali Manufacturers Association of India

Mr. Vipul A. Thosani, President, The Chemical & Alkali Merchants' Association

Mr. S. Ilanahai, President, Chemical Industries Association

Mr. Janak Mehta, President, The Dyestuffs Manufacturers, Association of India

Mr. K. S. Raju, Chairman, The Fertilizer Association of India

Mr. Vinay D. Patil, President, Indian Speciality Chemical Manufacturers' Association

Mr. Aashish R. Amin, President, Nandesari Industries Association

Mr. Pradip Dave, President, Pesticides Manufacturers & Formulators Association of India

Mr. Jigish Doshi, President, Plastindia Foundation

Mr. Anil Rairikar, Chairman, Process Plant & Machinery Association of India

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Mr Prabh Sharan Singh

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Mr Kunal Jain

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ICC : Southern Regional Office, Chennai

Mr R Venkatasubramanian

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REPORT OF THE EXECUTIVE COMMITTEE

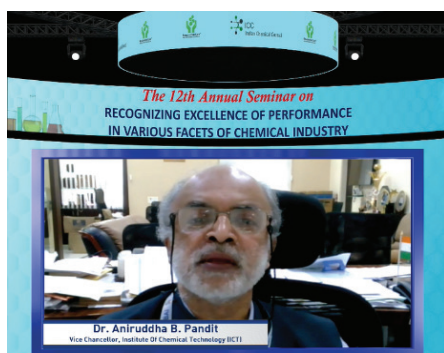
Flagship Events of ICC: September 2021 - August 2022

The Twelfth Annual Seminar on “Recognizing Excellence of Performance in various FACETS of Chemical Industry”

Inaugural Session

As a prelude to the ICC Awards Presentation function, a Seminar is being organised every year on the same day. The Twelfth Seminar in this series was organised on 24 September 2021, virtually from 09.30 am to 04.30 pm. The whole idea of organising this Seminar was to give an opportunity to each Award Winner of the year to present and showcase their achievements in the respective fields which brought to their homes the ICC Award.

Dr. Trivedi welcomed all delegates and introduced major functions of ICC, including Liaison with Government of India, Responsible Care, Nicer Globe, Chemical News and of course the ICC AWARDS. He then introduced Prof. A B Pandit, Vice Chancellor of ICT and one of the regular contributors to ICC and requested him to give his opening address.



Delivering the Keynote Address, Dr. Aniruddha B. Pandit wondered, “Why do we need to recognise our work with Awards?”. The news media showers with news of conflicts routinely, but we need to acknowledge the excellent work done by many technical people for benefitting society. The awards have been organized in ways that reflect the overall progress of work being carried out, Dr. Pandit opined.

Mr. Samir Kumar Biswas, I.A.S., Additional Secretary-DCPC, Government of India while addressing at the function said that ICC covered all sectors of chemical and allied industries for recognising the achievements in their respective fields and selecting the best for conferring the Awards. This simplifies the job of Government departments and hence there is no need of instituting separate awards at Government level as these ICC awards are prestigious. He congratulated all Award winners for their achievements and urged them to do more in the coming years. The Inaugural Session ended with a customary Vote of Thanks by Mr. H. S. Karangle, Director General, ICC.

Technical Sessions

Development of Indigenous Technology and Excellence in Process Design and Engineering

Galaxy Surfactants Ltd. was honoured with the prestigious ‘ICC Acharya PC Ray Award for the development of indigenous technology’ for its breakthrough advancements in development of non-toxic preservatives for personal care products.

Making his presentation at the Seminar **Dr. Nirmal Koshti**, Director & Head Innovation, Galaxy Surfactants, pointed out that preservation is an essential component of personal care products, since most of them afford a nutrient and moisture-rich environment that is conducive to the growth of microbes. However, since around the year 2000, most of the workhorse preservatives available in the market like parabens, formaldehyde releasers, halogenated molecules, isothiazolinones, etc., have come under the toxicity scanner and are implicated with serious toxicity issues ranging from irritation, allergies, neurotoxicity, to carcinogenicity to human beings.



In this backdrop, Galaxy took up the challenge to develop safe, non-toxic and cost-effective preservative systems and came up with the proposal of using amino-acid surfactant, acyl glycine, for preservation. "These lipidated glycines – with the fatty portion attached to glycine through a peptide linkage – have been reported in research literature and personal care firms have been using it for their anti-microbial activity in a small way, but not in a very significant way and certainly not for preservation," Dr. Koshti explained.

In these molecules, there are no structural features which have the potential to be troublesome in future. "There are no halogen atoms, no heterocycles, no phenolic moiety, and so when it degrades in nature it ends up as glycine and fatty acid, which are constituents of living cells. So, they appeared like a safe bet to be used for anti-microbial preservation for personal care products," he noted.

The synthesis of acyl glycine is a two-step process with the fatty acid converted into fatty acid chloride and then reacted with glycine to get acyl lysine. Typically, phosgene is the chlorinating agent and formamide type of catalysts are used.

Finished product as catalyst

Instead of using formamide catalysts, which are recognised as toxic, in the first step, Galaxy employed a 'smart catalyst' wherein the surfactant is used to catalyse the synthesis of the precursor of the same surfactant. This is a case of 'surfactant catalysing synthesis of surfactants', making it a closed-loop manufacturing process.

"Since the catalysis is effected by the surfactant, which is non-toxic & biodegradable, the catalyst need not be isolated from the intermediate or end-product unlike in the traditional process. It therefore addresses all the woes of conventional manufacture of amino acid surfactants," Dr. Koshti added. According to him, this process meets all the 12 principles of Green Chemistry including quantitative conversion, 100% atom economy, no waste generation, less hazardous reagents, milder reaction conditions, etc. These acyl glycines are combined with other gentle antimicrobials like benzoic acid to create the Galguard brand of standalone preservation systems offered by Galaxy for the personal care industry.

Work on Remdesivir gets Jubilant Pharmova ICC's process design & engineering recognition

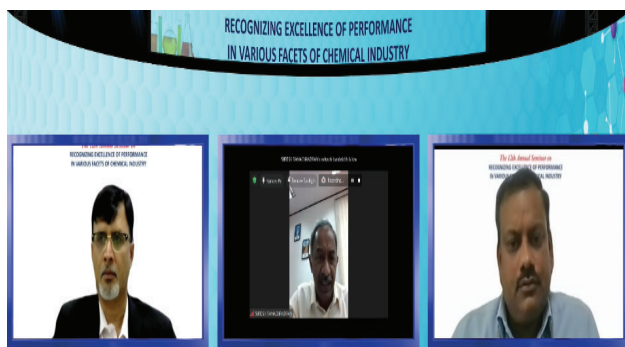
The development work by Jubilant Pharmova on Covid-19 drug substance, Remdesivir, in a very short period of time during the pandemic, was recognised with ICC's award for excellence in process design & engineering. Remdesivir, owned by Gilead Sciences, was the first anti-viral drug approved for treatment of Covid-19 and was in high demand during the first and second waves of the pandemic and Jubilant Pharmova (formerly Jubilant Life Science) worked with Gilead Sciences to make the drug available in India. During lab development work carried out by Jubilant, various modifications were done to achieve plant feasibility, good yield and quality of final products.

According to **Dr. Saji Thomas**, Head-R&D-API at Jubilant Pharmova, Remdesivir is a highly complex chiral molecule having six chiral centres and produced as a single stereoisomer. It involves a seven-step synthesis from the three main key starting materials (KSMs) till the API, with each KSM synthesis comprising a six-step chemistry. All the raw materials had to be imported from China and it was a big challenge during the nation-wide lockdown and supply disruptions, he noted. Jubilant Pharmova, with help from its subsidiary, not only managed the difficult task of synthesising Remdesivir in just 40 days, solving along the way design- and production-related issues, but also developed quality assurance procedures for a variety of isomers that got produced.

"We successfully commercialised the Remdesivir technology at our GMP facility at Nanjangud (Karnataka) and could supply 79 kgs of the API to our dosage formulator to supply the Remdesivir injection. This was equivalent to eight lakhs vials. Currently, we have a capacity of 30-40 kg per month, with the ability to expand it to 100-200 kg level. So, in case of any national exigency, we have enough capacity and capability to launch this product at the earliest," said Dr. Thomas.

Session on Health & Safety

Lanxess India Pvt Limited and Clariant Chemicals India Ltd were the Winners of this Award. The Indian subsidiary of the German speciality chemicals company, Lanxess, had the distinction of bagging three ICC awards –the most by a company – during this year’s event. The awards were for excellence in Management of Health & Safety, ‘Best Responsible Care Committed Company’ and ‘Best Nicer Globe User Company’.



Speaking about the company’s health & safety initiatives, **Mr. Utpal Kachchhi**, Site Head-Jhagadia, Lanxess India, said that the Jhagadia unit in Gujarat had zero reportable cases in the last three years and has 100 percent coverage of regular and contract employees on health & safety trainings. “The unit conducts both process and occupational risk assessments with the involvement of experts and plant employees. No new systems are started without conducting appropriate risk assessments. Management of Change (MOC) is strictly followed for new systems. Workplace and personnel monitoring is done. Exposure to chemicals and ergonomic hazards are checked while conducting the job safety analysis,” he noted.

In his presentation at the virtual awards function, **Mr. Olichandran Mathivanan**, Site Head, said the company has a strong focus on zero LTAR (lost time accident rate). The Cuddalore site did not have any reportable incidents in the last three years, he said. “The coverage of regular and contract employees for health & safety related trainings is above 90% and more than 1,500 drivers were provided trained in different training programmes. For safety during transportation, the site has adopted the ‘Nicer Globe’ initiative of ICC. Moreover, Management of Change (MOC) process is implemented through a software and a PR&MOC (Plant Reliability & Management of Change) department is exclusively working on changes in the product & process,” the ICC award citation stated.

ICC Award for Management of Environment

Aarti Industries and Chemfab Alkalies recognised for efficient management of environment. Mumbai-based manufacturer of speciality chemicals and pharmaceuticals, Aarti Industries Ltd., and chlor-alkali player, Chemfab Alkalies Ltd., were adjudged winners of ICC’s awards for excellence in management of environment.



Speaking about the achievements in the environment management area, Mr. Shankar Karhale, Corporate Head – Environment at Aarti Industries, revealed that the company’s Jhagadia (Unit-2) site has been rated ‘Gold’ with an overall score of 68 out of 100 in an Ecovadis assessment, with an individual environment score of 80 out of 100. Ecovadis is a well-recognised sustainability ratings service, which covers a broad range of non-financial management systems including environmental and sustainable procurement impacts.

He noted that sustainability is one of the most important pillars of the company’s strategic objectives. Under its environment initiatives, the company continually tracks the consumption of energy & raw materials, wastewater effluent, process emission of greenhouse gases emissions, etc. at each of its plants. The Jhagadia unit has installed a zero liquid discharge (ZLD) system aimed at reducing freshwater consumption and increasing use of recycled water. The site has also made investments in wastewater recycling, heat recovery, by-product hydrochloric acid (HCl) recovery and dry scrubbers for reducing sulphurdioxide (SO₂) emissions. In his presentation on environment management initiatives implemented by Chemfab Alkalies, Mr. Sridhar J., Vice President Operations, pointed out that the company’s Puducherry site, even though being located in a “vulnerable location” surrounded by human habitation, has been able to sustain operations because of its commitment to ensuring eco-friendly operations. A vast green belt comprising trees, herbs and shrubs covers more than 70% of the total plant area, he said.

According to the ICC award citation, the company’s eco-efficiency is at 94%, as against the overall Indian industry’s average of just 52%. “The plant has implemented innovative technologies like manufacture of soda ash from flue gases, implementation of ultrafiltration system for brine filtration, thus eliminating the use of alpha-cellulose which is made from wood, and a novel process for the conversion of non-hazardous brine sludge to bricks,” it added.

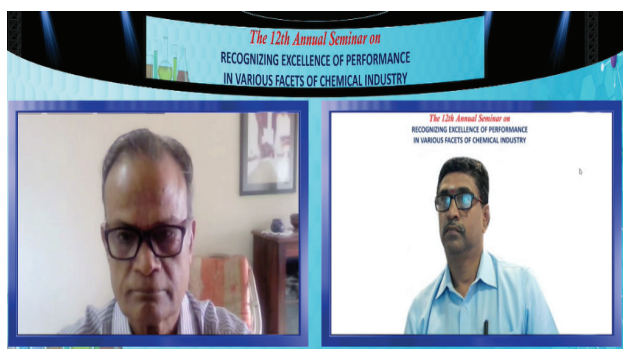
Speaking about the company’s water conservation efforts, Mr. Sridhar said that since the site had approval only to use borewell water, the company-initiated rainwater harvesting to recharge the ground water at the site. It was also decided to no longer depend on borewell water and plans to set up a desalination plant were finalised. However, due to opposition by fisher folks to the proposed plant,

it was converted into a plant to process filtered sewage water from the Pondicherry sewage treatment plant. The entire water requirement of the facility will be met by this converted plant, he said.

Excellence in Energy Conservation and Management

Thirumalai Chemicals & Tagros Chemicals conferred with this Award.

The balanced use of energy by agrochemicals firm, Tagros Chemicals, at its Cuddalore site, was recognised with ICC's award for excellence in energy conservation and management.



Giving details of the successes achieved through steps taken to ensure energy efficient operations at the site, **Mr. P. Devanathan**, AGM, Tagros Chemicals India Pvt. Ltd. said the site has managed to reduce specific energy consumptions by about 8 Gigajoules per tonne in just four years from 2017 by implementing a robust energy management system by following the ISO 50001:2011 standard. "We have now migrated the standard to the 2018 version," he added. The company has also implemented comprehensive fuel and electricity conservation plans. Mr. Devanathan informed about the energy management software, which is used by the company for routine, round-the-clock, monitoring of all energy meters and other energy consuming devices. The software gives out hourly, weekly, monthly and yearly reports, which help the company identify areas that need corrective or preventive actions.

Excellence in Human Resource Management in Chemical Industry

Gujarat State Fertilizers & Chemicals (GSFC) and Excel Industries Ltd., were feted for their innovative human resource (HR) management practices.



In his presentation, Mr. Sandeep Purohit, GSFC's Senior Vice-President, Human Resource & Services, highlighted a novel initiative called 'Samvad-Setu – Introspection through Interaction' which enables employees to share feedback about any issue with the top management. Yet another initiative is the analysis of the exit interview reports by a Professor of Psychology from MS University, Baroda. Ms. Swati Das, Chief Manager Human Resources, Excel Industries, gave details about the various employer welfare practices and health & wellness initiatives employed by the company, as also the robust performance management system and its rewards & recognition programme. "Most employees have joined Excel as their first or second employer and they have retired from Excel. Excel has an attrition rate of 2.56%, which is a great indicator of employee satisfaction," she said.

ICC Aditya Birla Award for Best Responsible Care committed Company

In his presentation on the company receiving the 'ICC Aditya Birla Award for Best Responsible Care Committed Company', **Mr. Balaram Khot**, Lanxess India's PTSE (Production, Technology, Safety & Environment) expert, noted that the company has been a Responsible Care (RC) logo holder since 2015 and has gone through three RC assessments till date.



"RC is an integral part of the company's business operations. The company believes that RC has created value for business, customers and the communities around its manufacturing facilities. Both manufacturing sites of Lanxess are on track to become 'Climate Neutral' by 2023. The company had no fatality and lost time injuries rate (LTIR) reported in last three years," informed Mr. Khot.

Best Nicer Globe User Company

Speaking about the 'Best Nicer Globe User Company' award in recognition of ensuring safe and secure transportation of chemicals, **Mr. Mahendra Shelke**, who is responsible for the logistics & supply chain functions at the company, noted that the industry, in general, does not consider transportation as a strategic factor in business success, which needs to change quickly. Realising that drivers are the most neglected human resources in the logistics space, Lanxess started a Driver Management Centre in 2015, which has now been renamed to Transportation Management Centre, which is basically a counselling

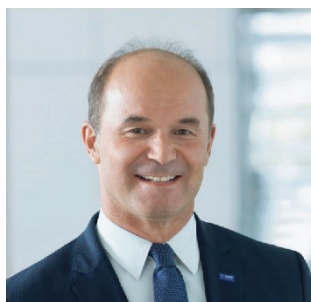
centre run by an external expert. "The objective is to inculcate the right behaviour, improving skills of the drivers, and training them to have accident-free operations on the road," he said. The company is also looking to bring in the latest technology in tracking transportation and driving assessment to ensure safer transportation, Mr. Shelke said.

Mr. D. Sothi Selvam, Director General – ICC made the concluding remarks and also proposed a Vote of Thanks to conclude the event.

Presentation of ICC Awards

Indian Chemical Council, organised its Annual Awards Function virtually on 24 September 2021. More than 500 invited dignitaries attended the function and cheered the Award Winners during the 2 hour-long function. Dr. Mansukh Mandaviya, Hon'ble Minister for Health & Family Welfare and Minister for Chemicals & Fertilizers, Government of India was the Chief Guest. Dr. Martin Brudermüller, President – ICCA (International Council of Chemical Associations) and Chairman of the Board of Executive Directors, BASF SE, was also Chief Guest representing Global Chemical Industry. Mr. Samir Kumar Biswas, I.A.S, Additional Secretary – DCPC (also Director General, CIPET), Government of India graced the occasion as Guest of Honour.

In his welcome address, Mr. Ravi Goenka, President, ICC, observed that India will be the biggest beneficiary of the China+1 strategy of global companies, and that the Indian chemical industry is witnessing a steady rise in global orders. "The speciality chemicals industry, in particular, will benefit from differentiated offerings." He attributed the buoyancy in the capital markets, particularly with respect to chemical companies, to expectations of exponential growth in the years ahead. This growth, he expected, will take the industry from its present size of about \$160-bn to \$300-350 bn by 2025. He urged companies need to be responsive to market needs, adopt new technologies and be responsible to the environment and to society. Mr. Goenka also appealed to the Hon'ble Minister Dr. Mansukh Mandaviya to launch the Production Linked Incentive (PLI) scheme for the chemical industry. "We must not lose the opportunity now available to us, to other emerging countries, such as Vietnam," he cautioned.



Dr. Martin Brudermüller, President – ICCA (International Council of Chemical Associations) and Chairman of the Board of Executive Directors, BASF SE, who was the Chief Guest (representing the Global Chemical Industry) at the event, spoke on the vital

role played by the global chemical industry in combating the ongoing pandemic. The industry, he added, has the responsibility to ensure safer manufacturing and offers

safe products that do not harm human health or the environment.

The Indian chemical industry, he said, will need to showcase how it can partner with regions such as the European Union, and needs to leverage the strengths of the country. "BASF looks to the government for a level playing field wherein domestic and international companies can contribute." As a means of encouraging investment, he urged the government to formulate a competitive tax scheme.

The Union Minister for Health & Family Welfare and Chemicals & Fertilisers, Dr. Mansukh Mandavia who was the Chief Guest, urged the Indian chemical industry to invest local chemical manufacturing so as to reduce the industry's dependence on imports.



Dr. Mandaviya called upon the industry to put in place time-bound plans for investments. He also urged the industry to focus on cluster-based development so as to improve competitiveness. "The government will provide all the support that the

industry needs," he assured. Dr. Mandaviya also referred to several measures undertaken by the government, including efforts to make industry-serving organisations more self-sustaining and not depend on government allocations and funds for their operations. In this context, he noted that the Central Institute of Plastics Engineering and Technology ("CIPET") has achieved significant progress, and is now generating substantial resources by providing a variety of services for the industry, including manpower skilling, testing services etc.

Mr. S. K. Biswas, Addl. Secretary, Department of Chemicals and Petrochemicals, also highlighted the support given by the government to the chemical industry. He drew special attention to the drive to set and implement mandatory standards for several chemicals, noting that it would ensure that only quality products are available to the industry.



Release of ICC Members Directory

Hon'ble Minister Dr. Mandaviya together with Dr. Martin Brudermuller released the latest edition of ICC MEMBERS DIRECTORY during the function. The new Directory is an invaluable and authentic reference guide which will be of immense use to members and others in India and overseas who seek to engage with the Indian chemical industry and customers, manufacturers, distributors and other service providers.

Mr. Bimal L Goculdas, Vice President, ICC congratulated all the Award Winners and also all those who sent in their nominations for these prestigious awards. "This time there were 100+ entries, the highest ever" Mr. Goculdas said. "While the best selected few may take home the laurels, it does not take away anything from all the other participants. Each one has put in tremendous effort, first of all in doing work worthy of applying for an award, and secondly in documenting the work well enough to apply for the award. According to me, the real winner in this entire process is the Chemical Industry as a whole, since best practices, especially in the areas of sustainability, environment, health, and safety, are shared openly. In short, while the winners may take home the awards, all of society will reap the rewards", he said.

"The presence of distinguished guests, industry stalwarts, and the quality of award participants, the institution conferring the awards, in this case the ICC, is itself honoured. Participating in this event has been a humbling and learning experience, and I feel inspired, as I am sure you all feel inspired, to strive for excellence. We look forward to continued growth in participation from everyone in the chemical industry as well as continued support from the Ministry of Chemicals & Fertilizers, Government of India", Mr. Goculdas concluded.



The customary Vote of Thanks was made by Mr. H. S. Karangle. He thanked the Chief Guests, Guest of Honour and all the Award winners for attending the program. He also thanked the member-companies who have supported the event, all service providers and the staff members of ICC for making the event a grand success.

9th India International Phosgene Safety Webinar

Indian Chemical Council (ICC) in its endeavour to help the chemical industry overcome the after effects of the Covid-19 outbreak initiated a dialogue and discussion with the International phosgene fraternity by organising the **9th India International Phosgene Webinar** on September 2, 2021, virtually from 13.30hrs to 17.30hrs IST. Despite the time zone difference across geographies, the event saw attendance from global experts – from Germany, Thailand, the US, and Japan, besides India.

This annual event of 9th India International Phosgene Safety Conference organised every year since 2012, touched upon key issues such as – global phosgene industry trends, the Tri-phosgene properties and industrial use, usage of PPEs in phosgene production units, the decontamination procedures, line-breaking procedures in large phosgene plants, provided updates on the Indian Phosgene Council (IPC) initiatives, along with domestic market insights from IPC members on incidents & accidents, lessons and learning, practices and remediate actions was witnessed.



The webinar began with a welcome address by ICC Gujarat Chairman, **Mr Ravi Kapoor**, who welcomed the Chief Guest, **Shri P. K. Taneja, IAS (Retd)**, Director General, Gujarat Disaster Management Institute, esteemed group of expert speakers from across the globe and audiences saying, "We have more than 120 participants attending the phosgene webinar, which is the highest seen ever in the last nine years." Realising that most of the phosgene producers are in Gujarat, and consumers are also there, so we started the first Indian Phosgene Conference in 2012 and IPC (Indian Phosgene Council) was formed in 2014. He expressed special thanks to everybody for attending this webinar. When we started we had a limited response and over the years, the council has grown from strength to strength. Mr. Ravi Kapoor also hinted at collaboration of ICC Gujarat with Gujarat Institute of Disaster Management soon, while insisting on the right attitude for growth.

Mr. Bavanji Vekariya, Chairman, Indian Phosgene Council (IPC) and Site Head, Covestro Ankleshwar introduced Dr. Kurt Meurer of Covestro Global, Germany & Global Head and speaker of the Phosgene Steering Group with Bayer, Covestro and Lanxess as member companies. Dr. Meurer gave September 2021 update on global Phosgene industry developments. "As you know the core focus of the chemical industry will be on climate, sustainability and circular economy. Phosgene is one key intermediate used in highly safe, clean, circular and efficient processes producing (di) isocyanates, polycarbonates and many fine chemicals. Despite considerable volume growth in the last decade, the fatal phosgene incidents have decreased significantly. The prevention of fatal and serious industrial accidents involving Phosgene or Tri-Phosgene (BTC) is on the right track so far. Support of global Phosgene industry in all world regions has paid off," said Dr. Kurt Meurer.

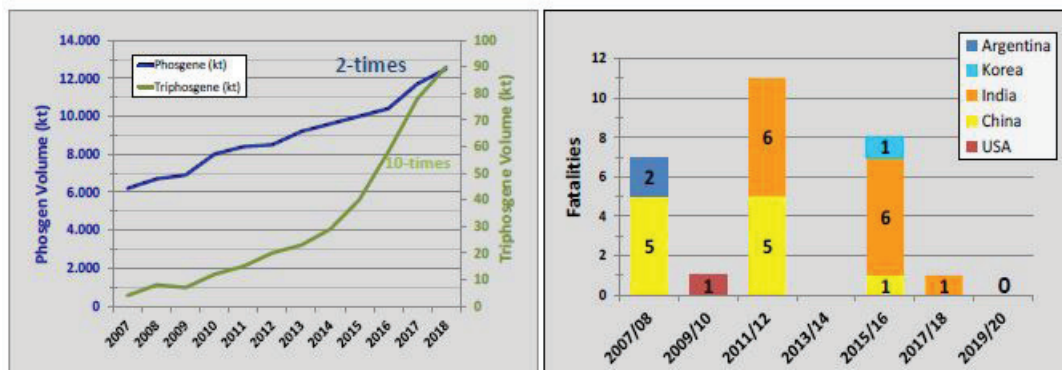


Image caption: Phosgene & Triphosgene Volume Trends vs. Fatal incidents up to 2020

It is a great step for India to have phosgene industry guidelines with best practices compiled by the **Indian Phosgene Council (IPC)**. "It is nice to see that 'International ICC Phosgene Meetings' in India supporting highest Phosgene safety values in India's Chemical industry are ongoing despite the Covid-19 pandemic situation. ICC IPC is aiming to become well acknowledged advocacy group for Phosgene in India. Also, IPC is looking at translating ICC's Phosgene guidelines in local languages taking into account, local, cultural and public aspects" Dr Meurer added. "There are also opportunities for phosgene based technologies and processes in the next decade. A complete or partial transformation of the Phosgene-based process design from 'classic' to 'innovative' production routes is expected in the coming decade. Promotion and development of highly safe, sustainable, circular and efficient Phosgene-based production processes have just begun."

"ICC is organizing International Phosgene Conference every year, since 2012 to address the safety issues of Phosgene producers and consumers in India. The Indian chemical industry is growing at a phenomenal pace and the next few years, we will see an even higher rate of growth. Rapid industrialization particularly in Gujarat state has increased the hazards, risks and vulnerability of the industry and the environment further. Risk of accidents involving chemicals has attained a very serious concern for disaster risk management within the government, corporate sector and the community at large. It is important that the industry focuses on Occupational Safety and Health, regulatory regime; else the risk of accidents is prevalent. Several such incidents have recently been witnessed in Vizag, Andhra Pradesh, Mumbai, Dahej, and in GNFC five years ago. There is an urgent need to

introspect the root cause of such incidents, because until and unless we do that such incidents and the magnitude of its impact will continue to increase. In fact that's what the Prime Minister's Disaster Risk Management Agenda stresses upon. It says, learn from past mistakes. But are we learning? Are we incorporating the learnings in our mitigation methods? I think we need to check and do the needful," said Shri P. K. Taneja, IAS (Retd), Director General, Gujarat Disaster Management Institute.

"While the incident is predominantly local, the affects and the impact are widespread – the loss of life and property may be localised to an extent but the subsequent losses due to interruption in services, products, and supply chains is phenomenal. So what is required is local capacity to reduce disaster risks, local capacity to respond to such events such that disasters are prevented in the first place," he further added.

Dr. Thomas Geller, Bayer, Dormagen, Germany made a presentation on the topic of '**Tri Phosgene - Properties and Industrial Use**'. He stated the reason for talking about Tri-Phosgene in a Phosgene conference is because there are some significant changes in the phosgene market, especially as regards legislation in China. In China, the use of Phosgene is rather restricted, whereas the use of Tri-phosgene is not restricted. Therefore, a lot of companies in China have changed from Phosgene to Tri-Phosgene. China is by far the largest producer of Tri-phosgene, which is also called as BTC (an abbreviation) or "solid phosgene" and most companies that are producing it, label it as a very toxic and corrosive compound. BTC is used in the fine chemical industry (i.e. Agrochemicals and pharmaceuticals). The Tri-phosgene capacity in China is more than 100,000 tons per year and the market is still growing. BTC is mainly used and produced in China and

only a small fraction is exported to other countries, for example, about 2,000 tons to India in 2016. There has been misleading literature on BTC. BTC is not a “safe phosgene”. However, the toxicological profile of BTC is different from Phosgene. There are neither detection devices nor badges dedicated to BTC.

Mr. Hisao Kokeguchi, (former) Mitsui Chemicals, International Isocyanate Institute (III) AP Coordinator, made a presentation on plant shutdown caused by extreme weather conditions in Japan with increasing occurrence of extremely heavy rains and multiple lightning strikes. The presentation was originally prepared by Member Company Mitsui Chemicals plant manager for Isocyanates. Highlighting a case when the western part of Japan was hit by extreme rainfall on July 6, 2020, a chemical plant complex of Member Company experienced emergency shut down due to flooding. Hence Kokeguchi advised, “Assuming that highly damaging weather will occur frequently in the future, it is necessary to review the design standards periodically considering extreme weather conditions.”

Dr. Med. Marc Vosskaemper, Head of PSG Global Medical Group, Covestro Global Medical Director / Health & Global Medical Affairs, made his presentation on **the ‘Medical Update 2021 – Progress in ICU Treatment’** emphasising on the need for Phosgene specific rescue chains in case of emergencies. There are also tasks for medical personnel to keep regular contact with first line hospital with emergency room/ICU, provide SOP suggestions for phosgene inhalation cases, SOP for decontamination in plant or emergency room, etc. Now many hospitals are using Extracorporeal membrane oxygenation (ECMO) for treatment of patients with phosgene inhalation, and pandemic gave a chance for use of ECMO, hence the use is much higher today. Getting to ECMO basis, look for experienced hospital department where ECMO runs for weeks, it is used in severe phosgene inhalation cases worldwide, while ECMO is not therapy for pulmonary oedema, but it helps buy time for the lung to recover or the pharmaceutical therapy to work in patients.

Mr. Somchai Kanjanasantisak from Covestro Ltd., Map ta Phut, Thailand in his presentation emphasised on the **‘Usage of PPEs in phosgene unit’** touching upon the points – phosgene medical badges, escape devices, PPEs for phosgene works, and chemical resistant unit.

Chemical resistant suit/ gloves/ boots are used when foresee the risk of contact with chemical like Phosgene solution, HCl, MCB etc. Full-body chemical protection is used when foresee the risk of contact with toxic chemical like phenol. For visitors, plant patrol, insulation work, electrical work (cable), instrument – cable and electronics, the PPE used is full-face mask with activated carbon filter. However, for instrument stuffing boxes from valves, mechanical – tightening of bolts on flanges in operation, response to leaks, mechanical – line breaking

and repairing pumps, the standard PPE used is a self-contained breathing apparatus. If the plant personnel are moving parts within the restricted areas, the standard PPE used is full-face mask with activated carbon filter.

The full face mask with filter usage is possible to enter restricted area (containment or open units) if all phosgene was removed/ destroyed and if all line opening finished and if no phosgene alarm is sounding.

Post the afternoon coffee break at 15:00 hrs, **Mr. Artur Klinger**, Dow Chemical, Stade, Germany/USA; III PSECC made a presentation on **‘Decontamination Procedures’**. His presentation touched upon the following points questioning – what is decontamination? Why is decontamination so important? We need to develop a decontamination plan, types of contamination and ways to prevent it, types of decontamination and what do we need for decontamination. Decontamination is the process of removing or neutralizing contaminants that have accumulated on personnel and equipment. Decontamination is important because it protects workers from hazardous substances, protects respiratory equipment, tools, vehicles, and other equipment used on site, protects all site personnel by minimizing the transfer of harmful materials into clean areas, prevents mixing of incompatible chemicals and thus overall protects the community by preventing uncontrolled transportation of contaminants from the site.

Stressing on the need to develop a decontamination plan, Mr. Klinger said, “A decontamination plan should be developed (as part of the Site Safety Plan) and set up before any personnel or equipment may enter areas where the potential for exposure to hazardous substances exists.”

The next presentation on **‘Line-breaking Procedures in Large Phosgene Plant Units’** was made by **Mr. Matt O’Neil**, Covestro LLC, Houston, Texas, USA.

Mr. Bavanji Vekariya, Chairman, Indian Phosgene Council (IPC, under the aegis of ICC -western India region) & Site Head, Covestro, Ankleshwar provided **IPC updates 2020-21**. Currently there are seven members who are a part of the IPC, of which five companies produce and handle phosgene in one form or the other and almost all of these companies are located in Gujarat, except Deccan Fine chemicals located in southern part of India.

Approaching the end of the webinar, there were local presentations from IPC Members. To begin with, **Mr. Pratik Patel**, Manager, GNFC Ltd emphasised on the **safe practices followed at GNFC Toluene Di-isocyanate (TDI) facility at Bharuch** for handling of Phosgene.

Mr. Kaushal Vithalani, Assistant Manager, BASF spoke about best practices followed at the Dahej facility – **the STF (Slip-Trip-Fall) prevention program**, the causes of STFs and preventing the same, and hand safety campaign in detail.

Mr. Prashant Maurya, AGM-EHS, Paushak shared details about the company saying, "Paushak was established in 1972 and part of Alembic group companies situated in Gujarat.

The concluding session by **Mr. Nihar Pathak, Atul Ltd** shed light on the **Phosgene-Engineering Controls** on the Atul's phosgene manufacturing plant. Atul Limited has Phosgene manufacturing plant as well as Phosgene uses plant. Engineering Control falls in the hierarchy of hazard controls – the first being, elimination, then substitution, third is engineering control, fourth being administrative control and fifth is the PPEs.



Ms. Aarat Sheth, Head-Events, ICC Gujarat and **Mr. Bavanji Vekariya**, Chairman, IPC gave vote of thanks

3RD Edition of ICC Sustainability Conclave 2021: Clean India -Green India: Strategies, Innovations & Technologies for Chemical Industry.

To take forward the cause of Sustainability, Indian Chemical Council (ICC) organized its 3rd edition of Sustainability Conclave during 2-3rd December 2021 with the theme "Clean India-Green India: Strategies, Innovations & Technologies for Chemical Industry". Keeping in view the pandemic situation, the 3rd edition of the conclave was again organized in a virtual mode. The conclave was organized in association with United Nations Environment Programme (UNEP), International Council of Chemical Association (ICCA), European Chemical Council (Cefic), American Chemistry Council (ACC) and with support from the Ministry of Chemical and Fertilizers and Ministry of Environment, Forest & Climate Change (MoEFCC), Government of India. Environmental Resource Management (ERM) has contributed as Knowledge Partner of the Conclave.

Mr. Ravi Goenka, President, ICC and CMD Laxmi Organic Industries Ltd. welcomed the participants. During his welcome address Mr. Goenka highlighted that sustainability is a top board room agenda today and the chemical industry is facing the challenges of high carbon emission, finite fossil fuel, severe weather conditions, water scarcity, waste management, ESG etc. The ESG investing is becoming more overt. But he also emphasized that it is in the DNA of the chemical Industry to innovate and come out with out of the box solutions and to set benchmark.

The ICC perspective on Sustainability was given by **Mr. Ravi Kapoor**, Chairman, ICC Sustainability Committee and MD, Heubach Colour Pvt. Ltd. during the inaugural session. Mr. Kapoor shared that we share a common bond about being sustainable, being clean and green. Chemical industry in India is doing well and it is bound to grow from the present level. The new order of thing is that stakeholders are now woken-up. Growth is inevitable but it has to be responsible and here the sustainability becomes imperative. ICC is pushing 'Responsible Care' very hard and is getting lots of appreciation from international community. Decarbonization, climate change, ESG, gender parity etc. are very pertinent issues for chemical industry even globally. He has briefly highlighted the importance of different sessions planned during the 2-day conclave.



During his Keynote Address, **Mr. Srikant Madhav Vaidya**, Chairman, Indian Oil Corporation Ltd. (IOCL) spoke about various benchmarks being set-up by ICC in Indian chemical industry. IOCL is also aligned with the vision of ICC to support and promote all branches of chemical industry and highlighted that ICC Sustainability Conclave emerged as a robust platform. Focus on environmental sustainability has been the fundamental tenants that drives that growth strategy. He also elaborated the IOCL's energy mandate that is aligned with the national goals. IOCL is working on development of indigenous process technologies, refinery upgradation, development of efficient fuels, exploration of low carbon pathways etc. India is now committed for net zero by 2070 and therefore energy transition is inevitable and India is going to witness the fastest growth in energy sector. IOCL is spearheading various green initiatives throughout the country to align with the national targets.

In her special address, **Ms. Sheila Aggarwal-Khan**, Director, Economy Division, UNEP touched upon the issue of air pollution in India. There is an opportunity for industry for being the frontrunner where governments are creating enabling environment for industry to flourish with sustainability at its core. She also highlighted that in terms of finance, about 200 banks representing about 40% of the finance sector are now looking at how they can bring sustainability at their core by setting targets for sustainable banking with third party mechanisms being set-up and bring transparency in their operations. Lots of industrial players and even governments are looking

to phase out fossil fuel. Many countries are looking at the electric mobility not only from energy side but also from circularity angle. For global agreement on plastics, governments are planning to come together to create a circular economy model. Also, on SAICM, the year 2022 will see lots of agreement on chemicals with many industry players to come into play.

The vote of thanks for the inaugural session was proposed by **Mr. Bimal Goculdas**, Vice President, ICC and MD & CEO, The Dharamasi Morarji Chemical Company. He thanks Ms. Sheila Aggarwal Khan for all the continued support by UNEP, Mr. Srikant Madhav Vaidya for sharing the vision and support of IOCL, support from the Ministry of Chemicals & Fertilizers and Ministry of Environment, Forest & Climate Change, Government of India, all stakeholders such as ICCA, ACC, Cefic and ERM for continued support. He also thanked Rockwell Automation, GPC and all other sponsors who continued to support the sustainability efforts of ICC. He specially thanked Mr. Ravi Kapoor and all Delhi team for spearheading this flagship initiatives who have made possible this 3rd edition of conclave even in these challenging times.

Mr. Nadir Godrej, CMD, Godrej Industries Limited has eloquently touched upon all the important aspects and pillars of sustainability and sustainable practices through his poetic style during his sustainability address. The base presentation on the theme of the conclave was made by **Dr. Shivananda Shetty**, Partner, ERM. During his presentation on the ESG & climate change agenda, he touching upon areas such as business drivers for sustainability & climate, important trends for 2021, sustainability maturity model, road to 2030- role of chemical sector etc.



Mr. Jai Shroff, Global CEO, UPL Ltd. shared his perspective on sustainability as a Guest of Honour. He shared his journey to be a global leader in the sector by believing in working together with different stakeholders, building lots of partnership with local companies, indigenous supply sourcing. India is now being recognized globally for its capability as a key material supplier. Opportunities are tremendous and our country has a very favourable ecosystem to lead the growth and transformation in the chemical sector and is one of the few favourable ecosystems in the world.

The panel session on Incentivizing environmental compliance, steered by Mr. Ravi Kapoor, had very prominent leaders of the Indian chemical industry viz. **Ms. Vinati Saraf Mutreja**, MD & CEO, Vinati Organics Ltd., **Mr. Rajendra Gogri**, CMD, Aarti Industries Ltd., **Mr Sameer Hiremath**, MD, Hikal Ltd., **Mr. Prakash Raman**, MD, Transpek-Silox Industry Pvt. Ltd., and **Mr. Rupark Saraswat**, CEO, India Glycols Ltd., as panelists. The session deliberated on some of the pertinent issues such as the need for incentivizing the environmental compliance, incentivizing leading to better compliance, different kinds of incentives needed to drive better environmental compliance as well as role of industry driven initiatives such as 'Responsible Care' in encouraging environmental compliance.

The current pandemic has forced the companies to move towards the technology front and many new technologies are being implemented to run the operations uninterrupted. The session on 'Emerging Digital Technologies and Industry initiatives driving Sustainability' was chaired by **Mr. Anand Srinivasan**, MD, Covestro India had participation from **Mr. Tommy Mitchell** (Rockwell Automation) and **Mr. Bala Santhanam** (Intel), who shared their view on new and emerging technologies. **Ms. Gabriele Unger** presented on the Tfs- Supply chain initiative for chemical industry.

In the backdrop of recently concluded COP-26, the sustainability conclave has a session focused on the outcome of cop-26 and its implications for the chemical industry. The session was moderated by **Mr. Charles Henri Robert**, ED-in charge, Climate Change & Energy, Cefic. The eminent panelists were **Dr. Abdulwahab Al-Sadoun**, Secretary General, GPCA; **Mr Yagishita Masamichi**, Showa Denko, Chair of ICCA Energy & Climate Change Leadership Group and **Mr. Narayan Krishnamohan**, Managing Director, BASF India Ltd. and Head, BASF, South Asia. The session discussed some of the important issues such as any element of progress that deserves recognition and which companies believe can make a meaningful contribution to the 1.5°C objective; how to support and show solidarity with the vulnerable countries, e.g. in providing technical expertise and finances; the current format and frequency of COP and suggestions for any change; and need for chemical industry needs to be more visible and proactive at the COP.



The ESG has become a boardroom agenda and is no longer a buzz word. One of the highlights of the conclave was a session on 'ESG driven strategies-Path for Sustainability'. The session was chaired by **Mr. Rajesh Srivastava**, Chairman, ICC-NR and CEO & MD, Jubilant Ingrevia Ltd., and moderated by **Mr. Deepak Jain**, Partner, Bain & Company, India. During the session **Mr. Karan Singh**, MD, Bain & Company, India spoke about ESG's global trends, strategies and implications and also highlighted on Indian Scenarios in ESG. **Mr Ram Vaidyanathan** (Godrej Industries Ltd.) and **Dr. Ashok Menon** (SABIC) shared their views on 'Sustainability 2.0-From surviving to thriving' and 'Role of ESG in shaping the future of Chemical industry', respectively.

On day two, **Mr. Ravi Kapoor** welcomed the dignitaries of the inauguration session and all the attendees for their active participation. He highlighted the excellent discussions that took place on day one of the conclave and also set the context for different sessions lined up for the day. **Mr. Vijay Sankar**, Deputy Chairman, The Sanmar Group and the Guest of Honour of the inaugural session highlighted that ICC's core mission is RC & NG. The Indian chemical industry has really transformed in the last few years. Growth is bound to happen due to many reasons but the challenges is how to grow sustainably, how to decarbonize while maintaining growth momentum and how the chemical industry can help other industries to achieve their UNSDGs. Transition to decarbonization, new cleaner technological innovations is inevitable and challenging. ICC is leading the flagship initiative of RC & NG but keeping in view the size of the Indian chemical industry the companies who have adopted RC are very less. Mr. Sankar urged the government to provide a formal overlay to RC & NG to speed up its sustainability initiative among the Indian chemical industry. Indian government is committed for green and sustainable future as envisaged by the commitment of our Hon'ble Prime Minister at COP-26.

The Chief Guest of the Inaugural session **Shri Bhagwanth Khuba**, Hon'ble Minister of State for Chemicals & Fertilizers, and New & Renewable Energy, Government of India welcome all the distinguished and eminent speakers and participants. He applauded the very timely efforts of ICC in organizing this conclave on a very important aspect. He appreciated the role played by the chemical industry during the pandemic in timely supplying critical inputs to the pharma sector and indigenous manufacturing. The commitment of our Hon'ble Prime Minister at Glasgow and his 'Panchamrit' to become carbon neutral and net zero by 2070 shows India's strong commitment towards decarbonization and carbon neutrality. Renewable energy and alternative energy sources have a key role to play here. About 39% of our capacity is from non-fossil fuels. Green hydrogen is going to play a key role in future in industry operations. Chemical industry should adopt new and renewable energy sources despite some technical challenges. There is a strong need to build capacity

within the country and shared infrastructure for industry to become more competitive for making India a hub for chemical manufacturing. Chemical sector needs to work closely with research institutions to drive innovations. The sustainability related initiatives of ICC such as RC & NG are playing an important role in chemical industry. Hopefully, more companies will come forward in adopting this voluntary initiative. There is a need to improve technical, cultural and behavioural aspects of chemical industry. Environment sustainability, health, safety and security should be the focal point for growth of the chemical industry. I am hopeful that ICC will continue to play its critical role in driving sustainability agenda and path for high growth trajectory. I look forward to deliberations and suggestions to this conclave.

The vote of thanks for the inaugural session of the day two was proposed by **Mr. Kartik Bharatram**, Dy. MD, SRF Ltd. Mr. Bharatram thanked Mr. Ravi Kapoor for setting the context and spearheading this sustainability initiative; Mr. Vijay Sankar for sharing his passion and efforts on Responsible care during his tenure as President, ICC. He also thanked the Shri Bhagwant Khuba, Hon'ble Minister and the Chemical Ministry for supporting this initiative and highlighting of importance of the chemical industry, its contribution during pandemic, ICC's initiatives of RC & NG, worked with research institutions, green hydrogen etc. He also thanked all the participants for sparing their valuable time for attending this sustainability initiative of ICC.

To ease the burden on finite resources, circularity has gained much attention and focus from all sector and also the focus is shifting to green chemistry. More and more sustainable solutions are now being designed by companies to make their operations greener. The session on 'Circularity, Green Chemistry and Sustainable solutions' deliberated on some of these aspects and leading chemical companies offered insight from their examples. The session on this important topic was chaired by **Prof. A. B. Pandit**, VC, ICT, Mumbai and moderated by **Mr. Kapil Malhotra**, Co-chair, ICC NR, and Global BU Head – Fluorochemicals, GFL. Dr. Reynold D'Souza (GPC) presented on one of the most important aspect of Plastics i.e. Strategies for flexible packaging & the circular economy and presented various examples and work done on these aspects across the globe. **Mr. Rakesh Mehta** (ExxonMobil) in his presentation on 'Innovative Products with Sustainable solutions' talked about the advance plastic recycling for expanding the lifecycle of plastics and its benefits, Mono PP Solutions from ExxonMobil, and its continuing work on high grade Post Consumer Resin (PCR) for use globally. **Dr. Rajendra Powale** (Galaxy Surfactants Ltd.) highlighted the good work done on green chemistry by Galaxy and how they have developed more green products by substituting the hazardous or toxic intermediates.

Governments and corporates around the globe are working towards reducing their carbon footprints, decarbonization and moving towards net zero emission.

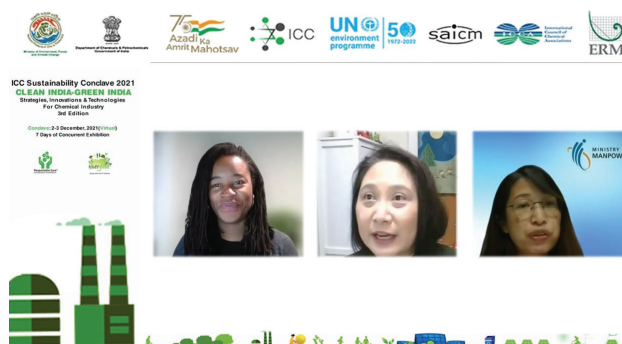
This has brought to the forefront the role being played by renewable energy sources and this is going to increase substantially in coming decade. One session of the conclave discussed about 'Harnessing Renewable Energy for Chemical Industry' and this session was chaired by **Mr. Gireesh Pradhan**, Fmr. Chairman, CERC & Secretary, MNRE, Government of India with **Dr. Ajay Mathur**, Director General, International Solar Alliance, as Co-Chair. Dr. Mathur expressed that global community is shifting away from coal. Chemical industry which is mostly dependent on coal, oil and gas has to move away towards renewables. He talked about the decarbonization plan of the sector using renewable energy and renewable carbon and shared a roadmap and next steps towards a sustainable chemical sector. **Mr. Ajay Shah** (Reliance Industries Ltd.) gave an overview for harnessing renewable energy for chemical sector. He talked about power to heat, power to fuel & chemicals, next generation chemicals and composites such as carbon fibres for efficient windmills, carbon fibre H₂ cylinders, green hydrogen. He also highlighted the challenges and opportunities in this sector for chemical industries and shared the RIL's vision of Green Energy and Giga complex. **Mr. Naveen Khandelwal** (BrightNight Power) made a presentation on various deliverables by BrightNight in renewable power across India, market mechanism for buying green power and company's role in making this happen. He also talked about the various projects of his companies at various locations across India.



The next session on 'Digital Transformation: Reinventing Chemical Manufacturing' was moderated by **Mr. Dilip Sawhney**, Managing Director – India, Rockwell Automation India Pvt Ltd. The Panel discussion some of the most pertinent questions on Digital transformation such as possible security threats from a digitization standpoint and ways to counter them; role of digitalization to reduce overall manufacturing costs; kinds of digitization technologies that an industry needs to build a resilient enterprise; ensuring safety of the plant, people, and the processes through digitalization; role of IIoT in helping industries to reach a sustainable and low waste model; role of Augmented reality for improving capability & competence in the organization; digital technologies to watch that offer the "lowest hanging fruit" for a quick turnaround on the investment in your opinion; combating challenges of Energy optimization, environmental impact

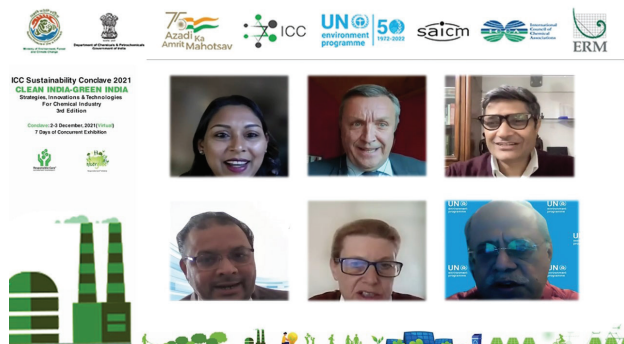
reduction, productivity; Resource Optimisation and asset utilization etc. The expert panelists were **Mr. Sanath Kumar** (GFL); **Mr. Ramesh Rajagopalakrishnan** (Aditya Birla Group); **Mr. Manoj Kumar Mishra** (SRF Ltd.); **Mr. Raju Kapoor** (FMC India Pvt Ltd.); and **Mr. Vivek Khanchandani** (Asian Paints Ltd.).

A properly implemented Globally Harmonized System of classification and Labelling of Chemicals (GHS) is fundamental to any chemicals management scheme as it synchronizes hazard communication globally, improves workers' protections and facilitates trade. To cover this important aspect, the session on 'GHS as a Foundation for Sustainable Chemistry: Lessons from Singapore' was developed in association with American Chemistry Council (ACC) and Singapore Chemical Industry Council (SCIC). The session presented a case study on GHS Implementation in Singapore, and the steps taken to maximize the benefits associated with full implementation, as well as the lessons learned.



The session was moderated by **Ms. Raleigh Davis**, Director, Global Affairs, ACC. An overview of GHS implementation in Singapore from the industry perspective was given by Ms. Cissie Yeung (SCIC). From the government perspective, a presentation on 'Regulatory Control and Management of Hazardous Chemicals at Work in Singapore' was made by **Ms. Evelyn Koh**, Senior Assistant Director (Occupational Hygiene), Occupational Safety and Health Division, Ministry of Manpower (MoM), Singapore. The session explored the implementation process, any challenges that arose and how industry and government maximized their collaborations to promote streamlined and effective uptake of the GHS principles.

A joint session on 'Strengthening data systems for Chemicals and Waste reporting under MEAs & SDGs' was developed by UNEP and ICC to get relevant stakeholders together to deliberate on issues related to data collection, analysis and reporting on chemicals and waste in India, in the context of relevant MEAs and SDGs. The session was moderated by **Ms. Nalini Sharma**, SAICM Coordinator, UNEP. The other experts of the session included Mr Pierre Quiblier, Programme Officer - Chemical and Health Branch, UNEP; **Ms. Ludgarde Coppens**, Head, SDG & Environment Statistics Unit, UNEP; **Mr. Chandra Bhushan**, CEO, iForest; **Mr. KVS Satish**, Chief Sustainability Officer, Jubilant Pharmova Ltd; and **Mr. Atul Bagai**, India Country Head, UNEP



The sessions aimed at informing national policymaking and encouraging proactive and collaborative engagement of different stakeholders to support chemical & waste data reporting in India. The session focused on the (i) Global scenario on chemicals and waste data reporting, (ii) Overview of national datasets and institutional frameworks for collecting and reporting data on chemicals and waste in India, and (iii) Understanding key aspects of SDG and MEA reporting in India in the context of chemicals and waste, and the challenges being faced therein. The discussion during the session led to enhanced understanding of issues related to data collection and management on chemicals and waste in India based on national and global experience and suggested on how existing datasets and responsibilities of various stakeholders can be made more effective.

The last session of the conclave was devoted to the measurement of sustainability and was entitled “What gets measured get done: Methodologies & Mechanisms” and was chaired by **Dr. Raman Ramachandran**, MD & CEO, PI Industries Ltd. Ms. Kate Newbury-Helps (ERM) made a brief presentation on ‘Disclosing the Sustainability Metrics which Matter’. During her presentation she spoke about need for reporting and measurement of Sustainability data, stakeholder expectations, ESG reporting framework and standards versus ESG ratings and rankings, ESG ecosystem trends, different reporting frameworks, materiality assessment and data collection and disclosure. **Ms. Anne Kolton**, Exec. VP, Communications, Sustainability & Market Outreach, ACC described the process of how ACC has developed its sustainability metrics. The process includes identifying the potential metrics and then putting forward these set of metrics to ACC boards for approval. The ACC sustainability metrics are focussed on environmental metrics, socially oriented metrics and product and process metrics. The ACC members are voluntarily reporting their performance in specific measurement in their metrics categories. **Mr. M. K. Rao** (ICC) elaborated the process of Key Performance Indicators (KPI) reporting mechanism of Responsible Care. He explained in details about the various health and safety parameters, Environmental parameters, Resources utilization and Security performance parameters. The various desirables and benefits of reporting the KPI were also highlighted during his presentation.

The vision for looking ahead during the concluding session, Mr. Bimal Goculdas, Vice President, ICC and MD& CEO of The Dharamsi Morarji chemical Company Ltd. highlighted on some of the big points on which ICC needs to focus. A lot of discussion during the two days was focussed on energy sector, CO₂ emission, electric mobility etc. There is a need to look at the bigger picture such as looking beyond the electric cars and focussing on electric mobility for public transport to reduce emissions, alternative fuels etc. It was encouraging to see all the different range of industries to come together on a single platform for the promoting the cause of sustainability. We need to look forward on innovative technologies. Funding opportunities are available for people and companies who have innovative ideas. ICC can play a pivotal role in getting such technological and financial resources to companies where it is needed especially to smaller companies. Lots of discussion took place on investments in sustainability that has a payback and is not a cost and companies can save money while saving the environment. Opportunities are there is logistic sector for sustainable packaging, use of solvents to remove solvents for greener chemistry. The Clean India-Green India is not possible without the rest of the world and vice-versa. Climate change is a common cause, we all need to fight together. Chemical industry needs to project itself as a part of the solution to the societal problems. Financial institutions are going to reward the companies based on their ESG performances. He stressed that ICC need to play a bigger role in promoting sustainability through cooperation of all stakeholders, government department, other associations, R&D institutions and various multilateral agencies.

The vote of thanks was proposed by Mr. D. Sothi Selvam, Director General, ICC.

The Fifteenth Annual INDIA CHEMICAL INDUSTRY OUTLOOK CONFERENCE & EXHIBITION

“India’s USD 5 Trillion Economy: Role of Chemicals in Navigating the Future” 1-2 March 2022



The Fifteenth edition of ICC’s signature event – **The Annual India Chemical Industry Outlook Conference & Exhibition** with the theme **“India’s USD 5 Trillion Economy: Role of Chemicals in Navigating the Future”** was organized on 1st and 2nd March 2022, virtually.

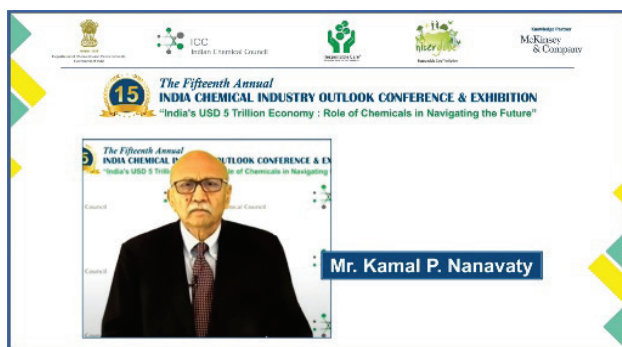
The event saw attendance of more than 500 delegates, with active participation from veterans, experts and decision makers of the chemical industry in India and globally. Like previous years, the 2-day event was supported by the Ministry of Chemicals and Petrochemicals, Government of India.

McKinsey & Company was the Knowledge Partner for this year too. This year **Argus** joined us as the Media partner and **GPC** as the Global Product Compliance partner and the conference had the active support of many of the large and medium scale industries.

The 2-day event saw various Sessions chaired by eminent leaders in the chemical business, joined by veterans and industry stalwarts gracing the panel discussions with insightful talks, complemented by power packed keynote sessions. It also included engaging breakout sessions on Agrochemical Industry and Specialty Chemical Sectors and increasing customer engagement in the virtual exhibition booths. The two-day virtual extravaganza brought to fore challenges and opportunities that continue to remain untapped by the chemical industry at large.

The Inaugural Session started with the introductory remarks by Mr. Kamal P. Nanavaty, Chairman – Conference & Exhibition, ICC (President - President – Strategy Development, Reliance Industries Ltd).

“The year 2020-2021 was a challenging year and the Chemical Industry has been a lifeline to the entire population globally. What we are going to witness is V shaped recovery in consumption. The Packaging & Health care sectors performed well while India still remains the growth engine and demand driver as we move into 2022’, said Mr. Nanavaty.



While talking about the global chemicals demand he added, “If we look at the global chemicals demand, China dominates the chemical sector, while India just hit 92 billion euros is very well set for an incredible and sustainable growth for the many more years to come. Indian Chemical Industry needs government support to remain on the growth trajectory. What we see here is building blocks and intermediate. The first block Naphtha followed by basic building blocks and bulk polymers, intermediates and specialty chemicals. If we look at intermediates and specialty chemicals we realize India has lot more to grow in the sector. In 2020, the growth of specialty chemicals was around \$32 billion to \$ 40 billion in 2025. There is a need to reduce import gap of six major value chains which includes C1, C2, C3, C3, C3/C6 and C6/C4. Around \$7.6 billion of opportunity are there in six major value chains.”

Speaking about the mega trends in chemical industry up to 2030, Mr. Nanavaty said, “In incremental/ entrepreneurial, we see circular economy and personalization, while in disruptive, we see genome editing in medical applications and digitalization of agriculture. New supply chain also emerge creating opportunities in India. Looking further, sustainability and circular economy is the integral part of our industry. Investments in upcoming petrochemicals project help in stepping towards \$5 Trillion economy. There are 9 major projects under implementation valued at \$35.8 billion, 5 projects are announced which is valued

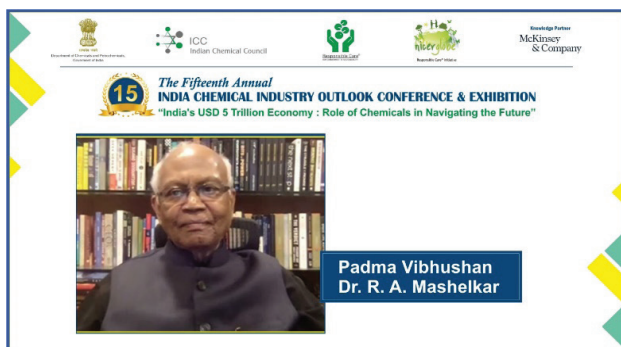
at \$62.7 billion and 10 projects are on drawing board valued at \$25.0 billion.”

“When we look way forward, Derisk transportation fuels by integrating crude to chemical - This will ensure availability of critical feedstock for downstream industries. Demand for specialty and high performance product will grow rapidly. Innovative business model, technological solutions for sustainable development. CO2 capture, enhancing plastic recycling are need of the hour - Circular economy will be at center stage. Digitalization and reducing carbon footprint are required imperatives. India needs a world scale cracker - USD 5 billion - every year. India needs cluster approach to reduce import dependency and to meet future needs of smart materials. The need world class infrastructure support from Government for accelerated growth”, he observed.

In his welcome address Ravi Goenka, President, ICC & CMD of Laxmi Organic Industries Ltd, said, “This is the signature event of ICC and has evolved as most successful event of the chemical industry in India. We have the resilience to overcome the challenges. This conference is wholeheartedly supported by Ministry of Chemicals & Fertilizers and McKinsey & Company as our knowledge partner. We are honored to have Ms Arti Ahuja, I.A.S, Secretary, Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, and Government of India, as Guest of Honour.”

Moving further, the first Keynote Address was given by **Padma Vibhushan Dr. R.A. Mashelkar**, FRS, National Research Professor & Former Director General, CSIR, and Government of India. He spoke about Chemical Industry, Green Hydrogen and Green Future.

“Chemical industry is undergoing transformation from linear value chain to circular ecosystems. Circular Economy offers \$4.5 Trillion potential business opportunity by 2030. Green H2 is important for India. H2 can reduce over \$160 billion worth of imports for India. India is the world's third-largest emitter, with 3.6 gigatonnes of CO2 equivalent across sectors. The Sector coupling energy vector critical to achieve deep decarbonisation of difficult sectors are Abundant, Affordable, Atamanirbhar, Decentralization, Digitization, Decarbonization, Enterprise, Exporter, and Economy. In The Long Term, Green H2 could become more than a niche fuel if cheap renewable electricity is available”, Dr. Mashelkar said.



“Opportunity of global trade of clean hydrogen is delivering it in low cost, clean H2 to demand centers key to drive transition to hydrogen economy. Opportunities lie across hydrogen value chain which includes production, transportation storage and utilization,” said Dr. Mashelkar.

The second Keynote Address was presented by Dr. Jakob Fischer, Senior Partner, McKinsey & Company, Munich, said, “Chemicals have outperformed the world market over the long run, and have come also out of the crisis stronger than the world market. India and Asia have outperformed Western world. Focused players significantly outperform less focused players. Focused players have more than 80% of their revenues in maximum two chemical segments. Global Chemicals market is projected grow to \$4.9 trillion by 2030, with an accelerated shift to Asia. APAC to contribute 70-80% incremental volume in next 10 years; India to see fastest growth in 2021-30.”



Focusing on the growth, he added, “Asia will be the primary source of incremental growth in the next 10 years (~70-80% of volume). While China will see a slowdown (from ~9% to 4% growth), India is projected to grow fastest at ~5% (at 2.5x of hist). Asia has become self-sufficient and provides over-capacity in many segments. While Western players are often still underrepresented in Asia, many Asian players are gaining a foothold also in Western markets.”

Talking about the trends he said, “Chemicals industry is impacted by all key megatrends which includes Sustainability revolution, Digitalization and e-commerce, Future of mobility and living, growing global middle class, growing global middle class, aging population in industrial countries and Industry internal trends.”

“Initiatives driven by global sustainability revolution usually fall under the following eight sustainability trends includes Climate action, Clean energy, Circular economy, building and renovation, sustainable mobility, farm to fork, biodiversity and zero pollution,” said Dr. Fisher.

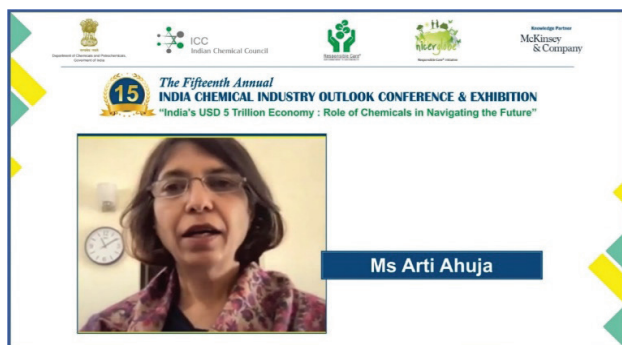
Dr. Stefan Doboczky, Chief Executive Officer, Heubach Group, delivered the 3rd Key Note Address of the event. He spoke on the topic: **Uncertainty for the World, possibilities for India - Navigating the Challenge of Constant Change in Chemicals**. “The Key supply factors are raw material availability and price, sustainability and supply availability. The Key demand factors include volume, sustainability and price. Covid, Geo-politics and Sustainability impacts supply chains” Dr. Stefan observed.



Speaking about the Indian chemical industry growth, he said, “India has unparalleled demographic advantages - abundant talent and future customers. India has large headroom to grow in the chemical sector where more ambition is needed but Indian Chemical Industry ranks 6th globally and is a key contributor to Indian economy. India enjoys several advantages in the chemical space with low labor cost, size for industrial scale units, locational advantage and favorable policy intent of Government of India. Activating growth strategies during current uncertain times will help in focus on sustainability, ensure clear positioning and ambition.”

The Guest of Honor **Ms Arti Ahuja, I.A.S., Secretary, Chemicals & Petrochemicals**, Ministry of Chemicals & Fertilizers, Government of India in her address emphasized on the importance of Mission 'Make in India'- policy initiatives

for attracting investments in chemicals. She stressed upon the theme of the event - India's USD 5 Trillion Economy: Role of Chemicals in navigating the future. She said, "So, what is it that will take us to the 5 Trillion economy and what is it that will make us Atmanirbhar, what is it that government has done so far. There are plastic parks, there are duty exemptions and lot of other things. The need for cracker unit is important, we need substitute for many products."



"What we learned from Covid pandemic is that we need to be prepared for disruptions. We also need systems that has three things: be resilient, be fragile and be responsible. We saw that systems were there so we were able to respond. We did not have a single PPE manufacturer, we did not have single N-95 mask manufacturer. This is the age for chemicals. It is the time to change the narratives of chemicals. 90% or 80% of people have small units. Let's have workable ideas and work on the innovation together," said Ms. Ahuja.

Mr. Avinash Goyal, Senior Partner, McKinsey & Company briefed about the concept paper which was on "Accelerating India's Sustainability Journey in Chemicals" wherein he said, "Sustainability is taking centre-stage in society and the business world amid shifting demand from conscious customers, growing investor awareness and stricter regulations. This is leading to greater scrutiny of environmental concerns due to energy intensive operations, high greenhouse gas (GHG) emissions and improper waste disposal."

With this the Concept Paper prepared by McKinsey & Company on the subject - '**Accelerating India's Sustainability Journey in Chemicals**' was done in the presence of Mr Avinash Goyal, Dr. Jakob Fischer, Ms. Arti Ahuja, I.A.S., along with Mr. Kamal P Nanavaty, Mr. Ravi Goenka, President, Padma Vibhushan Dr. R. A. Mashelkar, Mr. Bimal Goculdas, Vice President, ICC; Mr Rajen Mariwala, Addl. Vice President - ICC and Mr Deepak Mehta, CMD, Deepak Nitrite Ltd.



Mr. Bimal Goculdas, Vice President - ICC and MD & CEO, The Dharamsi Morarji Chemical Co Ltd presented proposed the vote of thanks to conclude the Inaugural Session. He thanked Dr. Mansukh L Mandaviya, Hon'ble Minister for Health & Family Welfare and Hon'ble Minister for Chemicals & Fertilizers, Government of India and Guest of Honor was Ms Arti Ahuja, I.A.S., Secretary, Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, and Government of India, other dignitaries and keynote speakers to make time available from their busy schedules to share insights and actively participate in the inaugural session.

Technical Sessions

Session - 1 - "Emerging Trends, Disruptions and Opportunities in the New Normal"



Mr. Krishnamohan Narayan, Managing Director, BASF India Ltd. was the Chairman for this Session.

Dr. Sheng Hong, Senior Partner, McKinsey & Company, Shenzhen-China spoke about the future of China: Chinese economy and chemicals industry: What lies ahead? "China has been a rising economy in past decades. China became the largest destination for FDI in 2020; share of inbound FDI in technology sector kept increasing in the past decades. The ten economic themes in the coming years are innovation, industry, market, life quality, rural, urbanization, reform and opening up, culture, sustainability and security. China's chemicals industry accounts ~40% of the global market and will continue to grow, especially for specialties" Dr Sheng observed while making his presentation. Focusing on Specialty chemicals, he said, "Specialty chemical segments grew at a significantly higher pace than industry averages. Profitability of chemicals players in China is improving but differs widely by sector and by players. Local players are growing fast and some are very profitable. CAPEX efficiency will be a defining competitive advantage for Chinese players. Chinese chemicals industry is evolving and consolidating faster than most would have believed. The olefin industry is experiencing a significant expansion in recent years wherein new winners and losers will appear. Investment into the chemicals sector has been relatively stable for the last few years."

Talking about the Mitigating supply risks in chemicals value-chain: 'How can India look inwards and improve self-reliance', **Mr. Ramakrishnan Mukundan**, Managing

Director & CEO, Tata Chemicals Ltd, said, “We are not moving faster on sustainability. Chemical industry needs to find its place, look at sustainability, embrace our customers, talent risk, going forward third risk element is risk of consolidation, alternate supply chain will reduce and it may also increase consolidation & concentration risks.”

“The big issue is the changing face of Indian chemical industry who are fundamentally moving towards chemical down stream opportunities. There will be a pressure from oil and gas majors. There is a huge dependency on imports. It is an opportunity as well as it is a risk. It is difficult to predict if the impact of the risk is high or low. Invest in local supply base. We are not moving faster on sustainability. Chemical industry needs to find its place,” said Mr Mukundan.

Mr. B. Ashok, CEO, Ratnagiri Refinery and Petrochemicals Ltd stressed upon the Emerging world of oil to chemicals: going from 80-20 to 20-80. He said, “India’s strong market fundamentals will drive rapid growth in petrochemical demand – potentially need 15+ world-scale petrochemicals assets by 2035 to meet domestic demand. Domestic availability of petrochemical feedstock remains a key challenge. Similarly, many products are in deficit; the deficit is likely to increase over the next decade. Multiple avenues have been suggested to overcome feedstock challenges in the domestic chemicals sector.” “While Petrochemical intensity has risen with the increasing downstream integration in the past few years although high capex requirements require focused attention to ensure viability. Three key areas of support that can act as tailwinds for the sector. They are regulatory, ecosystem & infrastructure and technology.” Mr. Ashok said.

Ms. Charmaine Remedios, Vice President – EXIM Shipping & Logistics Head, Reliance Industries Ltd, spoke on Congestion, Delays and Supply Chain Challenges: What Lies Ahead in the Crisis? “The global supply chain management market size is valued at USD 19.58 Billion in 2022. It is projected to reach USD 37.41 Billion by 2027, growing at a CAGR of 11.2%. On 5 January 2022, MSC has overtaken Maersk as the world’s largest ocean carrier by operated container vessel capacity. Unlike other major carriers who improved their rankings through M&A(s), MSC’s rise to the top was mainly organic. Since September 2020, ZIM and WHL have surpassed PIL in ranking by TEU capacity”, she explained. While talking about Covid-19 & global impact, she said, “Over dependency of Manufacturers on Chinese Imports. 2/3 of the world in lockdown. Halt in manufacturing/ production. In new normal, there was a slow revival of economic activities while the consumption is still staggering. The challenges faced in container shipping are Consumer behaviour, Port Congestion, Container Shortage and Trucking challenges.”

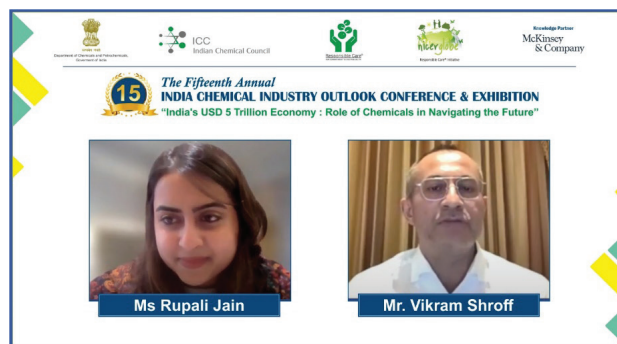
Highlighting about the global freight market & shipping industry news, she opined that “Merger & Consolidation within Shipping Lines has resulted in 7 carriers completely disappearing with the top 5 Shipping Lines controlling 65% of world fleet resulting in Oligopoly of the container

Industry. Five years ago this was 45%. Global Schedule reliability dropped to a new low of just 34.3% globally in January’22. This effectively means a removal of 12% of capacity which would be the equivalent of the loss of a carrier the size of CMA CGM or COSCO. Spot freight rates from India to Europe/Med at \$6000 – \$6500/40’ while South America market levels are still at \$12000 - \$13000/40’ due to congestion at European trans-shipment ports.”

Mr. Jayant V. Dhobley, Business Head & CEO, Global Chemicals, Fashion Yarn & Insulators, Aditya Birla Group, spoke on the “manufacturing to a solutions partner”. “Indian specialty chemical industry is about USD 32 BLN and expected to be USD 64 BLN by FY25, a CAGR of 12.2%. Pharma APIs, Agrochem-intermediates, Dyes, Pigments & Coatings constitutes ~80% of Indian specialty chemical market. Chemical Industry is about 2.3% of the Nifty 500 Free Float Market Capitalization, and the Specialty Chemicals is about 1% of Nifty Market Capitalization”, Mr. Dhobley opined. According to Mr. Dhobley “Indian specialty chemical industry is about USD 32 BLN & expected to be USD 64 BLN by FY25, a CAGR of 12.2%. Pharma APIs, Agrochem-intermediates, Dyes, Pigments & Coatings constitutes ~80% of Indian specialty chemical market. Chemical Industry is about 2.3% of the Nifty 500 Free Float Market Capitalization, and the Specialty Chemicals is about 1% of Nifty Market Capitalization”.

Session – 2 – Networking / Interaction with Booths/ Breakout – 1 (Agrochemicals)

In the first breakout session, the interview of **Mr. Vikram Shroff**, Director, UPL Ltd was conducted by Ms. Rupali Jain, Associate Partner, McKinsey & Company. Speaking about the learnings, growth and exports, Mr. Vikram Shroff said, “We have a great ecosystem, supply and partners in India to reach this level of success and supply chain excellence. The learnings are our agrochemical industry was able to supply chemicals very well throughout the pandemic and no shortages like other industries did. We should appreciate backward integrated strong supply chain that exist in India. We are agrochemical manufacturers in India. We are not so much traders, we are not so much manufacturers. Focusing on backward integration and key manufacturing is the key theme.”



“During the pandemic, the pharma industry did suffer but the government did come up with many schemes, while

our industry has so far not required anything. We all are in good foreign exchange trade right now, but things may change. We must appreciate the positive contribution in the industry in the trade surplus. Our industry is exporting to more than 140 countries and this is something again a repetition of India as a supply base. We feel that agrochemicals can grow from 4 billion to 8 billion/15 billion in the next few years with the help of government and all the industry members," Mr. Shroff added.



Mr. Sanjiv Lal, MD & CEO - Rallis India Limited discussed about the topic- Solving India's food challenge: Ensuring Food Security for Billion and Role of Innovation in Agrochemical Industry.' He stressed upon relevance of agriculture in economic prosperity wherein he said "The Green Revolution followed by the economic liberalization has catapulted India into high growth path well supported by the farmers and the agricultural ecosystem. Need to sustain these achievement for our economic prosperity. Prosperity also influencing dietary preference towards more nutritious food and will further intensify as we prosper towards USD 5 trillion economy." "Increasing Indian foot print in global agriculture commodity trade and maintaining substantial favourable trade balance. Primary source for livelihood of more than 50% of our population. Small and marginal farmers can contribute to food security. FPOs vital for farm aggregation leading to scale economies", Mr. Lal added.

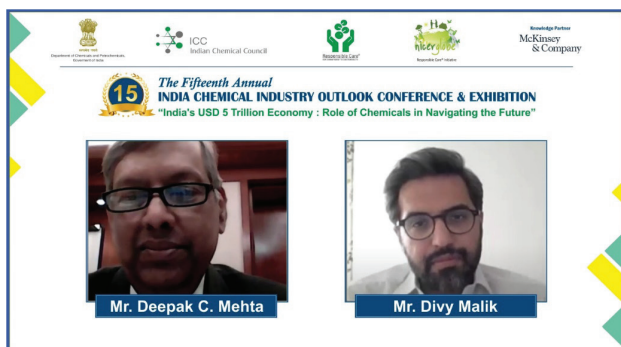
Mr. S. Ganesan, Vice President – Policy Affairs, UPL Ltd discussed about the "Agricultural sustainability and agrochemicals: Headwinds and tailwinds for Indian agrochemicals". "Application of chemical fertilizers and agrochemicals accelerated the food production outpacing the population growth. Remember, prior to 1960's when India was practicing organic agriculture, the country was facing extreme food insecurity. We were importing food grains then. Now, India ranks among the top ten agricultural exporting countries", said Mr Ganesan in his presentation. He also spoke about the difference between Global Agrochemicals use and Agricultural production and said that "There is a discernible correlation between agrochemicals use and agricultural production. Introduction of Bt crops (cotton, corn, soybean), promotion of organic farming, natural farming, ZBNF etc. have not reduced farmers' reliance on agrochemicals. The Growth

of Ayurveda, Homeopathy, and Naturopathy etc. have not affected global pharmaceuticals growth which increased from \$601 billion to \$1270 billion between the years 2005-2020. Ditto for agrochemicals. Every dollar spent on agrochemicals now gives better value than before, thanks to increasing use of generics. In the last 20 years (2001-2020), the global agrochemicals market has more than doubled from \$30 billion to \$70 billion. "About the headwinds, Mr. Ganesan was of the opinion that "Adverse weather conditions and ad hoc regulatory interventions, while for tailwinds include Strong growth in domestic and global agrochemicals market. Trade increasingly driven by generics, Expiring patents offer new opportunity for generics, Continued new launches for both domestic and export markets, Strong presence in overseas market push the export to a new high year after year, Driven by volume growth which is more sustainable."

Mr. Balakrishnan Iyer, Chief Procurement Officer, Deccan Fine Chemicals (India) Pvt Ltd, spoke about the 'Agro chemicals outlook, window of opportunity for the chemical industry, making the economic recovery plan a driver for competitive sustainability'. He said, "India is one of the fastest economies in the world. Indian Chemical Industry is poised to reach USD 300 billion by 2025. India is emerging as an attractive and durable investment destination. The industry is expected to reach US\$ 304 billion by 2025 at a CAGR of 9.3%, driven by rising demand in the end-user segments for specialty chemicals and petrochemicals segment. In FY18-19, Alkali chemicals had the largest share in the chemical industry, with ~69% share in the total production. The Specialty chemicals constitute for 22% of the total chemicals and petrochemicals market in India. The demand for specialty chemicals is expected to register 12% CAGR in 2019-22. The Specialty chemical companies are seeking at import substitutions while exploring export opportunities to accelerate their business." "India is a net exporter of agrochemicals and the thirteenth-largest exporter of pesticides and disinfectants. The country's exports have increased on the account of low-cost manufacturing, availability of technically trained manpower, seasonal domestic demand, overcapacity, competitive pricing and strong presence in generic pesticide manufacturing" said Mr. Iyer.

Breakout - 2 (Specialty Chemicals)

In the second breakout session, **Mr. Deepak C. Mehta**, CMD, Deepak Nitrilite Ltd was interviewed by Mr. Divy Mallik, Associate Partner, McKinsey & Company. Discussing about his insights on the pandemic, challenges etc., Mr. Deepak Mehta, said that "There are one challenge to another in all the years. With Covid-19, there is a havoc in the business. There were certain segments in the industry which was stopped completely. Although, there was a demand in pharma sector. We saw huge challenges in logistics. For many decades, we never focused on freight cost, but now the things changed drastically."



Mr. Mehta continued to add that “We are trying to see if we can have entire value chain in the country. We think this is the right time for Aatmanirbharta. This is also driving companies to grow in the market in various sectors. People are very keen to invest these days. India is growing well in all sectors. In the last 6 months, government is supporting various sectors for the growth.”

Explaining about the Squaring the circle: Value creation and growth in Specialty chemicals – food, nutrition and biosciences, Dr. Jens Christian Blad, Senior Vice President – Corporate Development, Lanxess India Pvt Ltd said, “Lanxess is a global operating specialty chemicals company. The fundamentals of Lanxess journey is safe, sustainable and digital. The major impact projects includes Promote coal phase-out in chemical parks, Nitrous oxide reduction plant in Antwerp and Switch to renewable energies in India. Decouple emissions and growth include Climate targets for each business unit, CO2e footprint as a criterion for growth and acquisitions, CO2e as board compensation criterion. Technological innovations include Increase energy efficiency in Verbund structure, Focus research on climate-neutral processes and technological innovation.”

Panel Discussion: Growth in India's Downstream Manufacturing Sector – Role played by the Specialty Chemicals Industry:



Mr. Deepak C. Mehta chaired the panel discussion.

Mr. Suresh Ramachandran, Country Head & MD, Arkema India said “We have lack of focus on R&D and we think that things will change sooner. One of the new initiatives has been launched by the government is the industry academia collaboration and partnership will help in specialty chemicals growth in India because we never had

that type of collaboration like China did. One of the reasons China grew was that they had tremendous focus on R & D activities. India has excellent potential. More than 50% of stem research students in US are Indians. If we nurture our talents then we can grow. India is moving very well on sustainability.”

Mr. Rupark Sarswat, CEO, India Glycols Ltd, opined that “We understand the real value of specialty chemicals. The importance or attention given to the industry is when we generate more revenue or the profit that they generate or the employment that they create. Specialty chemicals have an impact rather than these three elements, rather we focus on the potential that the specialty chemicals offer. We need to use our chemicals more effectively, the fertilizers, the other nutrients, etc. We need more of policy oriented approach to develop the specialty chemical sector.”

While participating in the Panel Discussion **Mr. U. Shekhar**, Chairman, Galaxy Surfactants Ltd, said that “In the chemical industry, we are surrounded by opportunities, not just in India but on the entire world. The need for sanitization and hygiene has long distance to cover as our country is concerned. If you look at homecare industry, the desire which we have is to have new opportunities in terms of innovation. Secondly, from the consumer's point of view we desire for ultra-safety. Safety plays an important role as far as personal care industry is concerned. We started our journey on innovations 15years back as mild surfactants.”

Mr. Sridhar Venkiteswaran, Avalon Consulting, said that “If we define specialty chemicals or fine chemicals, they are products or formulations or ingredients which cause \$4 or above and split the application around various products to big markets. We have whole products of home and personal care, or be it flavors and fragrances, textiles and so on. If we look at the specialty chemicals in India, and if we split it with exports and domestic market unlike many other industry, this industry is export driven which means India has a base to produce these components and is the key to move towards 5 trillion economy. It's the contribution that India can give to the international markets. Looking at the domestic market, we have a lower developing economy.”

Panel discussion: India the new battleground for Global Chemicals Manufacturing – Support the Industry seeks from the Policy Makers

The session was presided by **Mr. Avinash Goyal**, Senior Partner, McKinsey & Company.



Mr. Anand Srinivasan, MD, Covestro (India) Private Limited, said that “The global demand is rising. With the pandemic, we are focusing on pharma, healthcare, personal care, specialty chemicals and many other sectors. We think India is heading in the right direction. There need to be a clear focus of R & D towards the circular economy concept. We can take ideas from different countries”

Mr. Prakash Raman, MD, Transpek-Silox Industry Pvt Ltd, expressed that “the Indian chemical industry is going good this time grabbing the opportunity. We should focus on the demand side or the particular need of the country. The policymaker should focus on the key megatrend of the industry, need for the people and so on. We have same challenges, be it attracting young engineers to work in the industry or anything. It can be a challenging role as well.”

Mr. Chandrakant Nayak, CEO, DOW India, opined that “India is headed to become manufacturing hub for the chemicals and there are many supporting reasons for the same. Although the per capita income is still far behind. As our market start growing, the consumption start growing. We will need quality chemicals in the country. It is the demand size going to be taken care and the demand will trigger lot of investment and manufacturing.”

“Today, if we look at feedstock, which is not the only thing that drives the investment and the manufacturing in the chemical sector. It is more knowledge based. Feedstock is dependent on the logistics and can manage. There will be more development in technology, process technology developments and cleaner technology. There are big opportunities which can be encased in India. One of the important thing is balancing of upstream and downstream. There is a significant imbalance in feedstock and downstream industry. Today, the younger generation is more focused on sustainability. The younger generation is more into IT and other fields. We need to attract more good talent and explain that we are in good space, Mr. Nayak further added.

Mr. Rajendra V. Gogri, CMD, Aarti Industries Ltd, said that “We are seeing lot of investment taking place in India. We should rationalise our duty structure. The investment in basic chemicals and intermediate can be increased. New products require lot of R & D. New innovations are coming up. The CSR funding for some specific sector can be raised to focus on the particular investment. We have to work from bottom level starting from skill development and safe practices. The additional focus on training is important.”

Panel Discussion: Elevator pitch by Startups in Chemical Industry



The panel discussion was facilitated by Mr. Avinash Goyal, Senior Partner, McKinsey and Company.

Participating in the discussion, **Mr. Scott Barrows**, President, BluePallet, said that “The challenges that are holding chemical buyers are 2-sided marketplaces stifle commerce by putting themselves in the middle of every transaction. Open marketplaces like Alibaba pose fundamental risks to the chemical industry can't solve for regional restrictions, the sale of hazardous goods, and lack of buyer and product verifications. Traditional supply chains aren't able to adapt or respond to natural disasters or man-made circumstances.”

“In 2021, India imported \$12.7BN in Chinese chemicals. China is India's largest source of foreign raw materials. That same year, India exported just \$2.5BN worth of raw materials to China. That's less than S. Korea, Japan, Taiwan, Saudi Arabia, the United States, Germany, and Singapore. We see India as a critical source of raw materials around the world, but most directly - APAC and North America, specifically for Bulk minerals and ores, Organic chemicals, Agro chemicals and Plastic raw materials”, Mr. Barrows opined.

Mrs. Ginger Krieg Dosier, CEO, BioMASON, said that “the Biomason is developing a bio-cement-powered product suite. Precast tiles and pavers are the first bio-cement powered products on the market and installed around the world. Precast walls are low load bearing and structural precast walls for multiple applications. Precast pipes are working with a partner to deliver biocement precast utility pipes. Ready mix includes biocement to be available as ready mix – the most widely used cement application. Biomason's vision is to eliminate 25% of CO2 from concrete by 2030.”

Ms. Dosier also added that “The High-growth regions as ideal market for bio cement technology. There is a correlation between population growth and cement usage per capita, as the needs for greater housing and infrastructure arise in growing communities. India's rapidly growing population, development of infrastructure, low carbon goals and rural housing demand identifies India as a mid-term target.”

Mr. Gaurab Chakrabarti, CEO & Co-founder, Solugen, expressed that “By 2030, Solugen aims to remove the CO2 equivalent of taking 2M cars off the road. It will replace 5B bottles worth of non-degradable plastic by becoming a major producer of bio-plastic monomers. It will have the capability to make 90% of all chemicals. Develop resins, surfactants, and other important chemicals. Unlocking synthetic bio's (SynBio) full potential with next-gen process technology.” Overall commercial scale production remains difficult for SynBio design houses. Combining the best of petrochemicals and fermentation with the power of computational biology, we created the Bioforge. Bioforge 1 took just 12 months to construct and 9 month for all engineering processes (FEL 2 & 3). We increased manufacturing capacity by >1,000x and reduced cost

by 20x since 2018. Solugen's margins are 2-3x industries average" he ascertained.

Day 2 Key Learnings and Takeaways from Day One

Summarizing the deliberations of Day-1 of the event, **Mr. Bimal Goculdas**, Vice President - ICC expressed the hope that the 400+ delegates who attended the program were able to take the learnings back with them. India has too much import of chemicals. We are not thinking on a global scale. Most people looking at chemical industry prone to accidents or fires, we need to change this narrative of the society. We need to convey the positive message as well. Unfortunately, Dr. Mansukh Mandaviya, Hon'ble Minister for Health & Family Welfare and Hon'ble Minister for Chemicals & Fertilizers, GOI couldn't join us due to an urgent meeting. But we are thankful to Ms Arti Ahuja, I.A.S., Secretary, Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, for making it convenient to be present for the inaugural session.

Session – 1 Riding the Growth Wave: Transitioning from Kilos To Tonnes

Mr. Bimal Goculdas conducted this Session.



Mr. Suveer Sinha, Partner, McKinsey & Company, Mumbai discussed about the optimizing capital allocation: Unleashing the next wave of capital driven growth for India's chemical industry. He said, "After a flat period of 5-7 years, chemical sector is expected to invest globally. Total investments for the next 10 years (2021-2030) is expected to reach ~6 trillion USD."

"Key takeaways as you get into the capex cycle are Make this a core part of the CEO agenda – there is a significant value creation at stake, Make early interventions – the scope of optimization is significantly higher, Create strategic capabilities for China sourcing, Adopt a "value-backed approach" for digital solutions in greenfield plant and Create your own assurance system. Organizational issues are core to 65% capital projects not meeting their targets – leadership attention needed to enable the team" said Mr. Sinha.

Mr. Pankaj Patwari, Managing Director, Advent International, said, "Advent is one of the largest and most experienced global private equity firms with deep

experience in chemicals industry. Historically, North America and Europe have accounted for most of the PE deals in Chemicals. 50+ transformative acquisitions have been undertaken by global giants with transactions of over \$1 billion- Consolidation of market position and portfolio expansion have been key drivers. On the contrary, deal activity in India has been muted both in terms of deal size and count. However, Indian chemicals landscape is ripe for deal activity given strong macro trends."

"Secular growth potential of 10-11% p.a with margins ranging between 18-20%. Potential for local small/ mid-sized players to win due to emergence of niche opportunities. Regionalization of supply-chains and increasing gaps in regional pricing in the recent developments of chemical landscape. There are several investible themes for investors to explore in Chemicals space," said Mr. Patwari.

Prof. A. B. Pandit, Vice Chancellor, Institute of Chemical Technology, Mumbai, said that "R & D of companies is different, R & D of research institutes is different. For an industry to create wealth, or for an R & D to create wealth, there is a need to create three types of R & D establishments. The first type of R & D is process modification. The second type of R & D is product quality improvement and the third aspect is anticipation of market needs. We do have a complex chemistry which is involved, but when it comes to marketing, it may be dominating when it comes to any sectors. So, industrial R & D essentially involves all the sets of people who are involved in R & D who come together and discuss. No process is ever matured. Example – Catalyst Development. Earlier, we do multiple sets of experiments and this experiments we use to perform on a large scale. Initially, catalyst development involves lot of experiment as people understood and started initiating the structure."

"Basically, when we build a process first, by the time, the new equipment comes, we adapt ourselves to new process so for a longer period, completely new technology comes. You have to keep on modifying the process, that's why the process is never matured. The first stage of R & D is involving all the activities. Equipment has to be maintained. We also need to look at re-purposing of the product" said Prof. Pandit.

Mr. Sandeep Redkar, Consultant Leader, Rockwell Automation spoke about the internet of things: How would digital transformation change the chemicals business in next 5 years? The Digital Transformation drives competitive outcomes. It helps in drive critical product and service differentiation, enable breakthroughs in operational effectiveness and make workforce productivity and quality soar. High-impact pillars support the digital thread and connected enterprise. The manufacturing challenges are improve operational efficiency and asset utilization, reduce cost, ensure quality and compliance, and improve workforce productivity and on-time delivery.

Industry Think Tank

The topic discussed on this session was “Case studies / learnings on ‘Globalization’ of Indian Chemical companies. This session was chaired by Ms. Nitika Nathani, Partner, McKinsey & Company.



Talking about the challenges, **Mr. C. G. Sethuram**, Group CEO, Thirumalai Chemicals Ltd, said that “Basically, we first have to determine what we have to do. What we are talking now is base India global which is local global or base global and market local/market global. So, it is local/local or global/global. So, we need to determine this, in my experience, broadly the drivers for this is essentially the feedstock. The feedstock availability may go global or the market availability may go global. Once these are available, we go to that global locations we can curb out the business effect. The local in the global scenario, the regulatory aspect as well as the investment aspects and development aspects. So, we always evaluate on this front and then take a decision whether to move ahead or not.”

Mr. Zarir Langrana, Executive Director, Tata Chemicals Ltd, said that “the first acquisition was the two companies in UK and Africa, then Kenya and South Africa in to Tata family. The first thing is clarity on purpose and strategy like why are we doing, what are we doing and how are we doing. For international growth, why we move out – there could be many reasons like growing market, it could be driving cost, the delivered cost basis to our customers, it could be easy access to market, technology, skills, resources, feedstock and limited growth opportunities in the market, competitiveness and market benefit.”

Mr. Langrana further added that “We need to be very clear on why we are stepping out of our home country. So, are we looking at organic growth or appropriate entries or structured merger acquisition? So, it was first set of action taken in 2005. So, it was UK, Africa and then a merger with North America. We need to increase the product portfolio. It is extremely important to see the value systems and it is extremely challenging.”

Mr. Ramkumar Shankar, MD, Chemplast Sanmar Ltd, said, “The size of Indian market is essential for Indian chemical products. If we go abroad then that is in search of markets. Most of us are in search of feedstock or intermediates is largely because of positive feedstock within the country. We try to establish virtual integration across the borders.

Expect the unexpected.”

“There are various things to see when we cross borders and very difficult to plan for. Whatever happens in India we know that this is our country and we can see what can be done and look at the process, when we work abroad, we have to look at things carefully. It has to be mix of local and little bit of experts, there will be cultural differences, we need to look at culture of the parent organization is important, incorporating that is important. Most of the products in b to b are important, we have a good reputation when you go outside India. India is not seen as a cheap or low quality producer”, Mr. Shankar opined.

Boyden Session: CEO Survey Presentation & Panel Discussion on Leadership Paradoxes

Ms. Nita Keswani, Partner & Head – Chemicals Practice, Boyden Global Executive Search, said, “Boyden conducts Annual CEO Survey in the industry. 60% of leading Indian companies, 40% leading MNC’s for the company’s majority ownership. Around 35% of company’s sales revenue is less than 100 crores. The conversation about globalization has started in many companies. Macro-economic conditions and paucity of talent are top two industry issue in the long term. To attract talent and addressing the increasing need for flexibility, Indian companies may move towards hybrid work model.”

Session Group Photo



The moderator of this session was **Mr. Dinesh Mirchandani**, Managing Partner, Boyden.

Mr. Alok Sharman, Regional Director- South Asia & MD-India Brenntag Ingredients, said, “The paradox for strategic executor is a paradox and goes hand-in-hand. I was in leadership in US, I was asked to develop 5 year strategic note, so what was the strategy, how do I get documents. In 2019, I had been teaching to IIM students and other business schools out there, there I taught them strategic management. So, I introduced them a template to them and before that as a student I have struggled in those times so I developed all assignments, details of companies, revenues of companies. While I was in Brazil once, I struggled to learn about the culture, language so after 6 months I learned little bit about the culture, traditions and so on. Thing are changing. It will go hand in hand.”

Mr. Anand Gopaladesikan, MD – India & VP – Polymers, Asia, Wacker Chemie, said “Tech-savy doesn't need much explanation. We all are embracing technology. And while we talk about human, we talk about human welfare, human dignity, and human values. Tech has helped us in more humanist. I am using technology caring about human dignity.”

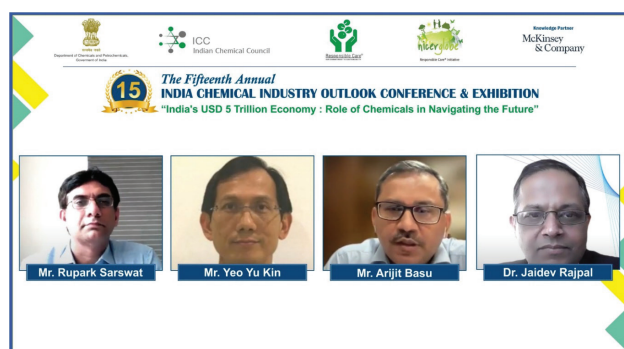
Mr. Jayant Dhobley, Business Head & CEO, Global Chemicals, Fashion Yarn & Insulators, Aditya Birla Group said, “I have been an NRI for many years. So, I was hardly in India. Last year, during Covid I lost my father and I couldn't be with him. That's why I realised what have been doing with my career and made a move to be in India. If we look at the company, we think managers are custodians. We have been doing CSR before it became a trend. We make chlorine, fluorine, we saw ways of innovation. I did not see them as a paradox.”

Mr. Mukesh Malhotra, MD, Solvay India, said “We became more prominent in the Covid situation. We live it in a behaviour which we practice in Solvay. This Covid taught us many things. We had shut down our offices. We had created a solidarity fund for people. The senior leadership contributed and have had collected 15 million euros and created funds outside of Solvay. We should focus on the care part too.”

SESSION – 3:

Preparing for the next wave of growth: The Sectoral Standpoint

The session Chairman was **Mr. Rupark Saraswat**, CEO, India Glycols Ltd.



Mr. Yeo Yu Kin, Senior Vice-President-Consulting, Asia & Middle East, Argus Media, and spoke about the petrochemicals 2030: Reinventing the ways to win in a changing industry – impact of feedstock on oil-to-chemicals value chain. He said that “Implementation of IMO2020 sulphur specification generated a several years of speculation on potential severe impact to refining industry. The expected shortage of residue conversion capacity did not materialise, overshadowed by the impact of Covid. High conversion refinery margin in the last 2 months of 2019 is quickly reversed due to the loss of product demand during Covid.”

Mr. Arjit Basu, Ex-MD, Sika spoke about the growth wave in Construction chemicals: Driven by surging developments in real estate and infrastructure. He said, “The current market size is estimated to be INR.10000 Crores approximately, poised to grow at 15% CAGR for next 5 years. “Sunrise Industry” as described by FICCI. Major growth drivers are –Urbanization, Green Buildings, Investments in Infrastructure, Aspiring middle class, Growing awareness and more adoption of ready-mix concrete (RMC). Current and prospective regulatory guidelines incentivizing energy-efficient and green buildings are expected to drive demand for sustainable, innovative and safe chemicals. With increased government focus on investments in infrastructure, increase in usage of RMC in Government infrastructure projects would boost the growth further.”

Dr. Jaidev Rajpal, Partner, McKinsey & Company, Gurugram spoke about the convergence of Pharma & Chemicals: Opportunities for KSMs / APIs. He said “API was a ~\$83B market growing 8% p.a. entering the COVID-19 outbreak, with fastest growth in APAC. COVID-19 and restrictions by Chinese government (2018-19) to improve adherence and effluent control norms has had a significant impact on KSMs & API supplies and prices. While supply and prices are now stabilizing, we expect the following structural trends to play out in the next 2-3 years. Structural increase in cost of manufacturing from China, as the producers invest to meet the environment compliance norms. Even after the cost structure increase, China will still be competitive as compared to the US and European plants.”

Session – 4 Sustainability – Esg & Circularity: Cutting Edge Technologies for Recycling

The session was chaired by **Mr. Ravi Kapoor**, Chairman – Sustainability Expert Committee, ICC & CMD, Heubach Colour Pvt Ltd.



Ms. Stefanie Lang, Senior Manager – Sustainability Asia Pacific, BASF, said, “A Circular Economy aims to decouple growth from resource consumption. Creating value through circular economy as a chemical company. Transition to a circular economy comes with key requirement. ESG commitment and focus on circularity create value. The area of the linear economy is ending because we can simply not afford it anymore.”

Mr. Dustin Olson, Chief Manufacturing Officer, Pure Cycle Technologies, said “Pure Cycle is a public company with the goal of building a global network of purification plants capable of converting waste polypropylene into an ultra-pure recycled resin. This allows recycled polypropylene to be reused in a broader and more profitable array of applications. Polypropylene’s attributes allow for a wide range of applications, however, the mechanical characteristics that make it so versatile also make it difficult to recycle.”

“Pure Cycle’s unique process creates a truly circular solution, a higher quality product, lower regulatory risk, and sustainable economics than traditional mechanically recycled polypropylene. Pure Cycle advanced the original P&G patented technology through five years of R&D, FEU activities, and commercial design efforts. Pure Cycle is ready to scale” he further added.

Panel Discussion: How can Companies leverage their ESG Performance?

The panel discussion was conducted by **Mr. Ravi Kapoor**.

His discussion started with the panelist **Mr. Divy Malik**, Associate Partner, McKinsey & Company. “Sustainability is not only important but also as the leaders of the corporation. We are global citizens of the country so speaking broadly about the chemical industry we are ahead of the curb for the long time, taking down in to ESG, or toxic waste management or governance in general. This is not something new to us. Chemical industry has been doing it for the long time. It has also been supporting other industries. We reduce food waste or by developing solutions or by reducing the weight of cars or by reducing fuel efficiency. In last few years, we lost the leadership position to some of the lesser known industries like metal and mining, oil and gas, cement, to some extent, they are doing better” Mr Malik said.

Dr. Mritunjay Chaubey, Global Vice President – Environment, Sustainability & Green Cell, UPL Limited, said “The key challenge faced in UPL was Sdg12 responsible consumption, that is the most challenging thing in the industry that how we can consume and how we do our production responsibly, while doing so, our experience in UPL is if we invade sustainability, specially focus on Sdg12 then it is for the smarter innovation and also it is for the profitability of the company. Under responsible consumption, in the UPL, in the last 5 years, if you see we have reduced 30% of environmental footprint, which means we have reduced specific water consumption.”

Dr. Ashok Menon, Director – Sustainability Strategy, APAC Region, SABIC, remarked that “Once in Saudi Arabia, typical gases were getting flared. These gases are converted into chemicals directly. We have been driving sustainability pretty much, trying to be in the forefront as much as possible. One of the challenge we face is climate resource litigation and decoupling the growth.”

Participating in the discussion **Dr. Raif Kelle**, Head – Sustainability Strategy, Evonik, said that “We have many different value chain and all the products are not the volume contributor. The additive’s goes into 1% of formulation. We looked at our own footprints, knowing that the sheer volume, we saw that the raw material are neglect able of the market. We focus on the handprints and the sustainability challenges.”

Mr. K.V.S. Satish Kumar, Chief Sustainability Officer, Jubilant Ingrevia Ltd, said “We work on the supplier sustainability part with respect to supplier of assessment practice and hand holding them to improve this course. Most of the MSME’s are supplier to one or the other companies and we can improve the performance.”

To conclude the 2-day event, Mr. D. Sothi Selvam, Director General-ICC proposed a Vote of thanks. While thanking the partners and speakers, Mr Selvam drew special attention to the contribution made by Mr Kamal Nanavaty, Chairman, Conference Committee and the Team - Mc Kinsey the knowledge partners who curated the programme and rendered huge contribution for the success of the conference.

CEO Round Table conference

For the year 2022, the 15th Annual India Chemical Industry Outlook Conference was organized on 1st & 2nd March 2022 with the support of the **Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India** and **McKinsey & Company** as the “Knowledge Partner”.

A **CEO Round Table** was organized in the evening of the first day of the Conference, on the Theme “**India’s Turning Point: Increasing Indian Exports of Chemicals by 3x from 40 Bn to 120bn by 2030 and its Implications on Value Chains, Self Sufficiency and ESG for Indian Chemical Companies**” at Taj Lands End, Mumbai. Mr. Avinash Goyal, Sr. Partner, McKinsey & Company conducted the event and there was an excellent exchange of ideas amongst the CEOs. The interactions were led by ICC office bearers, Mr. Ravi Goenka - President, Mr. Bimal Goculdas - Vice

President, Mr. Rajen Mariwala - Additional Vice President, Mr. Ravi Kapoor - Chairman-Sustainability Expert Committee and Mr. Kamal Nanavaty – Chairman-Conference & Exhibition Expert Committee of ICC.



Following are some of the key observations from the industry participants compiled by Mc Kinsey & Company.

Perspectives on increasing exports

- **Net exports matter more:** most CEOs echoed that looking at exports in isolation for the chemicals industry doesn't make sense. India has a vast potential to substitute intermediates, building blocks and many specialty chemicals
- **Attractive value chains galore:** Applications in high growth segments like Electronic chemicals and many platforms based on electrochemical processes, lignochemistry, enzymes offer extremely attractive possibilities.
- **Global competitiveness is critical:** for many accelerated R&D, increasing the backward integration of processes and improving efficiency have been core enablers for competitiveness such as Deepak Nitrite. For others it has been setup of world scale plants with best-in-class technologies that have played an important role
- **Functional excellence particularly in marketing and procurement is critical:** India has been great at core chemistry capabilities but has lacked complementing capabilities in marketing. This has been one of the core learnings for players particularly who have established global footprint. Similarly in procurement firms have opportunities to develop local sourcing through tolling or other routes to establish supply security and develop several value chains in India
- **Capital investment:** Investments by domestic companies have been increasing substantially with >100bn\$ over next 5 years, similar commitment from global majors such as Dow and BASF can have strong impact on the sector
- Experiences of the industry on ESG
 - **ESG offensive:** Overall the chemical industry has the opportunity to play on the offensive not just through decarbonization but also through green business building opportunities
- **Green feedstock & green chemicals:** Lot of companies have been moving to green chemicals particularly bio-based feedstock as shown in the experiences of Godavari Biorefineries. Many other petchem players are also planning to becoming carbon neutral by 2035 or earlier with a key part of that strategy is working on footprint of feedstock. Many are experimenting with nascent technologies such as utilization of CO₂ (Covestro) and even use of seaweeds
- **Recycling / Circularity** is becoming core and industry invested actively on rPET which is now being converted into footwear by brands such as Nike / Adidas and fashion apparel (Recron GreenGold) by RIL and further promoted through initiatives such as Fashion for Earth in partnership with Lakme fashion week
- **Green energy sources:** Many of the players have actively solved for scope 1 and scope 2 emissions. Most have shifted to bio-mass based steam generation such as Eternis and Godrej. Some of the players have also been using CSR actively to achieve water positive and carbon neutrality.
- **Financing:** ESG is top of mind, it is becoming a key question asked by Investors and bankers as demonstrated in the experiences of Heubach and SRF
- While most CEOs feel ESG will continue to shape the industry strongly, some believe that the impact of ESG may be overstated in short term similar to the experiences with carbon credits
- Few asks from the Government to support the Industry crease exports
 - **Introduce PLI schemes and restore export incentives:** Many sectors have been supported by PLI schemes e.g., Auto. Similarly, specialty chemicals PLI scheme is needed to improve exports. Industry also feels that some of the export incentives like MEIS should be reinstated

- **Improve Ease of doing business:** Great strides made but still a long way to go for the industry if it needs to compete with China.
- **Create conducive regulatory environment on EHS:** Industry feels strongly about decriminalizing safety incidents
- **Increasing availability of intermediates:** Many of the announced capacity expansions coming from SoEs hence government can play a big role in supporting the sector and particularly lower dependence on China in many intermediates
- **Debottleneck export infrastructure such as ports:** Lot of India's port infrastructure is constrained and has been further stretched with global supply chains being disrupted
- **Attract greater capital investments from MNCs** to setup global scale capacities with world class technologies which will help the domestic industry thrive through JVs and value chain linkages
- **Bolster Innovation and IP laws:** By setting up strict guardrails on IP in chemicals (similar to pharma), firms will be further incentivized to invest in R&D and this will spur innovation in the sector

Important Activities

October 2021

Industry Associations' Summit 2021

As per advice of **Shri Piyush Goyal** Hon'ble Minister of Commerce & Industry, Consumer Affairs & Food & Public Distribution and Textiles, Government of India **"Industry Associations Summit 2021"** in association with the **Department for Promotion of Industry and Internal Trade (DPIIT)** with the theme **"Stimulating Growth for Aatmanirbhar Bharat – Leveraging Global Opportunities Post Pandemic"** was organised by CII on 9 October 2021 at New Delhi. ICC was the lead association representing the Chemicals and Petrochemical industry. The ICC delegation led by Shri Rajendra Gogri EC member - ICC & CMD, Aarti Industries Ltd. placed the key issues faced by our industry before the Hon'ble Minister.



Mr. Rajendra Gogri, Executive Committee Member, ICC & CMD, Aarti Industries Ltd. Making the presentation in the ASCON summit.

Hon'ble minister assured that he will bestow his personal attention and agreed for periodic follow-up sessions towards resolving the issues brought out.

Webinars on "Chemical Industrial Disaster Risk Management"

ICC – Gujarat Chapter in collaboration with the Gujarat Institute of Disaster Management (GIDM) organised series of webinars on "Chemical Industrial Disaster Risk Management" on following topics: "Role of Disaster Risk Management within the Industries" on 30 September 2021. Mr. Ravi Kapoor, Chairman – Sustainability Expert Committee - ICC addressed the delegates. "Unravelling the effects of Cyclone to the Industries" on 7 October 2021. Mr. Prakash Raman, Managing Director, Transpek Silox Industry Pvt. Ltd. addressed the delegates. "Fire Safety & Risk Assessment within the Industries" on 14 October 2021. Mr. M. Annadurai, Executive Director & State Head of Indian Oil, Gujarat State, addressed the delegates. "Role of Business Continuity Management System for Sustainable Growth of the industries" on 21 October 2021. The webinars attracted huge audience from the Chemical and Petrochemical Industry.

Meeting with Guidance Bureau of Tamil Nadu Government

HR Committee of ICC Southern Region met Ms Pooja Kulkarni, I.A.S., MD & CEO of the Guidance Bureau of Tamil Nadu Govt on 21-10-2021 and deliberated on the following:

- TN Chemical Industry Vision 2025 document
- Mandating and strict implementation of Industrial zoning
- Speedy Environmental approvals for deserving companies like auto expansion, self-authorization for 50% expansion based on credentials, CEPI not to be considered for expansions
- Preventing Increasing activism towards Chemical Industry
- Land bank creation at Coastal areas for Chemical Industry, Plug and Play Industrial Estates and Infrastructure, Ports/Liquid Terminals
- Anomalies in determining minimum wages for Chemical Industry from Dec-2019



Interactive session with Karaikal Port

ICC SRO organized an Interactive Session with a Karaikal Port to support the Logistic / Export / Import segment of member companies on 28 October 2021. Large number of delegates participated in the Session. Captain K. Thiagarajan, Vice President, Karaikal Port made a presentation about the Karaikal Port and the facilities available in the Port. The queries raised were clarified by the port authorities.

November 2021

First Meeting of Associations' Council

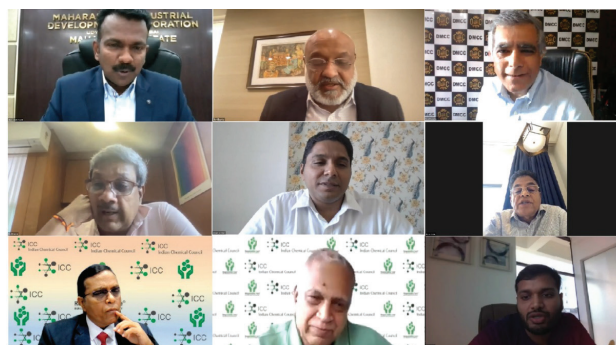
ICC, the lead association representing the Chemical and Petrochemical Sector, participated in the first meeting of the Associations' Council held on 2 November 2021. The meeting was chaired by Mr Sanjiv Bajaj, President-Designate, CII and Chairman & Managing Director of Bajaj Finserv Limited.

Ms Bidisha Ganguly, Principal Economist, CII made a presentation on the "State of the Economy". The ASCON survey results on the Business Sentiments were also presented. The sectoral associations reiterated the points brought out by them in the ASCONS summit held recently.



Interaction with Dr P Anbalagan, I.A.S., CEO, Maharashtra Industrial Development Corporation (MIDC)

A webinar under the aegis of Mr. Vinod Parem, Chairman-Western Region & President and Managing Director - India Region, Evonik India Pvt Ltd, was organised with MIDC on 10th November 2021. **Dr. P. Anbalagan, I.A.S., Chief Executive Officer, MIDC, Government of Maharashtra** took part in the program as the Chief Guest and clarified the Members on various issues concerning the Chemical Industry in the state of Maharashtra. He also made a detailed presentation on the services rendered by MIDC towards Industrial development in the state of Maharashtra. The webinar was attended by many CEOs and Senior Officials of Chemical Industries. Mr Ravi Goenka, President, ICC set the tone with his opening remarks and Mr. Bimal Goculdas, Vice President, ICC gave the concluding remarks.



Funding opportunities for Chemical Industries in Tamil Nadu

Mrs. Ramya Bharatram, Chairperson, ICC-SR, delivered the Keynote Note Address in the Seminar organised on "Funding Opportunities for Chemical Industry in Tamil Nadu" on 26 November 2021 at Chennai. Mr. S Krishnan, I.A.S., Additional Chief Secretary, Department of Industries, Government of Tamil Nadu was the Chief Guest for the Seminar. Mr. R. Radhakrishnan, CGM, SBI – Chennai Circle, Mr. V.T. Moorthy, Former Chairman, Southern Region, ICC, Mr. S. Ilanahai, President, Chemical Industries Association, and Mr. A. C. Saravanan, Vice President, Manali Industries Association participated in the Seminar.

A joint representation consisting the following issues was submitted during the program and Mr. S. Krishnan assured to take up with the Government suitably.

- Need for release of a vision document from Government of Tamil Nādu.
- Reducing Operational Cost
- Dispute resolution of old pending cases.
- Major problems faced in getting environmental approvals / consents.
- Specific problems in Tamil Nadu - Chrome waste dump in SIPCOT, RANIPET complex caused as a result of operations of Tamil Nadu Chromate Company.
- Floods in Manali Industrial Complex.



Online Refresher Course on “Chemical Engineering for Plant Personnel” held on 25 - 26 November, 2021

ICC under the auspices of the Technology & Energy Expert Committee, organized an Online Refresher Course on **“Chemical Engineering for Plant Personnel”** on 25 – 26 November 2021. Mr. O. P. Goyal, Member, Technology & Energy Expert Committee, ICC, Dr. Parag R. Gogate of Institute of Chemical Technology, Mumbai, Mr. Arvind Kaushik, Consultant, Prof. Prakash Vaidya, Chemical Engineering Department, Institute of Chemical Technology, Mumbai, Dr. Sujit Jogwar, Associate Professor, Department of Chemical Engineering, IIT Bombay, Mr. K. Sahasranaman, Member, Technology & Energy Expert Committee-ICC were the speakers for the program. This certificate course was successful and around 100 delegates actively participated in this refresher course.

ICC NR team meets Hon’ble Minister of State for Chemicals & Fertilizers and Renewable Energy

The ICC NR team led by Mr Kumaresh Misra, IAS (Retd.), Director, met Shri Bhagwanth Khuba, Hon’ble MoS for Chemicals & Fertilizers & Renewable Energy recently and discussed on the various issues faced by the Chemical Industry more specifically on Remission of Duties and Taxes on Exported Products (RoDTEP) and Production Linked Incentive Scheme (PLI scheme). The Hon’ble minister assured his full cooperation to ICC in these matters.



December 2021

MoU between ICC and Maharaja Sayajirao University of Baroda

ICC Gujarat Chapter signed MoU with the Maharaja Sayajirao University (MSU) of Baroda on 4th December 2021 for helping students of Environmental Studies with dissertation, industrial projects and other skill and knowledge development. Mr. Ravi Kapoor, Chairman-ICC Gujarat signed the MoU. MSU officials, Head of Department of Environmental Studies participated in the event.

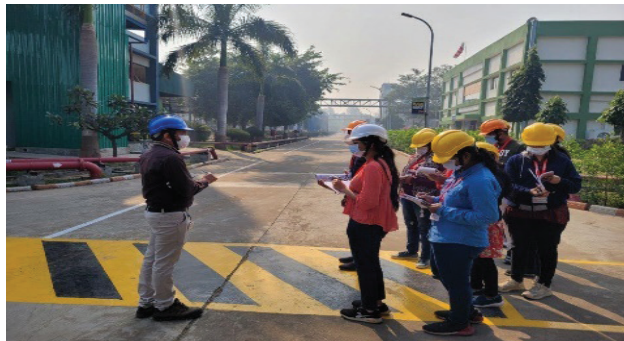


National Workshop on next phase of reforms for reducing compliance burden

As part of Azadi Ka Amrut Mahotsav, Government of India, observed Good Governance Week from 20th to 25th December 2021. In the Good Governance Week, Department for Promotion of Industry and Internal Trade, organized a National Workshop on next Phase of Reforms for Reducing Compliance Burden on 22nd December 2021 at Ambedkar International Centre, New Delhi. Mr. Kumaresh Misra, Director ICC and Mr. P. S. Singh, Secretary ICC NR took part in the same.

Visit of Huntsman Plant Umraya, Vadodara

ICC – Gujarat Chapter organised the visit of 40 Students of Environmental Studies along with 2 Professors at the site of Huntsman International, Umraya, Vadodara on 24 December 2021. During the visit, Mr. Kavishwar Kalambe, Site Director gave a presentation on Safety Norms observed by Huntsman.



Meeting with Mr A Udhayan, IFS, Chairman, Tamil Nadu Pollution Control Board (TNPCB)

Ms. Ramya Bharathram, Chairperson – SR, ICC along with Mr. Venkataraghavan, Executive Vice President, Thirumalai Chemicals Ltd., Mr Premapriyan, Secretary, Manali Industries Association and Mr Prabhakaran, Chemical Industries Association met Mr. A. Udhayan, IFS, Chairman, TNPCB on 29 December 2021 to discuss the issues of Chemical Industry related to Pollution Control, Environment and Future Action Plans. Dr S Selvan (CEE, Former MS), R. Vijayabhaskaran (CEE, Former MS) and Josephine Sahayarani (JCEE) also participated in the meeting. During the meeting, following points were discussed and submitted to the TNPCB: Issue of Delay in Consents; SEAC Formation and Delays to EC/CTE; CEPI Score and Issue for expansions

January 2022

Two day online certificate training programme in association with Dupont sustainability solutions on “Contractor Safety Management”

ICC Northern Region organized a “Two-day Online Certificate Training Programme” in association with Dupont Sustainability Solutions on “Contractor Safety Management” on 20-21st January 2022. Contractors are an integral part of plant operations and capital projects today, hence business outcomes are invariably linked to the contractor management. Poor contractor

management practices often result in accidents and slowdown of operations. The eight-hour online certificate program spread over two days helped in developing a deep understanding of contracting environments and the importance of establishing a safety culture at every phase of contract development execution. Mr. Nitin S. Sahai, Project Manager and Consultant and Mr. Raghunaath Rajagopalan, Sr. Industry Consultant are well renowned speakers. Mr. P. S. Singh, Secretary- ICC, NR delivered Welcome Address and also Closing Remarks.

“Series of Webinars by Eminent Speakers”

Under the auspices of the Technology & Energy Expert Committee, ICC is organizing a **“SERIES OF WEBINARS BY EMINENT SPEAKERS”** on the **Fourth Friday of every month from 3.30 p.m. to 5.00 p.m.** These lectures have been delivered by eminent speakers and experts from Academia and Industry. The First two Webinars in this series were held successfully on 28 January 2022 on “2G Biorefinery” by Dr. Pramod Kumbhar from Praj Industries and on 25 February 2022 on “Transition to Hydrogen economy in India on the back of green and blue hydrogen” by Professor (Dr) R. R. Sonde, Indian Institute of Technology – Delhi. The Third Webinar of this Series was held on Friday, 25 March 2022 from 3.30 – 5.00 p.m. on “Hydrogen via Aqueous-Phase Reforming (APR)”. The eminent speaker for this Webinar was **Professor (Dr) P. D. Vaidya**, Institute of Chemical Technology (ICT). There was excellent response to all these programs.

Meeting of Indian Phosgene Council (IPC)

ICC Gujarat organized the “Indian Phosgene Council (IPC)” meeting virtually on 27th January 2022. Representatives of Covestro India Pvt. Ltd., Atul Ltd., GNFC Ltd. UPL Ltd., Paushak Ltd and BASF India Limited participated in the meeting and shared updates related to the Phosgene industry worldwide.

Retirement of Mr Yogendra Tripathi – I.A.S., Secretary – Chemicals and Petrochemicals

After a very successful tenure, Mr. Yogendra Tripathi, I.A.S., Secretary, Department of Chemicals and Petrochemicals superannuated from the services on 31st January 2022. Mr Tripathi was very helpful and supported the chemical sector. ICC delegation consisting of Mr. P. S. Singh, Secretary - NR, ICC, Mr. Kunal Jain, Dy. Secretary, ICC, Dr. Rakesh Kumar, Officer - Sustainability, Environment & Regulatory Issues, Mr. G. K. Raman, Sr. Vice President and Head, Corp Affairs and Liaison, Jubilant Ingrevia Ltd, Mr. Saurabh Tripathi, GM Corp Affairs, The Sanmar Group, met Mr. Tripathi in his office on 31st January 2022. The Delegation expressed their gratitude for his support for the sector. ICC extends best wishes to Mr. Tripathi.



February 2022

“Industry – Academia Partnership Summit” by ICC SRO

A meeting was organised by ICC SRO on 10 February 2022 for organizing “Industry – Academic Institutions Partnership Summit”. Following members participated in the Meeting:

- Ms. Ramya Bharathram, Chairperson, ICC - SRO
- Mr. V. T. Moorthy, Advisor, ICC SRO
- Mr. S. Venkataraghavan, President, Thirumalai Chemicals Ltd
- Prof. M. S. Srinivasan, IIT Madras, Technology Committee Member, ICC SR
- Dr. Ravindra Gettu, Dean, Industrial Consultancy & Sponsored Research, (Indian Institute of Technology Madras)
- Dr. V.S. Raju Chair Professor, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai.

- Mr. Rajendra Mootha, Chief Operating Officer, IIT Madras Research Park

The points discussed included the need for an annual event to be organised by ICC-SR in July/Aug – “Industry Institutions Partnership Summit, to identify the gaps in Industry Academia interactions and how this summit would close the gap, need for upskilling, keeping abreast of technologies, benefits to Industry and Institutions, Revenue model and structure of the program”.

Meeting with Ms Arti Ahuja, I.A.S., Secretary, Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers

A meeting was organized by Ms. Arti Ahuja, I.A.S., Secretary, Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, and Government of India on 16th February 2022 to discuss about the promotion and development of chemicals and petrochemicals sector. During the meeting, she informed about the intention of the Government to promote domestic production of high value and presently heavily imported chemicals into the country. She also suggested for identification of 75 such chemicals and do developmental work with support from Technology Development Board.

In the meeting, the Secretary also invited and introduced Mr. Pathak, Secretary and Mr Naveen Kaushik, Scientist F of Technology Development Board (TDB) which is a statutory body under the Department of Science and Technology, Government of India. Mr. Pathak explained the role of TDB and its intention to facilitate production within the country for which Technology Development Board will provide appropriate funding support (for industry-based research). A detailed brief will be issued by the DCPC which will be shared as soon as received.

ICC team took the opportunity to welcome Ms. Arti Ahuja and to request her to take part in 15th Annual India Chemical Industry Outlook Conference & Exhibition to be held on 1-2nd March 2022.



Visit of Mr Agus P Saptono, Consul General of the Republic of Indonesia, Mumbai

Mr. Agus P. Saptono, Consul General of the Republic of Indonesia, Mumbai along with Consul of Economics of the Republic of Indonesia and Senior Staff of Economics of the

Republic of Indonesia met ICC Delegation at ICC NHQ in Mumbai office on 23 February 2022 to discuss opportunities of investments in Indonesia for Bulk Drugs Sector. ICC was represented by Mr. D. Sothi Selvam, Director General Mr H S Karagle Advisor and Mr. S. Jaikumar Secretary General. Mr. Agus P. Saptono agreed to send a detailed concept note on the subject.



March 2022

Webinar on “Standardization in transportation of Dangerous Goods” held on 4 March 2022

As the National Standards Body of India, Bureau of Indian Standards took the initiative to create awareness about the importance of standardization in Transportation of Dangerous Goods and started the work to formulate Indian Standard on this subject under Transport Services Sectional Committee, SSD 01. In order to obtain suggestions and inputs for consideration in standardization in this area, BIS organized a Webinar on ‘Standardization in Transportation of Dangerous Goods’ on 4 March 2022 at 10:30 AM onwards. During the Webinar, eminent speakers and domain experts shared the best practices and their experiences in Transportation of Dangerous Goods. ICC had active participation in the webinar.

3 – Day training program on “Knowledge Management” at Chennai

ICC SRO in association with CIA and MIA, organised a 3-day Training Program on “KNOWLEDGE MANAGEMENT” – on 9, 10 & 11 March 2022 at Chennai. The objective of the Programme was “Skill Development for Working Engineers”. **Dr. R. Velraj, Vice Chancellor, Anna University, Tamil Nadu** was the Chief Guest. The Training Programme Covered various subjects such as Overview of chemical industry, HAZOP, RCA, Problem solving techniques, Mechanical Integrity, AI/ML/IOT in maintenance, Energy management, Safety and environmental concerns etc. The Valedictory Function was held on 11th March 2022. More than 60 delegates participated in the program. Mr. Natarajan, Project Director, Tamil Nadu Skill Development Corporation was the Chief Guest during the Valedictory Function.



Mr. S. Venkataraghavan, President, Thirumalai Chemicals Ltd represented ICC in the program.

Webinar on “Indian Standards on Inorganic Chemicals” held on 11 March 2022

The Chemical Department, Bureau of Indian Standards (BIS) organized an **Awareness and Implementation Webinar on “Indian Standards on Inorganic Chemicals” on 11 March 2022** from 11 00 am to 12 15 pm.

The main objective of the webinar was to spread awareness on product standards on Inorganic Chemicals like Nitric acid, hydrochloric acid, sodium carbonate, potassium permanganate, sodium hydroxide, ferric chloride, sodium bicarbonate, aluminium chloride etc. During the Webinar valuable information on BIS certification process for implementation of standards was also shared. Through this webinar, the manufacturers of Inorganic Chemicals and BIS was brought to a common platform for discussion on standards as well as its implementation related issues.

Roundtable discussion with Brazilian Delegation on 14 March 2022

ICC – Northern Region represented chemical sector in Roundtable discussion with Brazilian delegation from the state of Minas Gerais in Brazil led by Vice-Governor of the State, Mr. Paulo Brant. It was a high-level delegation which included, the Secretary of Economic Development of the State, Mr. Fernando Passalio, senior representatives from the Federation of Industries of the state of Minas Gerais and Invest Minas besides representatives from the Brazilian embassy. The meeting was – organized by TPCI (Trade Promotion Council a body under the Ministry of Commerce and details were provided about investment and trade with the state of Minas Gerais of Brazil. There were more than 20 delegates and Mr Paulo Brant.

ICC – Rockwell Automation: Webinar Series on “Digitalizing Chemical Operations through Connected Plant”: First Session On “Advanced Process Control”.

ICC in association with Rockwell Automation has scheduled a Webinar Series on “Digitalizing Chemical Operations through Connected Plant”. The first session in this series on “Advanced Process Control” was held on 16th March 2022 at 1430 – 1530 hrs.

Advanced Process control solutions will improve ability to quickly adapt to business priorities and customer demands while driving increased profitability from plants. The solutions can benefit organizations by driving plants to achieve business objectives by:

- Reducing process variability and inefficiency
- Improving product consistency
- Enabling to get the most out of processes (higher throughput, lowering costs such as energy & RM consumption)

Source India – Bangladesh at Dhaka

ICC was invited by the Trade Promotion Council of India (TPCI) a body of Ministry of Commerce and Industry for its flagship export promotion event called **“Source India Bangladesh”**. The event was held on 26-27 March 2022 at Dhaka. The promotion event aimed to support Indian industries in chemicals, Dyes & Dyes, Intermediates, Agrochemicals, Cosmetics, Toiletries, Specialty Chemicals, Fragrance, Ceramic Industry, and Food & Beverages and showcase their products and technologies in Bangladesh market. Dr Rakesh Kumar, Officer - Sustainability, Environment & Regulatory Issues represented ICC. This was an excellent opportunity to promote the Indian Chemical industry especially the textile chemicals given the fact that Bangladesh has a very vibrant chemical industry offering opportunities to Indian chemical industry. India was fairly represented by mostly trading companies. Out of 40 participants about 13 were from chemical sector.

Program on “Waste to Wealth-creation by recycling spent Sulphuric Acid”

ICC, SRO in association with FICCI, Chemical Industries Association & Manali Industries Association organised a program on **“Waste to Wealth Creation by Recycling Spent Sulphuric Acid”** on 29 March 2022 at Chennai. The objective of the program was “Waste Management Techniques”. More than 60 delegates participated in the program.

Technical Presentations were made by Mr. Peter Goritschnig, CEO & Owner P&P Industries AG. And Mr. Raghunath Kulkarni, Managing Director, P&P Industries India.

Other Speakers include Mr. H. Shankar, Director (Technical) CPCL and Mr. Ramesh Arcot, Director - ProU India Engineering Pvt. Ltd.



The Presentations gave insights on the Technology of P&P Industries for Waste to Wealth Creation by Recycling of Spent Sulphuric Acid, success stories, Opportunities for utilising the technology by Chemical, Petrochemical & Pharmaceutical Industries.

April 2022

Stakeholder consultation workshop on “Accelerating low carbon roadmap for the Petrochemicals Sector in India”

ICC participated in the Stakeholder consultation Workshop on **“Accelerating Low Carbon Roadmap for the Petrochemicals Sector in India”** on 6th April 2022 at New Delhi. Under the Strategic Partnerships, for the Implementation of the Paris Agreement (SPIPA) project, the Delegation of the European Union to India, GIZ, Deloitte, the Stockholm Environmental Institute (SEI) and TERI in partnership with MoEFCC organized this consultation workshop. Mr. Kumaresh Misra, Director, ICC made a presentation on the petrochemical sector.

Meeting on Disaster Management Plant

Dr. Rakesh Kumar of ICC participated in the meeting on “Disaster Management Plan” organized by the Department of Chemical and Petrochemical under the Chairmanship of Secretary, C&PC on 12 April 2022.

ICC – Rockwell Automation: Webinar Series on “Digitalising Chemical Operations through connected Plant”: Second Session on “Golden Batch Analysis” held on 13 April 2022

ICC in association with Rockwell Automation has scheduled a Webinar Series on **“Digitalizing Chemical Operations through Connected Plant”**. The first session in this series was on **“Advanced Process Control”** was held on 16 March 2022 at 1430 – 1530 hrs. The second session on this series on **“GOLDEN BATCH ANALYSIS”** was held on **13th April 2022 at 1430 -1530 hrs**, virtually.

Webinar on “Initiative on Skill Activities for Chemical Sector”

Chemical sector is one of the most employment – intensive and diversified sector in India. There is a dire need of skill development activities in the Chemical Sector to fulfil the requirement of skilled manpower. To facilitate this, Rubber, Chemical & Petrochemical Skill Development Council (RCPSPDC), a dedicated Sector Skill Council (SSC), working under the Ministry of Skill Development and Entrepreneurship has been entrusted with the additional responsibility of identifying skill gaps and for designing programs to impart skills at various levels of the Chemical & Petrochemical Industry.

Towards achieving this objective, ICC along with RCPSPDC conducted a Webinar on **“Initiative on Skill Activities in Chemical Sector”** on 13 April 2022 from 3.00 p.m. – 4.30 p.m. virtually. Speakers for the Webinar included Director General, ICC and Mr Ajay Chaube, Vice President, SRF Limited.

Meeting with Representatives of Port of Antwerp

ICC Secretariat attended the meeting organized by Port of Antwerp on Thursday, 21 April 2022 at Hotel Taj Lands End, Bandra, Mumbai.

Following officials from Port of Antwerp attended the meeting:

- Luc Arnouts - Vice President International Relations & Networks
- Ann De Smet - Key Account Manager
- Bernadette Deschepper - Regional Coordinator
- Daljit Singh Kohli - India Representative

The meeting was organized to discuss on opportunities to work together with the ICC and its members and to discuss on specific opportunities and clarify any concerns regarding connectivity and handling at the port. Representative of Port of Antwerp made presentation on the offerings and recent developments.

Chemexpo India 2022

ChemExpo India 2022 – a comprehensive Trade show for the chemical and Allied industries was held on **20 – 21 April 2022** at **Bombay Exhibition Centre, Mumbai**. The event supported by (ICC) attracted large number of exhibitors from the bulk, fine and speciality chemical industries and included Indian as well as international companies. The event was inaugurated by **Shri Bimal Goculdas - Vice President, ICC** and CEO of The Dharamsi Morarji Chemical Co. Ltd.



Series of Webinars by Eminent Speakers

The Fourth Webinar of this Series was held on 22 April 2022 from 3.30 p.m. – 5.00 p.m. on **“Hydrogen via Electrolysis of Water”**. The eminent speaker for this Webinar was Mr Prabodh Maiti General Manager-Process, Thyssenkrupp Industrial Solutions (India) Pvt. Ltd.

ICC delegation meet Secretary, DCPC in New Delhi

A delegation of Indian Chemical Council, led by Mr. Ravi Goenka, President ICC and CMD Laxmi Organics Ltd called upon Ms. Arti Ahuja, IAS on 25th April 2022 who has recently taken over as Secretary Department of Chemicals and Petrochemicals, Government of India.



A detailed presentation about ICC and the important issues being faced by the Indian Chemical and Petrochemical Industry were presented. Some of the key issues which require the immediate intervention of Government of India viz RoDTEP and PLI for the Chemical Industry were deliberated in detail. Ms Arti Ahuja assured the delegation full support towards finding solutions to the various issues being faced by the Chemical industry.

Programme on “Knowledge Management Programme for practicing Engineers working in the Chemical Industry”

ICC Southern Region supported the programme organised by Chem-skill Development Council on “Knowledge

Management Programme for Practicing Engineers Working in the Chemical Industry". The programme was held on 19th & 20th April 2022 at Clariant Training Hall, Cuddalore, Tamil Nadu. Program covered, PSM HazOp, RCA, Environmental Concerns, Case Studies, Trouble Shooting, and Cost Management. Speakers of the program included veterans from the Chemical Industry such as Mr. R. Ramesh, Mr. P. Manoharan, Mr. Paul Pandiyan, Mr. S. Sudhakar, Mr. D. Pandian, Mr. T. K. Premkumar and Mr. N. Ramadoss.

ICC and GPC Webinar Series (Certificate) on Global Chemical Regulatory updates in 2022

Indian Chemical Council (ICC) and Global Product Compliance (GPC) organized a Webinar Series (Certificate) on Global Chemical Regulatory updates in 2022. The first Webinar was held on 28 April 2022 on **"Comply with UK-REACH: How Can Companies Prepare"** by Mr Guillaume Ehrhard. More than 90 delegates participated in the Webinars. The Second Webinar is being held on 25 May 2022 on **"Chemical Regulatory Updates in Latin America"** by Mr. Guilherme Vilhena.

May 2022

Working group meeting

ICC Southern Region organised a Working Group Meeting virtually on 11 May 2022 to discuss on the proposed "INDUSTRY INSTITUTION PARTNERSHIP SUMMIT" to be held on 23rd & 24th August 2022. Frost & Sullivan will be the Knowledge Partner of this unique initiative of ICC SRO.

Third edition of National Seminar on the role of Agrochemicals in sustainable agriculture

The event organized by Indian Chemical Council in association with Department of Chemicals and Petrochemicals, Government of India was held at Chandigarh on 6th May 2022. The theme of the Seminar was empowering farmers for a prosperous India. The Seminar was inaugurated by Mr. J. P. Dalal, Hon'ble Minister for Agriculture, Government of Haryana. The Program was supported by various industry associations in the sector viz. Crop Care Federation, Crop Life India, Agrochemicals Federation of India and PMFAI and BASAI. All the major farmer bodies such as Borlaug Farmers Association of South Asia, Krishi Club of Punjab Agriculture University, Bhartia Rishak Samaj, Young Farmers Association and All India Farmers Association.

It is to be noted that with nearly 1.3 billion population, India requires a robust and modernized agriculture sector to ensure food and nutrition security for its growing population. Given the fact that the scope for increasing the extent of cultivable land is limited, agrochemicals which includes Fertilizers and Pesticides are recognized as essential inputs for increasing agricultural production and for preventing crop loss before and after harvesting. Farmers as main stakeholders have a very important role they need to be empowered with the latest technology.

Adoption of Drones technology for agro chemical applications, meeting the challenge of stubble burning in a sustainable manner etc. were some of the topics covered during the seminar.

Ms. Arti Ahuja, Secretary, Department of C&PC delivered a special address in the seminar. Other eminent speaker's included Dr. S K Malhotra, Project Director DKMA Ministry of Agriculture, Government of India and former Agriculture & Horticulture Commissioner to Government of India, Mr. Raju Shroff, Chairman, UPL, Mr. R G Agarwal, Chairman, Dhanuka Agritech, Mr. Rajesh Srivastava CEO and MD Jubilant and Dr. Ditender Kumar, Director IPFT. A Knowledge paper prepared by AUXLIFE-GPC was also released during the program. The seminar was well received with good participation from the industry, farmers and Government bodies.



Trader's Meeting at India International Center held on 10th May 2022 under Chairmanship of Secretary Department of Science & Technology

ICC Northern Region took part in the Trader's Meeting at India International Center meeting. The meeting was chaired by Dr. Chandrasekhar, Secretary, Department of Science and Technology (DST). The Ministry of Chemicals and Fertilizers has constituted a seven member joint task force under the chairmanship of Science and Technology Secretary in order to minimize reliance on Chemical Imports and make India more self- reliant.

Meeting with Chairman SOHAR Port Complex, Oman

ICC NRO had a meeting with Chairman SOHAR Port Complex, OMAN. The emerging opportunities in Oman including availability of various feedstock at reasonable cost, coupled with excellent infrastructure and the possibility of their FTA were discussed.



Meeting with Mr Atul Bagai – Head, UNEP India

ICC NRO Secretariat had a meeting with Mr. Atul Bagai, Head, UNEP India on 24th May 2022 for collaborating on the ICC Sustainability Conclave and possible support from UNEP at their Delhi office. The possibilities of enhancing co-operation between ICC and UNEP were also discussed.

Secretary visit to Mumbai

On 26th and 27th May 2022, ICC had the opportunity to host the visit of Secretary in Mumbai. ICC, led by Mr Rajen Mariwala, Managing Director - Eternis Fine Chemicals (Addl. Vice President-ICC) organized the visit of secretary to Institute of Chemical Technology (formerly UDCT) Mumbai, one of the most reputed institutions for Chemical Engineering in India. Prof Sunil Bhagwat, Acting Vice Chancellor - ICT apprised the Secretary on the various Industry-Academia Collaboration, Patents and Innovations created by ICT, besides describing the facilities available in ICT. Ms Ahuja also interacted with the HoDs and paid visits to the ICT laboratories.



On 27th May 2022 an interactive session with Secretary was organized by ICC, with participation of more than 25 CEOs and exhaustive discussions took place on the growth of Indian Chemical Industry. Padma Vibhushan Prof MM Sharma and Padma Bhushan Prof Jyeshtharaj Joshi, the legendary academicians from ICT graced the interactive session. Secretary took keen interest in understanding the specifics with a clear intent to solve the issues faced by the Chemical Industry.



Apart from praising the pioneering role played by ICC, Ms Ahuja has entrusted specific responsibilities to ICC such as, developing training courses on safety and sustainability for the MSME sector and in developing a concept note for decriminalizing issues concerning HSE / Effluent disposal at the granular level. A detailed note on this is under finalization.

Ms Ahuja also has been kind enough to nominate many of the EC members of ICC, in various Task Forces of Chintan Shivir, the brainstorming exercise for creating the road map for Chemical industry with respect to Import Substitution, Sustainability and Specialty Chemicals.

With regard to the meeting held with Secretary DCPC on 25 April 2022, a detailed representation was sought from ICC. ICC made presentation to Ms Arti Ahuja, I.A.S., Secretary, DCPC and informed the following:

- Chapter wise financial implication for RoDTEP as against MEIS incentives which were discontinued
 - a) ICC submitted its response on 10th May 2022
 - b) Trade deficit for Chapters 28 & 29 for the years 19-20, 20-21, 21-22 was communicated.
 - c) Inference - Indian industry is not able to compete internationally and needs immediate support from Government by way of RoDTEP and PLI scheme

- Impact on exports if RoDTEP is made applicable
 - a) Growth in exports achieved in the last 5 years & estimate of outgo through MEIS have been furnished
 - b) Growth of 13% per annum can be achieved if RoDTEP is extended by increasing export volumes
- In the meeting held with Secretary DCPC on 25 April 2022, a detailed note was also sought from ICC on the following points regarding PLI:
 - Applying PLI in a gradient manner – List of products along with financial Outlay
 - a) The first Report on PLI for Chemical Industry was submitted in the year 2020
 - b) 134 products were shortlisted with target imports of ~Rs. 16,600 Cr in CY19 across end uses
 - c) 25 products suggested by Ministry of Chemicals and Fertilizers were also considered
 - d) After the meeting with Secretary DCPC, it was suggested to revise this report
 - e) The revised report has since been submitted to the Department
 - ICC has requested to strongly recommend a PLI scheme for specialty chemicals with a budget of Rs. 8,800 cr, given the substantial positive impact

ICC has also been asked to develop the **Perspective Plan 2040** for the Chemical Industry. Timely and proper positive measures have been initiated and the Chemical Industry fervently hopes that the new leadership in the Government will facilitate the growth of Indian Chemical and Petrochemical Industry at a much faster pace to make India a global sourcing hub for Chemicals and Petrochemicals.

Meeting of DPIIT at ICC SRO

Mr Phani Penumari, Associate Director KPMG, the nodal Agency for DPIIT visited ICC SRO. Ms. Ramya Bharathram, MD & CFO, Thirumalai Chemicals Ltd & Mr. S. Venkataraghavan, VP, Thirumalai Chemicals Ltd., Mr. A C Saravanan, Indian Additives Ltd., Mr. Sanjeev S. Gokhale, Chemplast Sanmar Ltd., Mr Premapriyan, Kothari Petrochemicals Ltd. & Mr Vinoth, Pon Pure Chemicals participated in the interactions held on 31 May 2022.

Series of Webinars by eminent speakers

Under the auspices of the Technology & Energy Expert Committee, ICC is organizing a “Series of Webinars by Eminent Speakers” The Fifth Webinar of this Series was held on 27 May 2022 from 3.30 p.m. – 5.00 p.m. on “Advanced Energy Storage Manufacturing Opportunities: Policy, Technology & Market Drivers for India.” The eminent speaker for this Webinar being Dr. Rahul Walawalkar President & MD, Customized Energy Solutions India Pvt. Ltd.

June 2022

Program on Only One Earth – Living in Harmony with Nature

ICC SRO celebrated “World Environment Day” jointly with Chemical Industries Association & Manali Industries Association, Chennai. In this background, a program was organised on “Only One Earth – Living in Harmony with Nature” on 7th June 2022 at Chennai, Tamil Nadu. The objective of the program was Environment, Compliance and Sensitization of Industries on Environment Issues. The Chief Guest for the program was Mr. M. Malayandi, Joint Chief Environment Engineer, TNPCB, Chennai. During the program, Ms. Ramya Bharathram, Chairperson - ICC SRO delivered the Welcome Address. Mr. S. Balraj, Senior General Manager, Chemin Enviro Systems Pvt Ltd. made a presentation on “Zero Liquid Discharge”. Mr P Manoharan, ICC made a presentation on “Responsible Care”. Mr Ramadass, CEO, Quality Business Solutions made Concluding Remarks.

The program included, Brainstorming sessions on Regulatory Compliance and Zero Liquid Discharge.



One day refresher course on “Chemical Engineering for plant personnel”

ICC Gujarat Chapter organised a One-day Refresher Course on “Chemical Engineering for Plant Personnel” on 11 June 2022 at Vadodara. Mr. O. P. Goyal, Member - Technology & Energy Expert Committee, ICC and Dr. Parag R. Gogate of Institute of Chemical Technology, Mumbai were the speakers for the Refresher Course. Mr. Vikram Singhal, Vice Chairman - ICC Gujarat and Managing Director, Gulbrandsen Technologies (India) Pvt Ltd was the Chief Guest for the Refresher Course. 70 delegates participated in the Refresher Course.



High Level Task Forces – Chintan Shivar

- Department of Chemicals & Petrochemicals has set up three important Task Forces on 17 June 2022 on the following issues. They will deliberate, prepare and present clear Roadmap in the CHINTAN SHIVAR (brain storming)
- The composition of these Task Forces is as follows:

i) Import Substitution

Mr. Prabh Das, CEO HMEL

Mr. Deepak Mehta, Managing Director, Deepak Nitrite Ltd.

Mr. Vijay Sankar, Dy Chairman, The Sanmar Group

Mr. Vivek Gadre, Atul Ltd.

Mr. K. K. Srivastav, Director CPC

ii) Sustainable Chemistry

Mr. Kamal Nanavaty, President - Strategy Development, Reliance Industries Ltd.

Mr. Sagar Kaushik, COO, UPL Limited

Mr. R. Mukundan, MD & CEO Tata Chemicals Ltd.

Mr. Mukesh Malhotra, Country Manager, Solvay India

Mr. S. K. Navahale, Dy Secretary, CPC

iii) Speciality Chemicals.

Mr. Ravi Goenka, President, ICC

Mr. Janak Mehta, President, DMAI

Mr. Rajendra V. Gogri, Chairman & Managing Director, Aarti Industries Ltd.

Ms Vinati Saraf, Managing Director, Vinati Organics Ltd.

Mr. K. K. Srivastava, Director CPC

Terms of Reference

- To present the roadmap with clear timelines on the subject themes
- To take views of all stakeholders and arrive at a concise actionable roadmap for its implementation.
- Same will be presented at CHINTAN SHIVAR and further brainstorming held.
- The roadmap recommendations should also take into account the national and global trends, regulations and best practices.

Meeting with Mr Neil Carr – President, DOW EMEA

An exclusive interaction for ICC was organised by DOW India with Mr Neil Carr, President, Dow Europe, Middle East, Africa & India on 16th June 2022.

Mr Carr is responsible for designing and leading the growth agenda for this critical and dynamic region. He has had an extensive career as a leader of businesses and functional organizations for Fortune 500 companies in the chemical and pharmaceutical industries in both North America and Europe. This has included leadership positions for businesses including paints and coatings and specialty additives businesses, as well as for procurement and logistics support organizations. ICC Office Bearers along with ICC Secretariat attended the meeting.

Meeting with Representatives of the Association for Materials Protection and Performance (AMPP)

Mr Eric M Piotrowski, Business Development Manager, Special Projects Global Operations AMPP Global leader in Material Protection and Performance accompanied by Dr Samir Degan, former Global President NACE International visited ICC New Delhi Office on 17th June 2022. The organization is in the process of opening an India office, as the chemical industry has a big role in corrosion management.

ICC – GPC Webinar Series (Certificate) on Global Chemical Regulatory updates in 2022

Indian Chemical Council and Global Product Compliance (GPC) are organizing Webinar Series (Certificate) on “Global Chemical Regulatory updates in 2022”. The Third Webinar in the Series was held on 21 June 2022 on “Chemicals under the EU Green Deal” and the speaker for the session was Mr. Daniel Toran.

ICC – Rockwell Automation Webinar Series

As a part of the webinar series, Indian Chemical Council (ICC) – Rockwell Automation organized a Webinar on “Digitalizing Your Chemical Operations through the Connected Plant” on 23rd June 2022 virtually. The Session

was on “Driving Outcome from Digital” “Technologies”. Mr. Rajendra Chougale, an industry expert was invited for discussing on how digital technologies can benefit the organization & drive outcomes.

Series of Webinars by eminent Speakers under the Aegis of T & E Expert Committee of ICC

The Sixth Webinar of this Series was held on 24 June 2022 on “ESG (Environmental, Social and Governance) Innovations in the Energy Storage / Electric Vehicle Sector”. Dr. Richard Lobo of Tata Chemicals Ltd was the speaker at the webinar, where 60 participants attended.

July 2022

NG – LOGNEXT 2022 & MoU with Intel the Global Technology Company.

Conference



- The first ever logistics meet under Nicer Globe platform was conducted at Mumbai on 25th July -2022
- Over 225 participants physically and 200 plus participated virtually

MoU with Intel

- Nicer Globe has signed MOU with Intel, a world leader in automotive safety technology. With this MoU, the Indian chemical industry set in motion the **MARCH TO ZERO, ie; ZERO accidents involving chemical transport fleet.**
- Intel will collaborate with Indian Chemical Council (ICC) as a Technology and Digital Transformation collaborator and engage with NG on the digital future needs of the chemical industry and its fleet operations.

Secure Trade and Transfers of Chemicals: Regulations & Good Practices in India



Indian Chemical Council (ICC) and Sri Balaji Vidyapeeth (SBV) in collaboration with The Henry L. Stimson Centre (USA) conducted workshop on "Secure Trade and Transfers of Chemicals: Regulations & Good Practices in India" on 28 July 2022 at Chennai. The event focused on Chemical security - Physical & Cyber Security which was attended by large number of delegates from Government, Industry and Academia. The Workshop was inaugurated by Ms Ramya Bharathram, MD & CFO of Thirumalai Chemicals Ltd in the presence of Officials from Sandia National Lab, US Department of Energy, and Officials from the both Central and State Governments. Mr S. Krishnan, I.A.S., Additional Chief Secretary to Govt, Department of Industries, Investment Promotion and Commerce, Government of Tamil Nadu delivered the key note address.

New Honorary Editor for Chemical News

Mr. K. Sahasranaman (KS) will take over the role of Honorary Editor of Chemical News from Dr. Prakash Trivedi. KS has been actively associated with Indian Chemical Council since many years and is currently serving as a member of the Technology & Expert Committee.

He is a chemical engineer from UDCT (ICT) and IIT-B. He has many years of experience with Engineering Design companies in various sectors. Key projects handled by him include several plants for Chlor-Alkali and Linear Alkyl Benzene and a first of its kind plant for Propane Dehydrogenation. He served UHDE India (now known as Thyssenkrupp Industrial Solutions) for 27 years, from where he superannuated as Vice President and Head of Engineering in 2016. A BEE certified Energy Auditor and a visiting faculty at ICT, KS was elected twice to the National Council of Indian Institute of Chemical Engineers. He is a prolific writer and contributes a regular monthly column "chemengineering" in Chemical Industry Digest. **ICC wholeheartedly welcomes Mr. K. Sahasranaman as the honorary Editor of our prestigious Chemical News.**

Chemical News will definitely miss the legendary **Dr. Prakash Trivedi** as the Honorary Editor of Chemical News, the respected position he held since July 2014. ICC members have acknowledged his contribution in making Chemical News a valuable monthly journal in the Chemical Industry for its quality content. Besides an invited member of various Expert committees of ICC, Dr. Trivedi was also chairman of HR committee, and was instrumental in developing an educational video '**Power of Chemistry**'. Dr Prakash Trivedi was awarded the 'Distinguished Alumnus Award' by ICT and has nominated him as Adjunct professor of the Institute.

He has to his credit more than 30 Indian/Foreign patents and 80 Presentations and Technical Articles. He is the author of **Specialty Plastics**, a book to be published in fall 2022 and a coauthor of **PVC Technology** with Mr. Arvind Athalye. Currently, he is writing a monograph on **Plastics Production Technology**, based on a course he is giving in ICT.

August 2022

Meeting with Ms Arti Ahuja, I.A.S. Secretary, Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers

An online meeting with Ms. Arti Ahuja IAS, Secretary, Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers was held on 2nd August 2022 to apprise her about the two training courses developed by the ICC constituted task force as per directives of DCPC. The ICC task force consisting of EHS heads of member companies has developed two training courses in association with ICT, on safety and environment, with focus on MSME units in the chemical sector. The meeting was attended by senior officials of the Ministry and Director General CIPET. Mr. Ravi Goenka, President, ICC, Chairman of the ICC Safety Committee, Mr. Rajen Mariwala, Co-Chairman of the ICC Safety Committee, Mr. Suresh Ramachandran also attended the meeting. A detailed presentation on the two training courses developed by the taskforce was made to the Secretary. Secretary highly appreciated the efforts made by the ICC's task force in developing these two courses for chemical units in MSME sector. The Training Modules are expected to be launched soon.

Meeting with Export Promotion Councils and Ministry Associations by Hon'ble Minister of Commerce and Industry, Textiles and Consumer Affairs, Food and Public Distribution – Shri Piyush Goyal

ICC delegation met Shri Piyush Goyal, Minister, Commerce and Industry, Textiles and Consumer Affairs, Food and Public Distribution on 5th August 2022 with the representatives Industry Chambers, Export Promotion Councils and Industry associations to review the issues related to exports as also industry growth at Vaniija Bhawan, New Delhi. The meeting was steered by Santosh Kumar Sarangi, Director General, DGFT, while Mr BVR Subramanyam, Secretary, Department of Commerce delivered the welcome address.

Mr Piyush Goyal emphasized for a sincere approach to boost exports with focus to "**Local goes Global: India makes for the World**". He said that Government is doing its best through various measures to support Indian exporters to compete globally. While enumerating the initiatives taken, he highlighted that with Gati Shakti, the government is improving connectivity and logistics. The Government is also negotiating to sign more FTAs with important trade partners. This will have a direct impact in providing a level playing field in international markets, he added. Economical labour cost in the country itself makes Indian industry fairly competitive while competing with countries like U K/ Canada. He informed that the country touched highest ever merchandise exports of \$422 billion and all-time total exports of \$667 billion - an increase of 34.5% over FY 21.

Mr Goyal underlined the importance of Free Trade Agreements (FTAs). In this context, he urged the industry representatives to study FTAs and identify the areas which have competitive advantage. He hoped for an agreement on a multidimensional partnership with UK this year.

Meeting with Shri Deepak Srivastava – Deputy Secretary in the Ministry of Petroleum and Natural Gas

ICC had a meeting with Shri Deepak Srivastava, Deputy Secretary in the Ministry of Petroleum and Natural Gas on 16 August 2022 regarding the issue of approval for utilizing ISO Tank Containers for transportation of Chemicals falling under Class A and Class B of PESO rules. The need for simplification of rules keeping in view of the regulatory framework was discussed. Shri Srivastava will have the proposal examined and a stakeholder consultation meeting is expected soon. The issue will be followed up by ICC appropriately.

September 2022

Signing of MoU between Central Bureau of Narcotics (CBN) & Indian Chemical Council (ICC)

A meeting was convened to sign MoU between Central Bureau of Narcotics (CBN) & Indian Chemical Council (ICC) on 19th September 2022 at ICC Mumbai Office. MoU was signed by Dr. Sanjay Kumar, Dy. Narcotics Commissioner and Mr. Ravi Goenka, President, ICC. Meeting was attended by Mr. Rajesh Dhabre IRS, Narcotics Commissioner, Dr. Sanjay Kumar, Dy. Narcotics Commissioner, Mr. V. S. Kumar, Superintendent, Central Bureau of Narcotics, Mr. Aleksander Piecyk, International Narcotics Control Board (INCB). Through this MoU, the Government intends to collaborate with the members of Indian chemical council whose business involves the manufacture, sale, storage, distribution or consumption of chemicals which have a potential of misuse for manufacture of illicit drugs.



UK – India Chemicals Trade Mission 2022

Department for International Trade (DIT), British Deputy High Commission Mumbai in partnership with Indian Chemicals Council (ICC) organized UK-India Chemicals Trade Mission 2022 on 21st and 22nd September 2022 virtually. The UK companies showcased their expertise in sustainability, green manufacturing and innovation in the chemicals sector during the Trade Mission. Alan Gemmell OBE (Her Majesty's Trade Commissioner for South Asia) was the Guest of Honour. Ms. Shraddha Rane, Dy. Secretary General, ICC spoke on "Opportunities for UK Chemical Companies in the Indian Market".

Third Meeting of Chemicals and Petrochemicals Advisory Forum

ICC was represented by Mr Rajen Mariwala, Incoming Vice President, ICC and MD Eternis Fine Chemicals Ltd. and officials of ICC northern region in the third meeting of Chemicals and Petrochemicals Advisory Forum organised by DCPC, Ministry of Chemicals and Fertilizers, Government of India on 20 September 2022. Mr Arun Baroka, I.A.S., Secretary, DCPC was flanked by Mr Rajen Mariwala and Mr Rajendra Gogri, Chairman & Managing Director, Aarti Industries Ltd.

Webinar on "CO2 capture and utilization from Thermal Power Station"

ICC under the auspices of the Technology & Energy Expert Committee organized a Webinar on "CO2 Capture and Utilization from Thermal Power Station" on 23 September 2022. The eminent speaker for the Webinar was Mr. Shivang Mahadevia of Tata Chemicals Ltd.



TRADE RELATED ACTIVITIES

Amendments in the Narcotics Drugs and Psychotropic Substance Act, 1985

ICC has submitted recommendations regarding amendments in the Narcotics Drugs and Psychotropic Substance Act, 1985 to Secretary - DCPC & Revenue Secretary on 26 October 2021.

ICC's recommendations include the following:

- Insertion of new definitions for 'diversion' and 'licit entity' in Section 2 so as to clearly define and distinguish between 'licit' and 'illicit' persons and acts.
- Addition of a new section to introduce compounding of offences by licit entity where the contravention involves acts that do not constitute 'diversion'.
- Amendment to section 35 so that the 'presumption of culpable mental state' does not apply in case of licit entities and the burden is on the prosecution to show that there was diversion from licit to illicit channels.
- Amendment to section 42 to provide certain safeguards for arrest in case of a licit entity.
- Amendment to section 54 – no presumption of guilt in trial in case of a licit entity.
- Amendments to sections 21 and 22 in respect of determination of quantity of 'manufactured drugs' and 'psychotropic substances' that are pharmaceutical preparations, respectively.
- Amendments to Section 2(xi) and section 3 to ensure that a substance be included as a 'Manufactured drug' or a 'psychotropic substance' after considering not just its abuse or potential for abuse but also its therapeutic use and after consultation with concerned stakeholders.

Duty on imports of "Sodium Hydrosulphite"

A representation was submitted to Revenue Secretary, GOI requesting to impose Duty on imports of "Sodium Hydrosulphite" from China PR and Korea RP on 29 October 2021 in response to the request made by one of our member companies

RoDTEP

ICC successfully completed the exercise of analysing the HS Code wise Combined value-wise and Volume-wise list of products with degrowing rates and submitted the same to Shri Samir Biswas, then Additional Secretary, DCPC on 3 November 2021. This was pertaining to the representation of RoDTEP which ICC had sent earlier. As a follow up of the earlier representation regarding Remission of Duties and Taxes on Export Products (RoDTEP), ICC sent another representation to the Secretary DCPC on 12 November 2021 with detailed worksheet on analysis of value wise and

volume wise exports with comparison of pre-covid and post-covid period with information of Merchandise Exports from India Scheme (MEIS) foregone. With reference to the inputs received from member companies, ICC also sent another consolidated representation to the Secretary DCPC to release RoDTEP rates for the specific products as requested by the members on the same day.

Budget proposal for the year 2022-23

A representation regarding Budget proposal for the year 2022-23 was submitted to Secretary DCPC based on the inputs received from the member companies on 29 November 2021. This representation included Revenue Implications; Issues related to customs policy, rules, procedures; duty drawback, other export promotion schemes etc. and Issues related to Direct taxes

Ease of Doing Business

Ease of Doing Business Section of DIPP had sought inputs regarding the template to capture the details of the compliance such as approvals, renewals, costs, timelines, industry pain points, etc., applicable to various sectors of the industry: exercise of reducing compliance burden (E-46054). The responses received by members were shared with DIPP on 29 November 2021

Pre-Budget Meeting for Union Budget 2022-23

ICC delegation led by Mr. Sanjeev Gokhale of Chemplast Sanmar along with ICC Team took part in the meeting held under the chairpersonship of Shri Vivek Johri, Chairman (CBIC), DoR, Ministry of Finance, GoI to discuss issues related to custom duties pertaining to Pre-Budget Submission for Union Budget 2022-23 on 6 December 2021. ICC made a presentation in the meeting.

Delay in receipt of Restricted License for Import of Denatured Ethyl Alcohol

In response to the special request made by one of the member companies, ICC sent an email to DCPC regarding Delay in receipt of Restricted License for Import of Denatured Ethyl Alcohol from DGFT Delhi on 13 December 2021

India – Korea CEPA

Based on the responses received by members, ICC submitted its response to DCPC on 18 December 2021 with respect to India – Korea CEPA pertaining to change in product specific rules in the context of Rules of Origin. It was suggested that checks and balances of the CEPA with Korea be included while implementing or reviewing free trade agreements. If manufacturers of partner countries resort to unfair trade practices like dumping or if trade balance for any line-item tilts towards any particular country beyond a certain threshold for any line item, concessional duty benefits should be withdrawn for that HS

code/line item. Due to unfair dumping shielded by CEPA, our member company is making losses and presently they are forced to decide to stop operation of their Units.

India – China Bilateral Trade

ICC had received email from DCPC regarding India – China Bilateral Trade. ICC has sought inputs on the top 20 items showing the surge in imports from its member companies. The responses received from the members were consolidated and sent to DCPC on 18 December 2021. Focus was on preventing imports of low-quality products.

RoDTEP Scheme

A request letter for making this scheme applicable for Inorganic and Organic Chemicals, (Chapters 28 & 29) was sent by ICC to DCPC Secretary, Finance Secretary and Commerce Secretary on 7 January 2022

Penal import duty

MoF had sought inputs on imposing same on imports from USA as a counter to US imposing penal duty on imports of certain items from India – Based on inputs from members, ICC sent its representation to DCPC on 11 January 2022 suggesting imposition of penal Import Duty on imports of PVC from the USA at USD 115/mt – equivalent to the just lapsed ADD quantum.

Vision India @ 2047

DCPC had organised a meeting on Vision India @ 2047 on 11 January 2022. DCPC presented a gist of India@2047. Inputs/suggestions from all stakeholders were sought on the same. In connected to this, ICC had circulated the email to all members requesting for their valuable inputs and the inputs received from the members were consolidated and submitted to the Department. An addendum was sent to the Department by ICC on 16 February 2022 based on the additional inputs from the members

India - Australia FTA

Based on the inputs received from member companies regarding Product Specific Rules pertaining to India - Australia FTA Product Specific Rules (PSR), ICC provided its response to DCPC on 12 January 2022. Pertaining to Tariff lines in the said FTA, ICC sent a representation to DCPC on 15 February 2022. This included suggestions for inclusions of fresh tariff lines as well. ICC actively participated in the meeting chaired by Hon'ble Minister for Industry & Commerce. ICC supported opening up of tariff lines under Chapter 28 & 29 on a reciprocal basis. Hon'ble Minister greatly appreciated ICC's stand. The issue of RoDTEP & PLI for chemicals was also broached in this meeting.

Webinar on “Intangible Technology Transfer”

ICC delegation attended the Webinar on “Intangible Technology Transfer for the Academic/Research Institutions/Laboratories in Chemical and Biotechnology sectors” organized by Ministry of External Affairs in association with DCPC on 23 February 2022.

India UK FTA

Based on the inputs received from members, ICC sent a representation to DCPC regarding inputs from the industry pertaining to India UK Tariff lines of imports from UK to India. India also sent the list of Tariff lines for duty liberalization of Exports from India to UK on 23 February 2022.

Restoration of duty exemption for Bisphenol A

ICC sent a representation on 16 March 2022 to Chairman, CBIC requesting for restoration of duty exemption for Bisphenol A as levy of import duty on Bisphenol A is an additional burden on the established manufacturers of Epoxy resin in India and may result in substitution by imported Epoxy Resins in the future.

Brainstorming Session on Product Linked Incentive Scheme (PLI)

Under the Chairmanship of Secretary, DCPC organised a Brainstorming Session on Product Linked Incentive Scheme (PLI) on 30 March 2022. ICC delegation actively participated in the said meeting.

Top 100 Chemicals Imported by value - TIFAC

A meeting was organised by Ms Arti Ahuja I.A.S, then Secretary DCPC on 16 February 2022 to discuss promotion and development of chemicals and petrochemicals sector. Intention of the Government was to promote domestic production of high value and presently heavily imported chemicals into the country. It was suggested by the Department to identify 75 such chemicals and do developmental work with support from Technology Development Board. A brainstorming session with TIFAC was held virtually on 18 February 2022 in which ICC members had participated actively. Subsequently, TIFAC shared a list of Top 100 Chemicals & Petrochemicals in terms of import value during the years 2016-17 to 2019-20 and a List of Chemicals with 100% dependency on a Single source country (China) with ICC. ICC was suggested to provide Validation of the top 100 chemicals out of the two tables as shared by TIFAC on which the Indian Government would need to act immediately on indigenous manufacturing to reduce import burden. A meeting was also held by TIFAC Scientists with Secretariat on 15 March 2022 and it was informed that the Government of India was initiating the work of indigenously developing the highly imported chemicals in India (Top 75 Chemicals) and would spend a minimum amount of Rs 1 Crore in developing each chemical in order to reduce the import dependency of these Chemicals. It was informed that this work of developing the chemicals will be assigned to the CSIR labs and that the industries will also be involved in the developmental work of these chemicals and the first right of manufacture may also be granted. ICC appealed the industry to get involved in this exercise and requested members to provide inputs as requested by the TIFAC team on the table of Chemicals prepared by TIFAC. With regards to the list of chemicals shared by TIFAC, ICC sent

its inputs regarding Top 100 Chemicals Imported by Value on the basis of the responses received by Members.

Meeting to discuss ongoing FTAs of India with UK, EU and Canada

ICC participated in the meeting Chaired by Shri Srikar Reddy, I.F.S., Joint Secretary, DoC to discuss ongoing FTA negotiations with the UK, EU and Canada on 19 May 2022. It was suggested to provide the Tariff wise comments w.r.t. Tariff Lines (Defensive Interest) as shared by Department in the meeting.

A copy of the Official Gazette Notification which DCPC has recently published regarding the Quality Control Order of 8 chemicals including 1, 3, Phenylenediamine, Lauric Acid, Acid Oil, Palm fatty Acids, Rice Bran Fatty Acids, Coconut Fatty Acids, Rubber seed Fatty Acids, Hydrogenated Rice Bran Fatty Acids in the Gazette of India was circulated to the members for information.

Inclusion of PLI for Chemical Sector

ICC delegation, during its visit to meet Ms. Arti Ahuja I.A.S., the then Secretary, DCPC requested for including PLI for Chemical Sector. In this regard, Ms. Arti Ahuja, had suggested ICC to provide the details of the list of products along with financial outlay, if PLI scheme is applied to this Sector. ICC, in association with Avalon had submitted the report on PLI for Chemical sector to DCPC in the year 2020. ICC, in association with Avalon again, submitted the revised PLI incentives recommendations to the Secretary during her visit to Mumbai on 26-27 May 2022. ICC requested the Ministry to strongly recommend a PLI scheme for specialty chemicals with a budget of approx. Rs 8,800 crores given the substantial likely impact. DCPC is taking steps to introduce PLI to Chemical Sector.

Extension of due date for BIS Registration of Foreign Manufacturers of Acetic Acid and Methanol under QCOs issued by the Department

ICC sent a representation dated 25 June 2022 to Joint Secretary, Department of Chemicals & Petrochemicals requesting the Department for extension of the due date by at least 6 (six) months for Registration of Foreign Manufacturers of Acetic Acid and Methanol so that the process of registration of overseas manufacturers may be completed by BIS within the proposed extended period. ICC also shared the detailed document providing a more comprehensive picture w.r.t. demand and supply for Acetic Acid. Also, the data regarding production, imports, demand and supply of Methanol was communicated to the Department. These statistics had implied that these two products are highly import dependent and there is an urgent need to extend the expiring QCOs' deadline.

India - Canada CEPA Negotiations

ICC had received notification from the Department of Chemicals & Petrochemicals regarding India- Canada CEPA negotiations. Department had sought comments/inputs on the tariff lines whether concessions in the form

of elimination could be offered on what lines and the reason for the same. In response to the said notification, ICC submitted its representation to the Department based on the responses received from member companies on 4 July 2022

India-UK FTA: Stakeholder Consultations

In regard to the negotiations of Department of Commerce with the UK for a Free Trade Agreement (FTA), the Department had sought industry's inputs pertaining to the Tariff Lines which the Department had shared. It was also requested to provide trade data and the market access offered on those lines during our previous FTAs have clearly been reflected. In connection with the said subject, a consultation meeting on Chemicals (including plastics) was also held under the chairmanship of Ms Nidhi Mani Tripathi, JS (FT Europe, DoC) & Chief Negotiator India-UK FTA in which Industry actively participated and provided its valuable comments. In response to the same, ICC submitted its representation to the Department of Commerce on the basis of the responses received from members on 4 July 2022. Subsequently, ICC also sent the response to the Department of Commerce with tariff Lines which were not originally present in the list shared by the Department but were requested by one of the Members on 5 July 2022

Ongoing FTA negotiations with the UK, EU and Canada

Stakeholders' consultation meeting under the chairmanship of Dr Srikar K. Reddy, Joint Secretary, Department of Commerce held with the Department of Commerce in connection with the ongoing FTA negotiations with the UK, EU and Canada on 19 May 2022 in virtual mode. Chairman and a few members of the Trade & Business development Expert Committee actively participated in the meeting. It was desired from the industry to provide the detailed inputs/suggestions/comments on the tariff lines pertaining to India's FTA with Canada, UK and EU. Based on the responses received from members, on 16 July 2022, ICC submitted India - EU FTA consolidated sheet consisting of Defensive List of Tariff Lines related to India-EU FTA and Additional Chemicals as suggested by members not included in the list shared by the Department; India - Canada FTA consolidated list; India - UK FTA consolidated list consisting of Defensive List of Tariff Lines related to India-UK FTA and Additional Chemicals as suggested by members not included in the list shared by the Department and Consolidated List pertaining to FTAs of India with UK EU Canada (Offensive list as suggested by the Members).

Decriminalising Issues Concerning Environment & Safety in Chemical Industries

During the meeting which the ICC delegation had with the Secretary, DCPC in Delhi on 25 April 2022 and in Mumbai on 27 May 2022, ICC had taken up the issue of Serious challenges faced by the Chemical Industry whenever incidents involving Safety, Health and Environment takes

place. It was suggested by the Secretary to provide specific information at the granular level on the details of the legal act, sections/ subsections/ clauses under which criminal actions have been initiated in the past against chemical companies by the police and other enforcing authorities. In this regard, ICC had sent representation to the Office of Secretary, DCPC on 28 July 2022 allowing the submissions for making necessary amendments which will help the industry against the harassment of Police, DISH and SPCBs. The said representation also included some of the instances of incidents with member companies; Relevant Acts / Sections under which criminal actions can be initiated and Detailed justification with Recommendation and Rationale for Decriminalisation.

Incentives Offered by Various States to the Chemical Industry

It was suggested by the Secretary, DCPC to provide the detailed report regarding Incentives offered by various States to the Chemical Industry. In this regard, ICC had submitted a detailed report providing details regarding various incentives offered by the states for the Chemical Industry on 29 July 2022. The report included details of Incentives in the States of Gujarat, Maharashtra, Karnataka, Telangana, West Bengal, Punjab, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, North East Region, Madhya Pradesh, Odisha and Kerala.

Request for Extension Period of registration for Paraxylene

ICC sent an email to Secretary, DCPC on 4 August 2022 requesting extension of the due date for mandatory BIS registration (which is currently upto 19 September, 2022) for a period of 12 (twelve) months for the Registration of Overseas Manufacturers of Paraxylene with BIS so that the registration can be completed within the proposed extended period.

PLI Format

The Department had sought inputs regarding the PLI format which was shared by the Department with the Industry Associations. ICC had circulated the PLI format shared by the Department to its members for their valuable inputs. The inputs received from member companies were consolidated and sent to the Office of Joint Secretary, DCPC for their perusal on 8 August 2022

India-UK FTA

ICC had received an email from DCPC regarding India-UK FTA. It was mentioned in the email that India has been negotiating with the UK for a Free Trade Agreement (FTA) since January 2022. In this regard, based on the UK's request List, the Department had shared two Excel Sheets containing details of the HS 8-digit trade lines, Trade with UK & World. One of the lists consisted of the Trade Lines (HS 8 digits) where UK has requested for improved staging and, for phased elimination or Tariff Reduction. The other list consisted of Trade Lines (HS 8 digits) where the UK has requested for market access with accelerated Elimination of Duty. Inputs from Industry members were sought against each Tariff line mentioned in the lists. In this regard, ICC shared the lists with its members for their valuable inputs. Based on the responses received from its members, ICC has sent the consolidated response to the Office of Joint Secretary, DCPC on 16 August 2022.

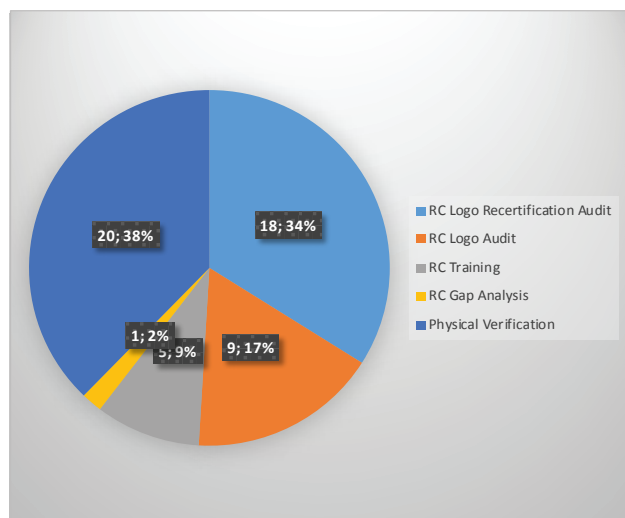
India - Canada CEPA

ICC had received an email from the Department seeking inputs regarding India - Canada CEPA. The Department had shared the list of Tariff Lines and industry's views were sought against each tariff line indicating clearly whether concession in the form of tariff elimination should be given and the reasons for the same. The said list was shared with the industry members for their valuable inputs and the response received from member companies was submitted to the Office of Secretary, DCPC on 16 August 2022.

RESPONSIBLE CARE – ACTIVITIES

Responsible Care® (RC) is the global chemical industry's voluntary initiative to drive continuous improvement in safe chemicals management and achieve excellence in Environmental, Health, Safety and Security (EHS&S) performance. Responsible Care® functions under the aegis of The International Council of Chemical Associations (ICCA) in over 68 economies globally. Indian Chemical Council (ICC), an apex industry body representing the chemical industry in India. ICC is a nodal body, pursuing the "Responsible Care Programme" in India, a global initiative through the International Council of Chemical Associations (ICCA). In the financial year 2021-22, seven member companies committed for the Responsible Care® program with this 158 companies are RC Signatories to the program.

In order to strengthen the program, ICC has carried out number of initiatives such as RC Training, RC Gap Assessment, RC Logo Audit, RC Recertification Audit, RC Physical verifications. Below graph represent the activist carried out for the FY 2021-22 for implementing and strengthening the Responsible Care in member companies.



Further to above we also organized various events in FY 2021-22 on the Responsible Care® for the benefit of member companies:

1. Webinar of the Responsible Care

To create more awareness about Responsible Care, ICC always take initiative by conducting webinars, seminars, training programs etc. 28th of October 2021 ICC has organized webinar of the Responsible Care at WebEx platform. Webinar were mainly focused on:

- Benefits of being a Responsible Care Company
- How to become an RC Company (Step by step process from planning to audit and secure RC Logo from ICC)
- Implementation & practice of RC Security Code.

Mr Sameer Hiremath, Chairman - Responsible Care Committee, ICC & Managing Director HIKAL Ltd, had delivered a welcoming speech with opening remark, to highlight the importance of becoming a Responsible Care certified company. Mr. H. S. Karangle, Advisor & Ex-director general of ICC, discussing mission of ICC. To explain the benefits of Responsible Care, Mr. Mansukh Patel, Member - Responsible Care Committee, ICC & Head - Sustainability & Corporate EHS Hikal Limited. With this we moved towards next agenda of Responsible Care Webinar that is How to become an RC Company (Step by step process from planning to audit and secure RC Logo from ICC) & Implementation & practice of RC Security Code; both agendas delivered by Dr. Pranav Tripathi, Officer - Sustainability, Environment, and Regulatory Issues ICC. He explained to the audience that RC handled in India, by a code based operation. Each code helps to achieve path of sustainability.



Question answers session has been done on both agenda, audience were interested to know more about Security code, implementation of code, how they can take initiative for that etc.

There were more than 262 participants participate for webinar, the webinar was moderated by Miss Priyanka, lots of successful interaction had been done between speakers and participants. Overall it was great discussion and informative session for everyone.

At the end of webinar Mr. Jaikumar, Secretary General of ICC gave closing remark with vote of thanks.

2. Webinar on Responsible Care

To create more awareness about Responsible Care®, ICC always take initiative by conducting webinars, seminars, training programs etc. 24th of November 2021 ICC has organized webinar of the Responsible Care at Zoom platform. Webinar were mainly focused on:

- Responsible Care®: Initiative of Global Chemical Industry
- Significance of Responsible Care® for the Indian Chemical Industry

- Inauguration of RC Manual 3rd Edition
- About 3rd Edition of RC Manual
- Best Practices of Responsible Care®
- How to Become Responsible Care® Company?
- Responsible Care® Security Code

Mr Ravi Kapoor, Chairman – Sustainability Committee, ICC & Managing Director HEUBACH COLOUR PVT LTD had delivered a welcoming speech with opening remark, to highlight an importance of- Becoming a Responsible Care® certified company. Furthermore, to explain, Responsible Care®: Initiative of Global Chemical Industry, Mr. Daniel Roczniak: Senior Director – Responsible Care® American Chemistry Council presented his presentation with highlighted global situation across world. After getting brief knowledge about global initiative for Responsible Care®, to understand National enterprise Mr. D. Sothi Selvam, Director General of ICC delivered his speech on Significance of Responsible Care® for the Indian Chemical Industry. Best Practices of Responsible Care® delivered by Mr. Bharat Meesala, Senior Manager – HSE & Responsible Care® LANXESS India Private Limited. To build more awareness of Security Code which is the 7th code of RC, Dr. Ramakrishnan Narayanan Auditor – Responsible Care, ICC deliver his thoughts on Responsible Care® Security Code.



Question answers session has been done on all agendas, audience were interested to know more about Security code, implementation of code, and how they can take initiative for that, also how they can procure 3rd Edition Responsible Care® Manual.

There were more than 163 participants participate for webinar, the webinar was moderated by Miss Priyanka, lots of successful interaction had been done between speakers and participants. At the end of webinar Mr Jaikumar, Secretary General of ICC gave closing remark with vote of thanks.

3. Workshop on “RESPONSIBLE CARE 3 CODES GUIDANCE MANUAL”

Worldwide, there are different ways for practicing Responsible Care®, among that in the India, we followed “code-based management system”. In code-based management system 7 codes are there. To follow these codes and implement actual practices,

the chemical industry needs uniform guidelines and thorough details of each code therefore ICC takes initiative for CODES BASED MANUAL and RC Manual. Among 7 codes, ICC already published 4 codes manual in 2018, those manuals are:

1. Process Safety Code,
2. Distribution Code,
3. Product Safety and Stewardship Code,
4. Security Code.

Looking upon utility, requirement & popularity of these codeMs ICC has decided to publish the rest of the three codes manual i.e.

1. Employee Health and Safety Code,
2. Pollution Prevention Code,
3. Emergency Response Code.

It is important to review drafts of all codes. Therefore, ICC organized 2 days' workshop with 20 experts and the team of ICC in Taj Santacruz-Mumbai on 14th and 15th December 2021. The whole idea of organizing workshop was, Experts will review all chapters of each code, & manual will be perfect in terms of guidelines, reference, technical knowledge etc. The workshop started with warm welcome by Mr. D. Sothi Selvam, Director General of ICC, he delivered his speech by focusing on an international scenario with GDPs & relation between market & chemical industry.

To explain the purpose of RC Code Guidance Manual and Drafting Method Adoption to all audience, Dr. Pranav Tripathi, Officer - Sustainability, Environment, and Regulatory Issues, Indian Chemical Council delivered his presentation. Dr. Pranav gave a brief idea about RC Manual & its editions, what kind of changes were proposed during each edition. Mrs Shraddha introduced & welcome to Mr. Daniel Roczniak, Senior Director, Responsible Care®- American Chemistry Council (ACC) to explain Importance of Responsible Care Manual and Guidance Manual. Keynote of his speech was, connectivity between, 'sustainability' and 'the chemical industry,' with all small aspects of the chemical industry including stakeholders. Mr. Bimal L. Goculdas, Vice President, Indian Chemical Council (ICC) & Managing Director and CEO of the The Dharamsi Morarji Chemical Co Ltd., Chief guest of session addressing & thankful to all experts. Inaugural session concluded by Mr. S. Jaikumar, Secretary-General, Indian Chemical Council. He gave vote of thanks and closing remark with a lot of wishes for a successful workshop.

First session begun with Critical Review on Employee Health & Safety Code, which was moderated by Dr. Pranav Tripathi. On 15th December 2021 i.e., second day of workshop dedicated for other two codes base manual, those are- Pollution Presentation Code and Emergency Response Code. Similar way adopted for

both sessions as followed for first session. This session moderated by Dr. Pranav Tripathi and Dr. Rakesh Kumar. Due to this method in two days successfully ICC covered all chapters.

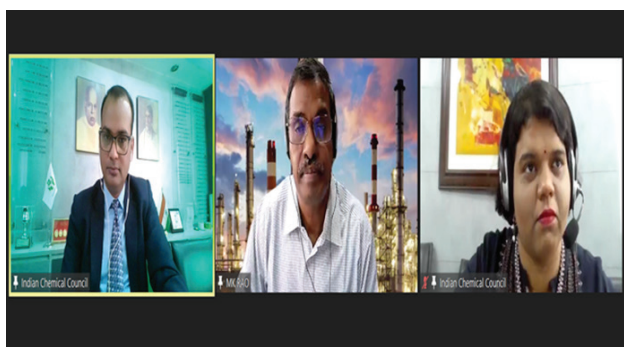


With efforts of the ICC team and experts, ICC can successfully achieve the goal of workshop.

4. Webinar on “RESPONSIBLE CARE® KEY PERFORMANCE INDICATOR (KPI)”

ICC organized a Webinar on “RESPONSIBLE CARE® KEY PERFORMANCE INDICATOR (KPI) 2021” on 18 February 2022. There were more than 230 participants taking part in the webinar. The webinar began with a welcoming speech and opening remark, which was delivered by Mr. Bimal Goculdas, Vice President, ICC, and Managing Director & CEO of The Dharamsi Morarji Chemical Co. Ltd. He highlighted the difference between the Responsible Care model followed in the India by ICC and overseas. To explain RC KPI, It's Benefits, and Mistakes Observed in RC KPI-2020 Reported data by companies, Dr. Pranav Tripathi, Officer - Sustainability, Environment, and Regulatory Issues delivered his presentation. After the Inaugural Session next sessions i.e., Changes in RC- KPI Guideline and Reporting Template for year 2021, was explained by Mr. M. K. Rao, RC Auditor, ICC. He adopted the demo-based methodology. He divided the session into two parts to explain the following factors:

1. Process Safety Events (PSE)
2. Transportation Incidents
3. Tons Transported (Raw Materials/Products/ Production)
4. Energy Consumption
5. Carbon Emission (GHG): Direct Indirect (Scope 1, 2, and 3)



After that over view of KPI 2021 format given by Dr. Pranav Tripathi. Question answer session was there, Due to satisfactory answers of speakers & lot of response from participants, the session extended more for 2.5 hr. The whole program was moderated by Miss. Priyanka, vote of thanks given by Mr. P. Manoharan (Auditor of ICC), he appreciated efforts to make the new format as well as efforts of speakers & participants.

5. Indian Chemical Council releases the Responsible Care®, “Codes Guidance Manual” of Pollution Prevention, Employee Health & Safety, and Emergency Response

Indian Chemical Council (ICC) recently introduced the Responsible Care® Codes Guidance Manual of Pollution Prevention, Employee Health & Safety, and Emergency Response, used by Responsible Care® (RC) Member Companies for the implementation of actual code practices in the industry.



(*Mr. Samir S. Somaiya; CMD of GODAVARI BIOREFINERIES LTD, Mr. B. L. Goculdas; Vice President, ICC & Managing Director & CEO THE DHARAMSI MORARJI CHEMICAL CO LTD, Mr. Ravi Goenka; President, ICC & Chairman & Managing Director LAXMI ORGANIC INDUSTRIES LTD, Mr. Chandrakant Nayak; CEO DOW INDIA, Mr. S. R. Deo; MD NOCIL LTD. & ICC Secretariats.)

In India for practicing Responsible Care®, “the Seven Code-based Management System” is being followed. It is important for practicing all 7 codes on a practical basis, and for that proper guidelines are required. Therefore, ICC decided to publish 7 codes guidance manuals. Among the seven codes ICC has already published 4 codes guidance manual in 2018. Considering the utility, requirement & popularity of 4 codes ICC has published Codes Guidance Manual of Pollution Prevention, Employee Health & Safety, and Emergency Response on 22nd March 2022 in the presence of 28 CEOs in the 3rd Executive Committee Meeting.

NICER GLOBE ACTIVITIES

- Nicer Globe has further added its offer to its members on multi model transportations. Today through NG we can track vessels and attempts are made to capture the rail services as well
- NG has developed a Driver App on android platform, which can be downloaded through play stores.
- Driver App is an interactive device with the drivers, monitor his performance during his journey, besides captures his observations on the journey.
- NG introduced security training program through E platform last year, which was appreciated and acknowledged by all stakeholders and international agencies & state bodies. Further it has added safety training programs on E platform to the driver community.
- Through NG, we can track E- Vahan, which will enable the member company to validate the vehicle records and the driver bonofides.
- NG conducted a workshop on Dangerous Goods transportations, requirements, provision , best practices to its member community

Membership Progress

- From 50 it has gone up to 68 now. Of which, 35 are RC members.
- Around 9 of them, are the logistics providers on our platform

Journey Risk Assessment

- Journey Risk Assessment/Analysis was carried out and more kilometers were covered during this year.
- About 4,500 kms of distance were carried out by multiple companies this year.

Sustainability Committee

- Nicer Globe acknowledge the support , time and efforts of Sustainability Committee and the core members for their continued guidance in strengthening Nicer Globe platform and its operations

Emergency Response Service Providers (Level 3)

- Since Nicer Globe acknowledge the support , time and efforts of Sustainability Committee and the core members for their continued guidance in strengthening Nicer Globe platform and its operations

REPORT ON CWC ACTIVITIES CARRIED OUT BY CWC HELP DESKS – HYDERABAD, MUMBAI AND VADODARA

September 2021 – December 2021

- I. Annual Declaration of Anticipated Activities (ADAA 2022) and ADAA E-filing camps:
 - The Annual Declaration of Anticipated Activities (ADAA 2022) E-filing online portal was opened by NACWC from 1st of September 2021 till 15th September 2021. Email communication was sent to all the Schedule 2 and Schedule 3 declarants, informing them about the NACWC E-file online portal opening date and preparations required for ADAA 2022 filing.
 - Weekly status and progress report on ADAA 2022 submission report provided to NACWC. ADAA 2022 final Status Report was sent on 15-09-2021.
 - All existing declarants submitted their declarations before the deadline of 15th of September. This was possible by conducting online camps (explanation of ADAA procedures and guidelines via zoom meetings) and physical interactions in the respective CWCHD offices.
 - One of the main reasons for repeated online events is the employee turnover. A trained nodal officer would leave and join other organization leaving a void in the other company. This is because of lack of proper knowledge transfer or handover/ takeover of responsibilities. Hence the ADAA camps and CWC awareness programmes become an inevitable part of CWC declarations.
 - The detailed feedback of the declaring facilities explained the way in which the cooperation was extended by the regional CWCHDs to the declaring facilities. NACWC appreciated the efforts of CWCHDs for facilitating the completion of all the declarations on time that too during the pandemic situation. NACWC was well aware of the fact there were huge challenges due to the attrition rate and employee turnover during the Covid time.
 - Because of the above reasons, a lot of facilities did not have plant site code, user id, password and other credentials apart from the data to be obtained on time. All these challenges were overcome by the constant cooperation from the CWC Help desks. The Joint Secretary, NACWC called all the CWCHDs individually to understand the challenges faced by the facilities and CWCHDs, and appreciated our efforts.
- II. Training – NACWC/ OPCW Training activities and other miscellaneous activities:
 - Email communication was sent to all the CWC declaration facilities to apply for OPCW training viz. “Wuppertal Online Course on Explosion Protection and Error Management in the Chemical Process Industries 2021” and one participant successfully completed the course.
 - Email communication was sent to all the CWC declaration units to register their nomination for OPCW – “Eighth Annual Meeting (online) of the Representatives of the Chemical Industry and National Authorities (NAs) of state Parties to the Chemical Weapons Convention (CWC)”. The NACWC staff and all the CWC HD staff participated in the programme and got updated in the latest developments on OPCW database and declaration requirements.
 - Provided guidance and provided proper resources to the EHS division of VSSC, ISRO who had approached CWC Helpdesks seeking help on disposal of phosgene cylinders they had with them for over 35 years.
 - Participated in an online workshop from 4th October to 8th October organized by OPCW on “Chemical Supply Chain – Regional Road Transport Safety and Security Management”.
 - There was a course conducted by OPCW on Regional Basic Assistance-and-Protection Course for First Responders in Asia Region via online from Oct 11 -15th. Our CWCHD personnel from all regions participated in the course and successfully completed.
 - Guidance provided to one of the Schedule 3 declarants in preparing Pre-Inspection Briefing document prior to their OPCW inspection.
- III. CWC Awareness Programmes (CWCAPs):
 - A combined CWCAP programme schedule was collectively prepared by all the CWC Help Desks and was sent to ICCHQ in September 2021. This was sent to the NACWC by ICCHQ for approval.
 - Due to the Pandemic situation prevailing at that time, the NACWC approved virtual CWCAP events and 15 events were approved in total.
 - West Bengal, Orissa, Chhattisgarh and Jharkhand were attached with CWCHD- Hyderabad as per

the revised MoU with NACWC. An updated list was prepared with the help of NACWC. After NACWC approval, revised Schedule for CWC AP was prepared and virtual Programmes in all the three regions were conducted from November 21 till December 21. Two events were carried over to January 2022 due to Covid situation.

- All the programmes were successfully completed by all the regional in-charges of CWC Help desks within the given time period.
- All the participants gave positive feedback on the virtual events and suggested to conduct CWC Awareness program twice in a year so that new nodal officers have an awareness regarding CWC Act 2000, classification of chemicals, Dual use purpose chemicals, guidelines and updates in NACWC declaration requirements.
- Most of the Industries welcomed the E-sign using Aadhaar Number. They considered this much easier and user friendly compared to using DSC (Digital) Key application.

January 2022 – March 2022

IV. Annual Declaration of Past Activities (ADPA 2021) and ADPA E-filing camps:

- The Annual Declaration of Past Activities (ADPA 2021) E-filing online portal was opened by NACWC from 1st of January 2021 till 31st of January 2021. Email communication was sent to all the CWC declarants, informing them about the NACWC E-file online portal opening date and preparations required for ADPA 2021 filing.
- Stepwise guidance was given to all the participating facilities during the CWCAP events conducted from November 21 till January 22 by conducting live demonstration of declarations. Reminders were sent to all the pending declarants and new declarants (Potential declarants were converted to new declarants after repeated persuasion and guidance. The lead was also given by NACWC through DGFT).
- Scrutinization (review) of declarations (ADPA 2021) received were meticulously done to ensure filing of complete and error free declarations. Conference calls / online meetings were conducted to review the declarations and all the technical issues were resolved. Weekly reports regarding ADPA status was submitted to the NACWC. The ADPA 2021 was facilitated and completed by all the CWCHDs on record time.
- Feedback forms were sent to the all declaring facilities to get their feedback on CWC HDs supports to their activities on CWCAP events, Declaration and ADPA 2021 declaration. Feedback

forms received in the prescribed form were compiled and submitted to NACWC for their information. The feedbacks obtained from all the declarants were very positive.

V. Miscellaneous Activities – SCOMET regulations:

- The CWCHD personnel participated in online outreach programme on “Export Controls for Start-ups in India Scenario” on February 2, 2022.
- The CWCHD personnel and industry representatives (CWC declarants) participated in an online event on “Intangible Technology Transfer for the Academic/Research Institutions/Laboratories in Chemical and Biotechnology sectors” on 23-2-22 which was organised by Ministry of External Affairs.

April 2022 – June 2022

VI. Budget for CWC Help Desks

- The following reports were jointly prepared by all the CWCHDs and sent to ICCHQ which in turn were submitted to the NACWC along with the budget for the year 2022-23.
 - Activities report of all the CWC Help Desks in the Q4 of the financial year 2022-23
 - Targets for 2022-23 for all the CWC HDs
 - Schedule and locations of CWC AP events to be conducted in 2022-23
 - Budget for CWC Awareness programmes to be conducted in 2022-23

VII. Meeting with the Chairperson, NACWC:

- There was a meeting called by the Chairperson on the 10th June 2022 at New Delhi to discuss CWC matters. Ms. Neel Kamal Darbari, I.A.S. has recently taken over the charge as Chairperson of NACWC, in the rank of Secretary, Government of India.
- An ICC team with 4 members met the Chairperson along with the other officials of NACWC. There was a presentation given by Mr Jaikumar, Secretary General and Dr R Narayanan, Advisor, CWCHDs.
- After the technical discussion the Chairperson gave some fruitful suggestions including the request for ICC to apply for The Hague award showcasing the activities of the CWCHDs which is a unique model considering its outreach activities for CWC declarations. The meeting ended with the Chairperson directing that a detailed proposal be submitted so that the same can be taken up with Finance. Mr Jaikumar thanked the Chairperson on behalf of ICC for convening the meeting and for considering all the requests of ICC.

July 2022 – August 2022

VIII. Q1 report to NACWC and miscellaneous activities including training, notification for ADAA 2023:

- The potential declarants in all the three Help Desks regions were scrutinized and four of them submitted their initial declaration, one of them being an exporter of a Schedule 3 chemical.
- CWCHDs have sent the following to ICCHQ which in-turn will be submitted to the NACWC
 - Activities report of all the CWC Help Desks in Q1 of the financial year 2022-23
 - Targets for Q2 of 2022-23
 - Online events conducted by each Help-Desk in the Q1 of 2022-23;
 - Programmes to be conducted in Q2 of 2022-23
 - Important information/ achievement of ICC relating to CWC during this period;
- Hyderabad CWC helpdesk relocated its office to new premises from the 1st of August 2022.
- All the CWCHDs carried out the following:
 - All the Schedule 2 and Schedule 3 Declarants have been informed regarding the intention of NACWC towards opening of the window in the month of September 2022 for online submission of Annual Declaration of Anticipated Activities (ADAA) 2023
 - Preparation of updated communication / mailing list of all declaring units for ADAA 2023
 - Monthly internal review meeting was conducted and challenges faced were discussed.
 - Sent the circular from NACWC with a note addressed to DG, for Nominations for a

Symposium for Women in Chemistry, Turin, Italy 9-10-November 2022, to all the member industries and declaring facilities.

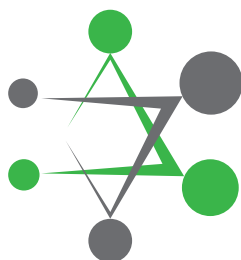
September 2022

The activities pertaining to September 2022 will be covered in the activities for next AGM covering the period from September 22 till August 23. The ADAA declarations have been successfully completed on the 15th of September 2022. But all the details will be officially communicated during next AGM.

Highlights

- 2020 and 2021 were nightmare for many declaring units pan India due to the man power shortage and reduction in manufacturing of chemicals, pharma products and intermediates.
- Despite the pandemic challenge the chemical fraternity recovered gradually and swung into action. The industry slowly learnt to mitigate the challenges and overcame the hurdles. The CWC ADPA 2022 declarations and ADPA 2021 declarations were successfully submitted on time.
- The CWCHDs with the approval of NACWC conducted 15 CWC Awareness Virtual Programmes (apart from many online meetings for ADAA camps) and this paved way for the addition of more number of declaring units (more than 700 units). There were new facilities which started producing in 2021 after the postponement of the projects in 2020.
- The human interaction (using virtual mode) was found to be important for obtaining declarations of ADAA 2022 and ADPA 2021 successfully and for the increase in number of declarations.
- The importance of Awareness programmes was found to be very significant for achieving the above results and this was appreciated by the NACWC.

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ICC

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Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY



Responsible Care® Initiative