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- Inconel
- Monel
- Hastelloy
- Titanium
- Stainless Steel
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MATERIALS.SANDVIK
Dear Reader,

This month last year saw the government announcing a nation-wide lockdown to control the spread of the novel corona virus, covid-19. Our economy was witnessing a de-growth in the third quarter of FY 2019-20 and by the end of the year the pandemic had hit our country. FY 2020-21 began with a country-wide lockdown, perhaps the largest and strictest in the world. This further affected the economy with large-scale disruption of industrial activity and trade. Just as the country was limping back to normalcy, a second and more potent wave of the pandemic has affected life and businesses. The government has communicated that it will not impose a national lockdown which may harm the economy and the States may impose lockdowns locally. Though industrial activities have been allowed to continue, curbs on trade and business will eventually affect our economy. Limiting curbs at the local levels together with the countrywide vaccination programme may reduce the adverse impact.

Hopes of global economic recovery have receded with a resurgence of covid cases in many countries. Organisations such as OECD had expected world output to reach pre-covid levels as early as mid-2021. Sudden spikes in cases caused by a new strain of the virus have put the brakes on an early recovery and have also raised concerns on the effectiveness of measures to combat the pandemic, including questions being raised on the vaccination programmes.

Representatives from the chemical industry, including AMAI Members, had a virtual interaction with Shri Anant Swarup, the new Designated Authority, DGTR where issues relating to the procedure for investigation of cases were discussed. The DA was appreciative of the industry concerns.

DGTR’s findings in trade remedy cases recommending imposition of duties to correct unfair trade practices are being rejected by the Ministry of Finance, much to the disadvantage of the domestic industry. The sudden change in the approach of the Finance Ministry has baffled our industry. While reasons for such large-scale rejections of DGTR’s recommendations are unprecedented, this seems to be a change in approach in response to recommendations of NITI Aayog and the downstream industry to discourage imposition of anti-dumping and safeguard duties of intermediate items. AMAI has represented to the government conveying that while the interests of downstream industries need to be protected, it is imperative to restrict imports on items where adequate domestic capacities are available and where DGTR has investigated and found prevalence of unfair trade practices by exporters to India.

The year 2020-21 will be long remembered as among the toughest years for business, beginning with tough curbs on industrial and trade activities, a steep drop in demand, continued imports aided by global surpluses and a sudden withdrawal of trade remedy measures that could have helped the industry to return to normalcy.

K. Srinivasan  
Secretary General
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**Introduction:**

In harsh salt or chemical environments, bolting systems are often the first to corrode. Here we look at what mechanisms cause this rapid deterioration and how operators can protect bolted piping and flanges, and lengthen the service life of coatings.

The fate of a complex steel assembly may be determined by the vulnerability of its smallest and least considered components. The bolts or fasteners holding the assembly together are often the areas where corrosion starts first, and where the effects of corrosion may have the most serious consequences. Although the use of alloy bolts would make a big difference, the vast majority of bolts used in the offshore industry and elsewhere are carbon steel. With some bolts failing in as little as six months and the design lifetimes of industrial infrastructure being regularly exceeded, a remedy is required that can improve on the often short-lived results achieved using standard coating systems.

**Bolt Corrosion Mechanisms: Why do bolts rust so easily?**

If we look closely at steel bolted systems, we find large components assembled and secured using relatively small nuts and bolts. Such assemblies are found on pipelines, machinery and other infrastructures in every corner of the globe. Wherever they are found—in the joins and most particularly in the bolts—are where the greatest corrosion effects are to be found. Differences in corrosion potential, relative size, mixed materials, damage to coatings during assembly, and crevices formed between components are all well-understood factors affecting bolt corrosion, but these are often ignored in practice. Figure-1 shows rusting of the bolt due to damage in coating while assembling.

Figure 2 is an example of how the design and construction of an assembly can create unnecessary problems. The photo shows a section of pipe-work constructed from a combination of low alloy low and high-alloy steels, with a low-alloy steel flange connected to a high-

**FIG-1: Rusting of the bolt (left) in which coating was damaged while assembling**

**FIG-2: Galvanic Corrosion of low alloy steel bolts attached to high alloy steel flange & corrosion of low alloy steel flange due to damaged coating**

**FIG-3: Principle of cathodic protection with sacrificial anode method**

**FIG-4: Corrosion process in bolts where bolts act as sacrificial anode**

Corrosion in the low-alloy flange is apparent where coating damage has occurred, but most significant is the level of corrosion in the bolts. Here we have two key factors operating:

- Relative size
- Corrosion potential

The bolts are of low-alloy steel with a corrosion potential of around 0.85. The flange is high-alloy with a corrosion potential of around 0.5—a difference of 0.35, well outside acceptable differences. In addition, the bolts and nuts are small relative...
to the structure to which they are joined, exacerbating the corrosion effect. In some environments, such bolts may show significant corrosion within weeks of installation, as they are affected in the same way as the sacrificial anode in a cathodic protection (CP) system. Figure-3 shows principle of CP and Figure-4 shows corrosion process in bolts where bolts act as sacrificial anodes.

**Bolt Damage and Crevice Corrosion:**

In nuts and bolts, assembly can cause damage and penetration of the coating, which can lead to corrosion. Figure 2 shows a nut after only 18 months in the splash zone, its polytetrafluoroethylene (PTFE) and zinc plating failing within six weeks of exposure.

In a salt spray test, a zinc/nickel coating would be expected to last at least 1,000 hours before 'red rust' occurs. An accelerated weathering test such as this is designed to demonstrate the potential longevity of a coating system on the basis that test conditions are extreme. For example, if it could last 1,000 hours in a salt-spray cabinet, then the lifetime of the coating should be 10 years under normal conditions.

However, 1,000 hours is only six weeks. In the real world, the bolts shown in Figure 2 have been exposed to constant salt-spray conditions for 18 months, within a structure design life of 20 years.

Crevice-corrosion under washers and bolt heads, and disbonded coatings on the threads, also play a role in the litany of problems affecting bolted systems.

In a report on bolt failures as part of a testing program by Det Norske Veritas (DNV), it was shown that washers are more likely to fail than any other component in a bolted system. It is easy to see why this might be true, because washers are the smallest component, trapped in a crevice, subjected to turning forces from both sides, and rarely treated with any care.

**What remedies are available?**

Essentially, three standard remedies exist for corrosion occurring in a bolted assembly:

- **Do nothing** – Rusting of infrastructure around the world is mainly caused due to the negligence and the philosophy of putting off preventive activity until tomorrow which one should be doing today.

- **Take everything apart, clean, recoat, replace and reassemble** – Not really practical if an entire LPG carrier, offshore platform or refinery needs refurbishment every 18 months. Therefore proper care should be taken at the time of installation.

- **Clean/blast/recoat the worst affected areas on a routine basis** – Common practice but, periodic inspection should be carried out to prevent catastrophic failure of the structure/equipment.

**Corrosion-Inhibiting Sprayable Thermoplastics (CIST):**

Corrosion-inhibiting sprayable thermoplastics (CIST) technologies provide a new approach to corrosion control in bolted systems, treating the entire system rather than focusing on any particular part. It is also called 'enviropeel' as it is environment friendly. The inhibiting oil present in it has dielectric properties to prevent galvanic corrosion. The system works by excluding corrosion factors such as oxygen and water through an encapsulating barrier coating. It also provides active corrosion protection through the slow release of corrosion-inhibiting oils over the lifetime of the system.

Spray-applied CIST is a zero-VOC (volatile organic compounds), solvent free, strippable, recyclable, reusable thermoplastic material that can be sprayed onto any substrate size or shape. The system employs a dedicated heating and pumping unit in order to melt the thermoplastic chips into liquid and spray the coating material onto the substrate of the component to be protected, yielding a snug-fitting coating that encapsulates the substrate of the material to be protected, following every contour. The main functions of the system also include the exclusion of electrolyte (water) and oxygen by providing inhibiting oil on the coated surface.

By providing a vector for a film of oil to every surface within the encapsulation, CIST both prevents new corrosion and arrests existing corrosion. Very little surface preparation is required, even on rusty surfaces. Only the removal of loose materials, such as flaking rust and paint, is required. This system can be used for long-term storage.
of components/equipments, standby equipment or operational plant/structure, etc. Figure-5 shows the main functions of the CIST system where the outer barrier prevents all kinds of ingress and inhibitors inside prevent corrosion. Even the simplest assembly is constructed from a variety of components. Difference in materials, complex shapes, even the act of construction: all have a role to play in the longevity of the final structure. Figure-6 shows such a complex structure protected by CIST. CIST can be applied to a variety of structures/equipments/components, exposed to moisture and contaminants for corrosion protection.

A carbon steel gear shaft was coated with CIST and left outside for over three years in a mining area where iron rich dust and coastal rains were present in the atmosphere. On cutting away the CIST film, the substrate was found to be as good as new as shown in Figure-7. The Figure shows the elements of CIST such as: resilient weather proof barrier, active inhibiting oil coats, protective film fitting on the substrate contours, and a portion of recyclable/reusable coating material. The advantages of applying CIST system are summarized below:

• **Outstanding corrosion protection**: It provides continuous active corrosion inhibition and strong weatherproof barrier.

• **Prolonged system lifecycles**: It saves time and money, reducing maintenance efforts (cost) and equipment downtime.

• **Easy to use**: Its application fits any substrate; it is easy to apply, remove and re-use.

• **Environmentally friendly and safe**: It is re-usable, recyclable and non-toxic. It reduces risk exposures.

**Field Testing in the North Sea:**

CIST has been successfully applied since 2003 in the North Sea for protection of prematurely rusting bolts. Severe corrosion was experienced in systems that had been expected to last many years using PTFE-coated, zinc-plated, low-alloy bolts. Bolt replacement was the only obvious remedy. Realizing that this would be both disruptive and expensive, the operators sought alternatives. CIST was selected due to its ability to arrest and prevent corrosion with minimal intervention and surface preparation requirements. Figure-8, left-bottom shows the protected bolts with CIST and the left-top shows the corroded PTFE/zinc plated bolts. Figure-9 shows the mixed metal substrate with CIST removed after seven years of operation in the North Sea.

A regular program of removal and inspection was implemented with impressive results, where a mixed metal substrate is shown to have no corrosion after seven years of exposure (in contrast to the similar substrate illustrated in Figure-2). The seven-year results on inspection included:

• No evidence of new corrosion following encapsulation of previously corroded substrates.

• No evidence of galvanic effects or crevice corrosion in protected substrates.

• Coating integrity maintained despite heavy contamination.

• Inhibiting oil continued to be released even after seven years.

• These operators continued to
use CIST across the platform and have not needed to replace any bolts for corrosion failure since the application of CIST.

**Field Testing at National Grid Gas Terminal:**

As a major operator of gas transport pipelines, the UK National Grid needed evidence of CIST performance before recommending its use. Accordingly, in 2005, a series of applications were completed for long-term testing purposes. Removal of CIST and inspections were completed in 2006, 2007, 2009 and finally in 2010 after five years. The five-year results on inspection included:

- No evidence of corrosion was found on any of the CIST-protected substrates
- Inhibiting oil was found to be on every surface within encapsulations
- Although exteriors surfaces were soiled from atmospheric and industrial deposits, the coating remained in good condition with continuing oil deposition on the substrate

Following testing, a preliminary CIST installation on the Bacton interconnector site was completed in 2011, and CIST is now in use on National Grid substations at various sites in the UK, protecting gas-insulated switchgear for the National Grid and other utility companies.

**Laboratory Testing**

A number of tests have been completed to establish the satisfactory performance of CIST coatings under various conditions, including ultraviolet radiation (UV), cryogenic and ignition testing. However, for the purposes of this paper, the focus is on anti-corrosion performance; for this reason, two tests are highlighted here.

1. **Salt Water Deluge Testing:** The susceptibility of low-alloy steel assemblies to the corrosion effects of salt water is well documented. In this test, a carbon steel pipe and flange is subjected to a constant flow from a 20% saline mixture for five days a week for periods up to six months at 86°F (30°C).

   The flange is protected with CIST, but the pipe remains unprotected. After six months, the constant cycle of salt water and drying has corroded the unprotected pipe. However, under the CIST system, the substrate remains completely clear of corrosion as shown in Figure-10. The saltwater deluge testing results included:

   - No ingress of water through the upper seal onto the pipe
   - Corrosion occurred on unprotected pipe
   - No corrosion within CIST encapsulation
   - Coating was unaffected by immersion cycles

2. **Hot Salt Fog Testing:** An international company considering CIST for wellhead protection subjected a small wellhead section to brutal salt fog testing in a hot salt fog chamber. The substrate was coated with CIST and then large sections of the coating were

   FIG-10: Contrast between uncoated pipe & CIST coated flange

   FIG-11: 3000 hr hot salt fog test showing bright steel under CIST & rust everywhere else
cut away before the test piece was subjected to a 3,000-hour test in the chamber. The results are shown in Figure 11, with bright steel under the CIST and rust everywhere else.

Independently observed testing by the original developers of CIST showed zero corrosion after more than 10,000 hours in a hot-salt fog chamber—nearly 14 months. Figure 12 shows the control sample and the protected bolt side by side after the testing.

Results of the developer’s hot salt fog tests included:
- Exposed cutaway areas showed severe signs of rust
- CIST-protected areas show no sign of corrosion
- Severe damage to coating did not affect the ability to protect adjacent areas
- Corroded nuts were difficult to turn and remove; impossible to check bolt tension
- Protected nuts rotated freely; bolt tension was unaffected

Traditionally, the application of remedial coatings to corroded bolted steel assemblies required high levels of intervention—disassembly, replacement, blasting and coating—with the expectation that corrosion would reappear relatively quickly.

Conclusion:
It can be concluded that an effective long-term remedy has an important role to play in equipment/infrastructure protection and the reduction of risk to personnel and the environment. Early field use of this new technology shows promise in solving some of these below mentioned challenges.

- Testing and field applications since 2004 have demonstrated that CIST can provide long-term protection against galvanic corrosion and crevice corrosion.
- CIST provides bolt corrosion control on existing and new-build applications without the need for large-scale intervention.
- CIST corrosion prevention mechanisms provide whole system as well as individual component protection in complex assemblies.
- Non-toxic, reusable and waste-free, CIST helps reduce the environmental impact of corrosion prevention.

In industrial, marine and offshore environments, with equipment life cycles being extended and safety guidelines more stringently applied, corrosion prevention of bolts and fasteners has become increasingly important.

References:
U.S. Patent No.-5,455,075, dated 03.10.1995.
In the last article, it was made clear about various types of heat exchangers & their applications. It was also explained that how the performance of the finned surface heat exchangers varies for induced and forced draft heat exchangers. We also learned that how various metals can be joined to each other using a variety of filler materials.

Now in this article, we will learn that how the selection of the finned surface heat exchanger is done. It is very important to understand few items before we unfold the method of selection. The items are:-

1. Heat exchanger is designed to install in which side of air? :- As discussed in the last article, it is important to understand that whether the heat exchanger is to be installed as an induced draft or forced draft. The selection criteria were already discussed in the last article. Once we decide that same, we need to take the next step.

2. Is it going to be 100% recirculating air or 100% fresh air? :- Some applications like painting ovens for powder coating do not require the introduction of fresh air. But on another hand when the wet paint is to be used for example car painting, where the thinner is added to the paint there the requirements for the fresh air comes in. This is to avoid the thinner present in the air which by over-heating, can cause a fire. Depending on the timings we can add some amount of recirculated air. We can also do this as the two-stage heating. In the first stage 100% fresh air can be introduced till the time whole thinner has evaporated, after this, we can close the fresh air damper up to 75% for the baking of paint. This will save a good amount of energy.

On the other hand, when the hot air is used for the drying of powder or granules the recirculating the heated air is not possible. This is because of the reason that when the air comes out drier (after drying the product) it is saturated air at a lower temperature. As the drying takes place the humidity becomes lesser and lesser in the air & the air becomes warmer and warmer. This especially happens for the batch type of driers. In the continuous type of drier like spray drier, this may not be possible. But when continuous type fluid bed driers are used the last zone heat from the cycle can be taken back to the fresh air so that the energy bills can be brought down.

3. Atmospheric conditions of the ambient air. :- Before the selection of the materials is to do it is important to study the atmospheric conditions. We need to very carefully observe the level of dust in the atmosphere, traces of acids or fumes present in the air. It is also important to see that the heat exchanger (especially with 100% fresh Air) should be installed away from the exhaust chimney. If any kind of fumes or acid traces is present in the atmosphere the heat exchanger has to be coated with the anti-acid coatings. Also, care should be taken that the coating should not hamper the heat transfer coefficient of the heat exchanger. Now in the market, many kinds of coatings are available that do not hamper the heat transfer coefficient of the heat exchanger surface.

Selection of working fluid. Selection of the heat transfer fluid is also important. The selection of the fluid can broadly be divided into three categories:-

i) Low temperature zone:- When the air temperature requirements are less than 90 Deg. C we may think of using hot water (at Atmospheric pressure) as the working fluid. When the temperature is between 91 to 125 Deg. C, we can use water by adding either the glycol or can pressurize the water to that level.

ii) Medium Temperature zone:- When the air temperature required is between 125 to 200 Deg. C then we can use the saturated steam. The low-temperature steam is good to use as it does not hamper the life of the heat exchanger.

iii) High Temperature Zone:- When the high the temperature of the air is from 251 Deg. C to 350 Deg. C it is advisable to use high-temperature thermic fluids. These days some fluids can handle as high as 400 ~ 425 Deg.C.
A detailed chart on the selection of the material was already included in our earlier article published in December 2020 issue of Alkali Bulletin.

**How Drying takes place using hot air?**

The fresh normally contains moisture or better know, as Relative humidity. This humid air when passes over the finned surface heat exchanger it absorbs the heat (As heat always travels from cold to hot). The air expands in volume because of heat, therefore, the humidity which is in terms of the %age of air reduces up and the humidity becomes less. In other words, the air will have more capacity to absorb the moisture.

Let us understand by example. In a fluid bed drier 100% fresh air is coming. The incoming air condition is 32 Deg. C @ 60% RH. & if, this air is heated to 110 Deg. C, then at that stage the humidity will be less than 5%. So around 95% of the air is still available to absorb the moisture and that is how the drying happens. Since that air out of the drier contains a higher moisture level so it is not advisable to take it back to the heat exchanger. Unless the moisture content is removed. For many years companies have used various technologies like rotator wheel, heat pipe, and various methods to recover high-temperature heat. We will discuss the same in other coming articles.

**Calculation of Heat Load**

There are two very important accepts that we need to understand before selecting the heat load. The first is the air-side heat load & the second is to pass that kind of heat load from the surface of the heat exchanger. It can be understood by the following formula very easily.

\[
\text{Heat load of the airside (KW or BTU/hr.)} = \text{Heat required to heat the product (KW or BTU/hr.)} + \text{container heat load (KW or BTU/hr.)}
\]

**The heat load of the airside**: Let us understand the same by two examples

**a. Heat Load of wet granules.** To take an example we can consider the wet tea which is to be dried. The initial moisture level of the made tea is around 50% this is to be drier to 5%. The reduction in the moisture level is 45%. (Please refer to Figure #1.)

**b. Heat Load of the painting Oven**

In the painting ovens especially the power coatings 100% of the air is recirculated. Let us understand the same case when the ambient temperature is 32 Deg. C and 60% RH at this level once the doors of the oven are closed the air starts getting heated up slowly. The air starts expanding and comes to a point when the RH becomes at higher temperatures.

**c. Calculating the Heat load of Granules (Clay Sandy)**

Please note the following things about the products to be dried

- The weight of the product in lbs or Kgs. Let us assume it is 2200 lbs/hr or 1000 ton/hour.
- The initial temperature of the product in Deg. F or Deg.C. Let it be ambient air of the winter 59 Deg. F or 15 Deg.C
- The temperature at which a product is to be heated up in Deg. F or Deg. C. We can take it as 248 Deg.F or 120 Deg.C
Specific heat of the product Clay Sandy is .33 Btu/lb Deg. F or 1381 J/Kg Deg. C (figure #2).

Initial moisture content is 50% & final moisture content allow is 5% Maximum.

Material of drier is steel & the weight is 5,236 lbs or 2,380 Kgs.

d. Heat load calculation of the granules (Clay Sandy)

There are two types of heat loads in the drying process, the first is known as Sensible Load & the other is latent load. The sensible load is the heat load required to heat the product from ambient to design temperature. The latent load is the heat load required to evaporate the water in the product. Let us calculate the same as under:-

**Sensible Load**

\[
\text{Heat Load} = \text{Weight of product} \times \text{Specific heat} \times (\text{Final Air Temp} - \text{Fresh Air In Temp})
\]

**Latent Load**

\[
\text{Latent Load} = \text{Weight of water to be evaporated} \times \text{Latent heat of vaporization}
\]
In our case it is

**Imperial Calculation**

Heat Load (Btu/hr) = 2200 lbs/hr * .33 Btu/lb Deg.F * (248 - 59) = 137,214 Btu/hr.

**Matric Calculation**

Heat Load (K.joule/hr) = (1000 Kg/hr * 1381 * (120 -15) )/ 1000 = 145,005 K.joules/hr.

**Latent Load**

Amount of water present in the clay

% age of moisture = Initial Moisture – Final Moisture

Weight of water = (%age of moisture) /1000 * Initial weight of the clay before drying

Heat Load = Weight of water * Latent heat of evaporation of water for one unit.

%age of water = 50% -5% = 45%

**Imperial Calculation**

Weight of water = 45/100*2200 = 990 lbs/hr.

The latent Heat of evaporation of water is 970 Btu/lb.

Latent Heat load = 990*970 = 960,300 Btu/hr.

**Matric Calculation**

Weight of water = 45/100*1,000 = 450 Kg/hr.

Latent Heat of evaporation of water is 2256 K.joules/Kg.

Latent Heat Load = 450*2256 = 1,015,200 K.joules/hr.

**Total Heat load of the product**

**Total Heat Load = Sensible Load + Latent Load**

Imperial Load (Btu/hr) = 137,214 + 960,300 = 1,097,514 Btu/hr.

Matric Load (K.joules/hr) = 145,005 + 1,160,205 = 1,305,205 K.joules/hr.

Now another important factor is the heat load of the container. It is very important to consider the fact that for the first time the start of the drier the metal.

**Heat Load of the drier body**

Heat load = Weight of drier * Specific heat of steel (from Figure #2)* (Final Air Temp – Fresh Air In Temp)

Imperial Load (Btu/hr) = 5,236 lbs * .117 Btu/lb Deg.F * (248 - 59) = 115,783 Btu/hr.

Metric Load (K.joule/hr) = (2,380*700 * (120 -15) )/ 1000 = 174,930 K.joule/hr.

**Total Heat Load of the System**

Total heat load = Heat Load of the product + Heat Load of the drier body.

Imperial Load (Btu/hr) = 1,097,514 + 115,783 = 1,213,297 Btu/hr.

Metric Load (K.joules/hr) = 1,160,205 + 1,74,930 = 1,335,135 K.joules/hr.

However, the body load can be considered lower once the automatic process starts.

In the next article, we will learn how to calculate the surface of the heat exchanger required? Also, what are the factors that affect the surface?

There are two very important accepts that we need to understand before selecting the heat load. The first is the air side heat load & the second is to pass that kind of heat load from the surface of the heat exchanger. It can be understood by the following formula very easily.

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**About the author:**

Dr. Jagjit Singh Sehra’s life was moved by two personalities, one Sikh’s first Guru Nanak Dev Ji & Other Dr. Abdul Kalam, ex-President of India. Guru Nanak Dev Ji wrote a shalok in Japji Sahib ‘Pawan Guru, Pani Pita, Matta Darat Mahat’, which means Air is teacher and water is a father and they both are nurturing mother earth. Till mankind takes care of these resources nothing will happen on earth. The time has come when we need to blend the laws of Physics and Law of Nature and give solutions to the world on how to save water and air. Humans are searching for life on other planets, the first things they look for are water and air. But on our own planet, we are misusing both. Everyone on this planet is for a short span, we need to educate the people to save the natural resources that have been given free to us. As responsible citizens of the global village, it is everyone’s responsibility to take care of these natural resources and handover a clean environment for the next generation.

Dr. Jagjit Singh Sehra invites people to join him and help companies and society to save water or generate water. You can also get connected with him through his website at www.drjagjitsingh.com or send him an email at sat@drjagjit.com.
Like many other sectors of the economy, the global chemical industry has been adversely impacted by the COVID-19 outbreak, resulting in disrupted supply and plant closures. Its recovery is still uncertain, with US and parts of Europe still under the grip of the pandemic. The turmoil in these markets is likely to be felt globally, including in India.

There are clear imperatives for India to take effective measures to safeguard its future, as the chemical and petrochemical industry contributes 18% of manufacturing output and 14.35% of total exports. India’s chemical and petrochemical industry has been steadily growing at a compound annual growth rate of 10% for the past ten years. Covering more than 80,000 products, the chemical industry is currently worth around US$178bn and is projected to reach US$300bn in the next five years, as part of the Indian Government’s overarching vision of a US$5tn economy by 2025. Favourable policy making from the government is a key step to realising this vision.

Past reforms have supported a dramatic rise in India’s ranking on the World Bank’s Ease of Doing Business Index – it leapfrogged from 100th in 2018 to 63rd in 2019. Coupled with favourable policies and ever-rising demand, these reforms have transformed the chemical industry into a major segment of the manufacturing sector.

The COVID-19 pandemic has compelled leaders and businesses to execute measures to not only contain the virus, but also to safeguard livelihoods. The Indian government recently announced a series of stimulus packages to revive the economy after months of COVID-19 response measures, and policy frameworks are expected to be further strengthened to recover from the current damage, as well as ward off threats of future pandemics.

Re-shaping India through collaboration

One such initiative is ‘Atmanirbhar Bharat’, or ‘Self-reliant India’, a long-term policy initiative which infused about US$280bn into the economy, encouraging industries, businesses, and people to play an inclusive and collaborative role in re-shaping India.

While there are many stakeholders who will reap the benefits of Atmanirbhar Bharat, the most important among them are industry and the government. The relationship between the two is critical to progress policy framework that meets the overall requirements of the chemical sector. Though widely praised, the Atmanirbhar Bharat initiative must meet several key industry requirements if the government’s vision of self-reliance is to be achieved.

To move away from dependence on imports and focus on exports, the chemical industry will require between US$75bn and US$100bn in capital investment to create new manufacturing facilities in India, as well as additional investment for feedstock facilities. Equally important is investment in support infrastructure, such as efficient ports network, and reliable and affordable power and water supplies to ensure efficient and uninterrupted operations.

The supply chain disruption during pandemic phase created severe adverse impact for units dependent on imports of intermediates and feedstocks, especially from China. Moreover, China’s chemical industry structure is changing due to stricter environmental policy and this may also impact the supply chain in future. Under this drive for attaining self-sufficiency, the Indian chemical industry must safeguard itself by creating local capacities for these crucial intermediates and specialty chemicals. The clearance process for new facilities must be faster if the sector is to meet the needs of the changing marketplace.

The plan for the growth and investment in the chemical and petrochemical sector ought to be made prudently and in harmony with
measures to protect the environment. India currently only has 54 companies using the International Council of Chemical Associations ‘Responsible Care’ certification logo. A more stringent environmental policy is required.

Gaining an advantage in the global market

Amid the prevailing uncertainty, the global chemical industry is looking at solutions to come out strong from this crisis and Indian companies are taking steps to align with global market changes. Several organisations are turning their focus to forward and downstream chemical opportunities, which may lead to an increased focus on petrochemicals, intermediates, and specialty chemicals. Higher investment in the sector could ease feedstock challenges and boost self-sufficiency.

To remain competitive in the global market, many players are consolidating at an increased pace, often through high-profile mergers and acquisitions. For India, this could help fortify a competitive advantage. Companies are embracing digital technologies to improve efficiency and productivity. Also, in line with the global trend, many players in India are placing increased emphasis on sustainability and climate resilience.

Over the past few years, the government has enacted several reforms designed to encourage business growth by eliminating unnecessary regulations, simplifying bureaucratic processes, and making the overall process more transparent, responsive and accountable. However, since the chemical industry is highly fragmented and faces intense rivalry among competitors, it might not reap much benefit. Even after allowing 100% foreign domestic investment (FDI), India could not attract expected FDI in the chemical sector.

The government has enacted a Bureau of Indian Standards certification which prevents the dumping of cheap and substandard chemicals in the country. The proposed Production-Linked Incentive (PLI) for the chemical sector and a scheme to establish ‘centres of excellence’ in the petrochemical field, alongside the Chemical Promotion and Development Scheme, are likely to be effective steps towards increasing self-reliance.

The Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) policy, announced by the government in April 2007, encourages the development of global industrial corridors in an integrated and environmentally friendly manner. Gujarat PCPIR is a sterling example of the success of this initiative. This PCPIR houses units by prominent chemical and petrochemical players like Opal, ONGC, Gujarat Petronet, Reliance, BASF, GACL, Gujarat Fluorocarbon, SRF, Hindalco, Lanxess, Welspun, and producing basic petrochemicals like Ethane C2, Propane C3, Butane C4; downstream petrochemical products – polymers and fibres, heavy chemicals, pigments and additives. It has become one of the fastest growing industrial clusters in the country, having attracted more than ₹1.12 lakh crore investment in 180 currently functional industrial units, and a further 650 units at various stages of construction.

The industries set up in this PCPIR generated 45,000 direct jobs and 1.35 lakh indirect jobs.

The Gujarat Government is expecting a further investment of around ₹1.0 lakh crore once it is fully developed in the next five years. Similar success can be expected with three others planned PCPIRs, in Odisha, Tamil Nadu and Andhra Pradesh.

An encouraging start – but more needs to be done

Government readiness and policy plans have provided a canvas onto which the industry can begin to grow. But there’s still an opportunity to further accelerate growth in the sector through expedited implementation of initiatives such as PCPIRs and PLIs.

The current duty structure needs to be reviewed to address inverted duty issues such as duty differential across the value chain, alongside duty reduction of some feedstocks, specifically naphtha and hydrocarbons, such as ethane and propane. The domestic chemical industry needs increased research and development (R&D) spend, from the current 2-3% to 5-8% of revenues, in order to achieve cost and quality competitiveness. The government should implement supportive policies that incentivise industry focus on R&D.

With these strong measures in place, and suitable co-operation between industry players and the government, the “Atmanirbhar” initiative can become reality and help boost the Indian chemical sector into becoming an independent, enterprising, and resilient player on the global market.

(This article has been reproduced from Indian Chemical News (www.indianchemicalnews.com), March 06, 2021)
The 14th India Chemical Outlook Conference organised on an online platform by the Indian Chemical Council (ICC) over two days (a detailed report will appear in next week’s issue), painted a bright outlook for the sector, despite the current challenges posed by the pandemic and the economic slowdown it has caused.

The de-risking strategies of global companies is affording opportunities for several Indian chemical companies, and this positive perception is reflected in the enthusiasm shown by the capital markets. This is a refreshing change for an industry that till recently did not move the needle as far as equity markets and investors are concerned.

Most speakers at the conference were bullish about the prospects for the industry, though some advised caution pointing to several challenges the industry faces – from the commercial, technological and sustainability angles, in particular. The structural issues plaguing the economy led to a slowdown that the pandemic has only worsened, and once its severity recedes will need to be dealt with if the economy is to go beyond the 6% growth limitation it has found itself in.

Clear, consistent policy

India punches far below its size so far as chemical demand is concerned – almost without exception across all sectors. While this gives the comfort of long-term growth to come, given the economic necessity of the industry, much more needs to be done to ensure that the growth opportunities are captured to the maximum extent possible by domestic manufacture – be it by Indian or foreign companies or alliances between the two.

Given the outsized nature of the investments needed, foreign companies have an important role to play and reasons as to why FDI in the core chemical industry has been limited so far were the topic of discussion by a panel comprising senior executives from the chemical industries of India, Europe and the Middle East. One common refrain was the need for a clear and long-term policy framework, which does not change with the government of the day. Talk to executives at multinational companies – several of whom have substantial steel on the ground here – and this uncertainty is paramount in their minds and more so in their boards overseas. Far more than the well-known issues of poor infrastructure, high cost of capital, lack of access to feedstock etc.!

This trepidation is quite understandable. Large chemical projects, after all, involve capital expenditure running into the hundreds of millions of dollars, and plants are built to last several decades. One wrong call can set a company back by years, or even push them to bankruptcy.

Need for new investments

New investments will be needed in the industry not just to meet new demand, but also to refurbish or replace existing assets that have outlived their utility. Several plants currently operating in India are sub-economically sized and compromised in their competitiveness, and this needs to be set right. In some cases, debottlenecking and incremental expansions may be feasible, but for others there may well be no alternative to mothballing and rebuilding. The latter approach also gives the opportunity to size adequately, based on what the markets can bear and what the competitive landscape looks like, as also a chance to adopt newer technologies and processes.

Either way there will be a need for sizeable resources. The capital market route to raise cheap money is now available to the industry – unlike in the past – and it is encouraging to see more and more companies opt for this to fund new projects, or even improve their balance sheets by retiring high-cost debt. Private Equity (PE) investors – always quick to spot an opportunity – have also been eying the chemical industry here, and afford another channel for unlisted companies seeking to benefit from the capital and connections they bring. The fears that PE’s were there to slice and dice businesses for quick resale is unfounded, and many have proven to be exemplary stewards of the businesses they participate in.

Building afresh will also afford an opportunity to incorporate safety systems that are state-of-the-art, and so address a big challenge the chemical industry here faces. The rich valuations and the attention that the industry is now seeing can go up in smoke in the event of catastrophic safety violations. Building
a sustainable and safe chemical industry is as important as building a competitive one!

**What will it take to get big-ticket investments?**

For a start the business case has to exist and the good news is that in many value-chains in which India has currently no or inadequate manufacturing capacity, this is the case. Take the case of phenol, in which a world-scale plant has come up a couple of years ago, and one more will soon be needed. Likewise, in the acrylic value chain, India’s first plants are to be commissioned any time now, and at least two more are in the planning stages. These projects came up not because there were incentives available, but quite simply because the market conditions were conducive.

In some other value-chains the market size is sizeable, but investments have not happened on account of externalities and matters of competitiveness. Take the case of methanol. India imports close to 2.3-mt of this basic petrochemical annually, and the economics of manufacturing it here from expensive hydrocarbon sources (such as naphtha or imported liquefied natural gas, LNG) is rather poor. There may hence be little option but to import, and it should not be too much of a worry. There are multiple sources for methanol – and de-risking by sourcing from a small list of countries and companies is not a risky option. Goading local investments by offering subsidies and other cash incentives, on the other hand, may work for some time, but won’t fundamentally alter the business dynamics, and could be akin to throwing good money down a sink!

In some instances, the business case is not yet there, but will be in 3-4 years. One example is the polyurethane raw material, MDI. It is made globally in tightly integrated value-chains, involves diverse chemistries – nitration, hydrogenation and phosgenation – and a world-scale project will cost close to a billion dollars. The Indian market alone cannot justify such a project now, and it will be crucial for a new entrant to export at least a portion of their output in the first few years of operations. Global competitiveness will hence be key!

There are investment bets that are deterred by the lack of access to technology, and joint ventures can be one work around. Take the case of acetic acid, imports of which are close to 1-mtpa (enough to support a couple of world-scale plants), despite the presence of one sizeable domestic producer. The technology is closely held by a handful of companies (aside a few Chinese ones), and coaxing them into parting with it or partnering will depend on the global/regional market dynamics.

Unlike in China, there have been few joint ventures between Indian and international companies here. It should not be so, as there are benefits all across. For the foreign company, an Indian partner provides a pathway to navigate the complex regulatory and bureaucratic frameworks that a grassroots investment in India entails. For local companies, the advantages could include access to technology, raw materials, global markets and capital.

That India has just a few international joint ventures in chemicals is a matter that needs introspection!

**Focus on indigenous technology development**

While buying technology is an easy option in several instances, it is vital to accelerate efforts for indigenous development. China is again a good case in point. The country has made rapid strides in developing indigenous technologies for several products – coal-to-chemicals, methanol-to-olefins, several fermentation-based ones, and a wide range of fine chemicals – by forging partnerships between industry and research institutes. This has been a huge failing in India, compounded by the reluctance of entrepreneurs to have faith sometimes in the efforts of their own R&D departments.

It is a matter of great shame that despite being one of the world’s leading consumer of fertilisers such as urea, the country still needs to depend on technologies from overseas every time a new plant for it or its raw material (ammonia) is to be built. Even for something as basic as nitric acid – a key raw material for several fertilisers, explosives and chemicals – all the process technologies come from overseas.

**Create clusters close to coasts**

Chemical investments are best done in clusters. This model of development is not new; clusters have existed in Europe, the US Gulf Coast, Singapore, Thailand and China, among other countries, for several decades. They enable efficient utilisation of resources such as energy, raw materials, water, etc.; permit savings in logistics and other tertiary costs, including for waste management; and make for safer operation of hazardous industries like chemical manufacturing. Encouraging investments in the chemical industry here in India – by Indian companies or international ones – will critically depend on the ability to create these homes where the industry can invest, thrive and reinvest to meet current and future demands.

Gujarat and Maharashtra have been the go-to destinations for the chemical industry in the past, but new homes are needed for building the chemical industry that India needs tomorrow. The coastal states are the natural choices, and every effort must be made to create manufacturing hubs in as many as practically possible. It is key to luring investments!

*(Reproduced with permission from Chemical Weekly, March 16, 2021)*
Chlor-Alkali Units have virtually/physically observed Safety Day/Week in their respective units to create awareness among their employees, contract labor, others, associated in day to day working of the plant. A Report on Programs organized by Member Units has been compiled and is given below:

1. DCW Ltd., Sahupuram
   (as reported by Mr. S. Suresh, VP (Mfg.) and Mr. S. Alwis Gift, Chief Safety Officer)

50th National Safety week was celebrated by DCW Ltd at their works Sahupuram from 04.03.2021 to 10.03.2021. For the very first-time practical fire extinguisher operating competitions were held plant wise from 15.02.2021 to 23.02.2021. Apart from this, Oratorical competition, Safety Slogan, Poem and Safety Poster Competition were held for employees. Also essay competitions were held separately for contract and permanent employees.

On 04.03.2021, Safety flag was hoisted by Mr. G. Srinivasan, Sr. Executive VP (Works). Safety day pledge was administered by all employees.

Safety personal protective equipment and contest winners’ posters were displayed.

Mr. M. Seenivasagam, Joint Director of Industrial Safety & Health, Tuticorin was the Chief Guest in valedictory function held on 4th March 2021.

Representatives from mutual aid companies like SPIC, SUPER GAS, TAC etc. attended the function. Senior

of Industrial Safety and Health also attended as a special guest.

Prizes were distributed to the winners of the various competitions by the chief guest. The vote of thanks was proposed by safety dept. staff at the end. The function came to a close with the National Anthem.

2. Punjab Alkalies & Chemicals Ltd., Naya Nangal
   (as reported by Mr. M.P.S. Walia, GM-Works)

The 50th National Safety Day was celebrated at the works Naya Nangal on 04.03.2021 and safety week form 04.03.2021 to 09.03.2021. Program was inaugurated by Mr. M.P.S. Walia, GM (Works). He highlighted the importance of National Safety Day/Week and emphasized to follow safe practices at workplace and appealed for achieving zero lost time

The function began at 3.00 PM with a prayer song. The Presidential address was given by Mr. G. Srinivasan, Sr. EVP (Works) in which he stressed the need for safety in industries. The safety report for the year 2020 was presented by Mr. S. Alwis Gift, Chief Safety Officer. The special address was given by Mr. S. Suresh, VP (Manufacturing). The key note address was given by the Chief Guest Mr. M. Seenivasagam, Joint Director of Industrial Safety & Health, Tuticorin in which he emphasized the need of wearing personal protective equipment and thus reducing accidents. So every employee should be vigilant & follow safety procedures.

Mr. S. Ravikumar, Deputy Director

Prize distribution for the winners of competition held

A presentation on safety being made by employees

National Anthem being recited at closing ceremony

Senior Dignitaries of DCW Ltd. on the dais

National Safety Day 2021 theme was “Learn from Disaster and Prepare for a Safer Future”
injuries. He also mentioned that accident causes embarrassment to the company, sufferings to the victim & their family and affect National Economy.

Competitions including Quiz competition, Poster Competition and Safety Slogan Competition, etc. were organized.

Training Programs conducted on Construction Safety, Fire Safety, Health Safety, Electrical Safety, Environment Safety, Safety in handling hazardous chemicals and Road Safety.

3. Grasim Industries Ltd., Rehla

as reported by (Mr. Ajit Singh Kaushik, DGM)

Rehla unit observed 50th National Safety Day/Week Campaign and organized many activities and competitions including SCBA competition & demonstration held at chlorine filling station. Online training on electrical safety provided by HOD (Electrical).

Fire extinguisher operation & demonstration organized at material department in presence of HOD (Materials). Virtual training on safety observation conducted by HOD (Safety).

On the closing ceremony winning posters and slogans displayed.

4. TGV SRAAC Ltd., Kurnool

(as reported by Mr. B.B. Gantayat (Sr. GM -Safety))

50th National Safety Day observed on 04.03.2021 by TGV SRAAC LTD at Kurnool, factory site.

Mr. V. Ramakrishna Reddy, Dy. Chief Inspector of Factories, Kurnool was the Chief Guest. He hoisted Safety Flag and inaugurated the Personal Protective Equipment exhibition. He explained the use of various PPEs and firefighting equipment displayed.

Safety Day function presided over by Mr. N. Jeswanth Reddy, Executive Director (Tech) and Mr. B.B. Gantayat (Sr. GM -Safety) welcomed the Chief Official of Grasim Industries Ltd., Rehla addressing the gathering Safety Oath is being administrated by employees.

Dignitories distribution the prize to the winners.

Fire extinguisher operation and demonstration is in progress in presence of HOD.

Officials of TGV SRAAC Ltd., on the dais.

Chief Guest is hoisting the Safety Flag.

A safety presentation in progress.

Official of Grasim Industries Ltd., Rehla.

Safety Oath is being administrated by employees.

Fire extinguisher operation and demonstration is in progress in presence of HOD.

Dignitories distribution the prize to the winners.
Guest and all attendees.

Safety pledge also administered bilingual in English and Telugu.

Factory Manager Mr. E. Ramaiah read out the Annual Safety Report for the year 2020-2021 including details of expansions and major modifications in the plant that took place during the tough time of Covid-19 by providing adequate safety measures to protect and prevent the employees, workers and visitors from corona virus and with special reference to Occupational Health and Safety Systems.

Mr. N. Jeswanth Reddy emphasized the safety measures taken in the factory by providing Masks, Hand sanitizers, Multivitamin tablets, Patanjali Coronil kits, etc., to combat corona virus. Mr. G.K. Agarwal, E.D (Tech) stressed the health safety crisis worldwide and making use of mask a permanent part of life and maintaining social distancing. He also explained the Road Safety, need of positive behavior and attitude at work place, continuous practice of safety measures for achieving “Zero Accident”.

The Chief Guest delivered the safety message emphasizing the Chemical Accidents occurred when chemical industries restarted after unlockdown in Andhra Pradesh.

The Chief Guest and E.D (Tech) distributed the prizes to winners of the various safety competitions. Vote of thanks delivered by Mr. B.B. Gantayat.

5. Lords Chloro Alkali Ltd., Alwar
(as reported by Mr. Rattan Singh, Safety Officer)

“Lords Chloro Alkali, Alwar” celebrated the 50th National Safety Week from 4th to 10th March with zeal & enthusiasm with participation of all categories of employees at their works, Alwar.

Safety week celebrations are meant to create awareness about various safety & hygienic measures. Company organized “Cyber Safety Awareness” program by Mr. Amit Singh (DSP – Cyber Branch, Govt. of Rajasthan). He shared all information about how the cybercrime takes place by our own lack of knowledge and what precautions one should take. One program was on “Covid-19”, updating the latest information and protections to be taken.

Company organized safety competitions such as Run for Safety, Quiz, Safety Slogans, Safety Posters, and Safety Exhibition for awareness and involvement of the employees. Other training programs such as Fire drill, SCBA awareness & Fire safety training & Chlorine mock drill were organised during the safety week.

6. Meghmani Finechem Ltd., Dahej
(as reported by Mr. Chandrakant Mistry, AGM)

50th National Safety Week 2021 was observed at Meghmani Finechem Dahej unit from 22nd February to 04th March 2021.

Safety posters, safety slogans, SCBA set display, three men fire drill, Chlorine kit handling competitions were organized during the week.

On 22.02.2021 safety quiz competition conducted to improve theoretical knowledge of employees. Chlorine kit handling competition was organized. In case of Chlorine
SCBA Wearing Competition

Safety Oath being administered

Leakage how to operate Emergency Chlorine Kit.

Mr. M.A. Hania, Sr. VP welcomed Mr. S.C. Bamania, Jt. Director (DISH), the Chief Guest. Chief Guest explained about fatal accident/incidents like LG Polymer at Vishakhapatnam, Bhopal Accident, UPL – 5, etc.

He talked about “ZERO HARM” and Safety should be part of our culture. Safety is the commitment towards our family and our Organization.

7. Nirma Ltd., Bhavnagar
(as reported by Mr. U.K. Mehta, Manager – Safety & Fire)

Nirma Ltd. celebrated the 50th National Safety Day 2021 at their works, Bhavnagar. The campaign was aimed at renewing the commitment of all employees to working safely throughout the year. 245 persons attended the National Safety Day Program. Mr. Jatin Adesara, Assistant Director ISH, Bhavnagar (GJ) & Mr. S.D. Yadav, Officers of ISH Bhavnagar and Mr. S.V. Sonara, Director graced the function with their presence.

Mr. Viren V. Shah (AGM- SHE) welcomed the Chief Guest and other dignitaries followed by pinning the safety badges and hoisting of safety flag by the Chief Guest. Safety banners and posters were displayed at various locations of the plant. Safety flag hoisting was done by Mr. D.G., VP-Safety and Swachhtha oath administered by Mr. P.T. Chadasaniya (AGM-Inst.) and Mr. U.K. Mehta (Manager –SHE).

Chief Guest inaugurated the function. In his keynote address, he highlighted the importance of contractor worker safety. He said safety is responsibility of each and everyone. Plant should take care of workers training & development. Mr. S.V. Sonara highlighted the effects of mishaps on employees and their family members. He also emphasized on the execution of monthly safety audit with cross functional team of various departmental HODs/Area In-charge.

On this occasion, Mr. D.G. Jakhade emphasized on how the accidents were happening. Basically Unsafe Act has major role in the accident. The Unsafe condition is also important factor for Various Accident cases. The Unsafe Condition can be eliminated by doing regular interval inspections and taking timely corrective actions. The safety training to employees including contract workers can reduce the unsafe act on daily activities. It is every body’s responsibility to control the Unsafe Act, particularly on contract workers. He appealed to every employee that works should be completed safely without any harm and safety should be monitored by all concerned HODs & area in-charge. With everybody conscious, it is

Cleanliness oath is being administered by Mr. U.K. Mehta (Manager- SHE), Employees & Contract Workers

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possible to reach Zero Accident goal and we are committed to achieve it in coming years.

Safety awareness program like safety quiz, safety slogan, poem, essay writing, safety posters, painting competition, wall paintings, good housekeeping contests were organized.

HSE exhibition was also organized. In the exhibition, various equipment for evaluation of health hazards, and work environment in factory, various personnel protective equipment (PPE), safety posters, different kinds of fire extinguishers and firefighting equipment were displayed.

The function ended with vote of thanks by Mr. S.M. Rohadiya, Dy.Manager - SHE.

8. Siel Chemical Complex, Rajpura
(as reported by Mr. Yogendr Kumar, Asst. Manager)

Siel celebrated the National Safety Week from 4th March to 10th March 2021, at Siel Chemical Complex, Rajpura.

Safety day opening function was presided by Mr. H.S. Sandhu, VP (Works), Mr. Rakesh Sharma, Sr. G.M. (Chemical) and by Mr. Uday Patel G.M. (Projects). Safety week celebration included various programs related to safety awareness such as Training programs on chlorine and general safety, Children HSE poster competition, Chlorine Emergency competitive drill, Fire emergency drill, Safety quiz competition, Online quiz competition, First Aid Training program, SHE slogan competition and Safety Exhibition.

Mr. H.S. Sandhu inaugurated the program with hoisting the safety flag. Speaking on the occasion, he briefed that how we have worked continuous without any break during the tough period of COVID-19 without any loss.

Mr. Rakesh Sharma also emphasized on day-to-day safety requirements in one’s life. As the companies are moving towards automation, he also categorically mentioned the basic needs of safety trainings required to all and each plant personnel and it is the utmost duty of all to adhere the safety practices. He also lightened that all are equally responsible to create safe working environment.
Over 40 million rural homes get tap water connections under 'Jal Jeevan Mission'

Business Standard | 30 March 2021

JJM has achieved a new milestone in providing tap water supply to four crore rural households across the country as said by Mitnistry of Jal Shakti. As per the latest data shared by the Ministry, 7.24 crore people (38 per cent), more than 1/3rd of rural households, are now getting potable water through taps.

Announced by PM on August 15, 2019 with the aim to provide tap water supply to every rural home by 2024, JJM has reached new milestone in providing over 4 crore rural households with tap water supply.

Across the country, Goa has become the first state to provide 100 per cent tap water supply followed by Telangana and Andaman and Nicobar Islands.

"The untiring efforts of States and the Union Territories have helped JJM provide assured tap water supply to every family living in 56 districts and over 86,000 villages.

"States and UTs are now competing with each other and focusing on the target to ensure that every household in the country gets safe drinking water, so that 'no one is left out'.


Jal Shakti Ministry approves Rs. 465 crore performance incentive to seven states

The Indian Express | 28 March 2021

The Jal Shakti Ministry has approved Rs 465 crores as performance incentive grant to Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Gujarat, and Himachal Pradesh under JJM. Gujarat was among the best performing states in implementing JJM to ensure tap water supply to every household.

North eastern states have implemented JJM with speed and scale despite hilly terrain and forested areas. It is for the first time that five northeast states have qualified for the performance incentive grant.

"For performance incentive grant, the criteria include physical and financial progress under JJM, functionality of piped water supply schemes and capacity to utilise the fund. Today, Mr Shekhawat, the Union Minister, Jal Shakti approved Rs. 465 crores as performance incentive to these states," it added.

Despite the COVID-19 pandemic and the resultant lockdowns and disruption, speedy implementation of JJM on the ground has set an example and during the financial year, more than 3.16 crore rural households have been provided tap water connections, the statement said.

Currently, Andaman and Nicobar Islands, Goa and Telangana have become 'Har Ghar Jal' States/UT, and every household in 55 districts and 85,000 villages of the country have tap water supply.

Since the announcement of JJM, four crore households have been provided tap water connections, thus increasing the tap water supply from 3.23 crore (17 %) rural households in the country to more than 7.20 crore (37.6 %), the statement added.

This is the "speed and scale" of the work being undertaken to provide clean drinking water to every rural household. In the financial year 2020-21, Rs 11,000 crore was allocated for JJM and grants have been provided to States/UTs based on output in terms of functional household tap connections given and the utilisation of available central grant and matching state share, the statement added.


JJM will improve health outcomes, increase productivity, particularly for women who often travel long distances to get potable water and inevitably contribute to economic growth and
One of the most interesting numbers tucked away in the Union Budget documents this year was the financial allocation for the JJM, a massive Rs 50,000 crore for 2021-22. It is an almost five times increase from the revised budget estimates of 2020-21 (Rs 11,000 crore) and the actual spend in 2019-20 (Rs 10,000 crore). The Mission, to provide a functional tap water connection to every Indian household by 2024, is the most ambitious social sector programme of Narendra Modi’s second term. When completed, it is likely to be as transformational as the Swachh Bharat Mission of Modi-1.

For most commentators on the economy, India’s transformation is largely viewed through the lens of economic growth. Indeed, economic growth is necessary because ultimately, only that can lead to a sustained rise in the incomes of all Indians, the fundamental requirement for prosperity. The task of achieving sustained high growth is hard, made harder by the current sluggish state of the global economy and the spectre of imminent, rapid technological change.

The Swachh Bharat Mission’s chief task was basic: constructing functional toilets for all Indians. But its impact is more than basic. It is not simply a sanitation programme. It is a health and nutrition programme (absence of toilets breeds disease and malnutrition). It is also a productivity enhancing programme because only a healthy population can become productive economic agents. In the end, it contributes to economic growth.

The JJM is equally important. Of course, India ought to have provided clean drinking water to its people many decades ago. This Mission will soon correct that anomaly. Just like Swachh Bharat was not just a sanitation programme, Jal Jeevan is not just a clean drinking water campaign. Again, it will improve health outcomes, increase productivity, particularly for women who often travel long distances to get potable water and inevitably contribute to economic growth and prosperity. Change is already visible in many places where implementation is complete.

The most reassuring aspect of the JJM, which points to its sustainability, is revealed in its Vision Statement which states as its aim that “every rural household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities.” There is clear emphasis on quality (obvious), on quantity (important, because even in urban areas, water supply is intermittent) and finally on delivery charges. This is not a “freebie” programme. It will charge a fee from users though it will be kept at an affordable level.

https://www.sundayguardianlive.com/opinion/the-other-transformation

Govt makes it easier for users to get drinking water tested

Leveraging the technical capacity built for Covid-19 testing and surveillance, the National JJM, in partnership with ICMR, launched an online portal that will make it possible for users to get quality of drinking water tested through a network of nearly 2,000 labs across the country.

The Water Quality Information Management System’ (WQMS) will ensure that any adverse test report will be automatically flagged up to state and central-level authorities for corrective action at source of the supply of drinking water.

The system will work the way ICMR’s robust online portal for Covid-19 test monitoring is functioning -- with a clear data flow protocol where testing laboratories provide results to the person requesting the test, state, and national databases.

Union Jal Shakti minister, Gajendra Singh Shekhawat said ‘Har Ghar Jal’ (water to every household) is not just a one-time infrastructure programme. “It will go a long way in building the capacity of the frontline workers, empowering women and creating employment in villages,” he said.

The preliminary testing of drinking water at village-level will be done by trained women workers using field kits (FTK). One among the five women trained to perform the FTK test in every village in the country would be registered on the portal by the block / sub-divisional laboratory in-charge to upload the FTK test results.

The sample will be sent to nearest laboratory for confirmatory test, if required. As per an estimate, testing will
cost Rs 180 - 600 for 12 identified parameters, including arsenic and fluoride content, and the cost would be borne by village water and sanitation committee (Pani Samiti or User Group). The cost of basic 8-10 parameters will not be more than Rs 200 per sample.

“Idea is to bring the state authorities on board to bear the cost in a manner that the network of laboratories across the country function on a no profit, no loss mode,” said an official.

There is currently, a network of 1,933 active lab linked to WQMIS. The Centre has earmarked 2% of its entire JJM budget (Rs 1,000 crore out of nearly Rs 50,000 crore in 2021-22) for testing so that the quality of drinking water supply is ensured along with required quantity under the ongoing JJM -- a flagship programme of the central government for providing tap water connection in every rural household by 2024.

The Jal Shakti (water resources) ministry on Saturday discussed the modalities of the testing system under the WQMIS and released a testing framework during a review meeting of the JJM through virtual conference of water resources ministers from states.

Ever since the JJM was announced by the Prime Minister Narendra Modi from the ramparts of the Red Fort on August 15, 2019, more than 3.77 Crore rural households have been provided with tap water connections.

In total, more than 7 crore rural families (36.5% of total) have now started getting clean water in their homes. “Every family living in 52 districts, 670 blocks, 42,100 panchayats and 81,123 villages are getting assured tap water supply in their homes now,” said Shekhawat.


**Action plan to augment water supply in summer**

**The Indian Express | 13 March 2021**

Krishna District Collector A Md Imtiaz has directed the Rural Water Supply (RWS) Department to come up with a plan of action to meet the drinking water needs of people in villages during the summer months. In a review meeting with RWS officials at his camp office here on Friday, the Collector said that a total of 361 works has been awarded in the district under Jal Jeevan Mission and proposals to augment water supply have been prepared at an estimated cost of Rs 5.12 crore. Of the total 361 works awarded for the district, 318 are below Rs 5 lakh and they are scheduled to be completed by March 31.

Focus should be laid by the RWS officials on clearing the water beds in overhead water tanks and other works to ensure proper drinking water supply during the summer months, Imtiaz said, adding that the data of the household connections for drinking water supply should be uploaded online at regular intervals.

RWS Superintending Engineer Sainath and other officials attended the meeting.


**National Conference of Ministers on JJM held on 13 March 2021**

**PIB | 12 March 2021**

The Union Minister of Jal Shakti, Shri Gajendra Singh Shekhawat will be chairing a Conference of States/ UTs Ministers on Jal Jeevan Mission on 13th March 2021 with all Ministers of States/ UTs in-charge of Rural Water Supply and reviewing the progress made under Jal Jeevan Mission- a flagship programme of the Union Government for providing tap water connection in every rural household by 2024. The Minister of State for Jal Shakti- Shri Rattan Lal Kataria, Secretary DDWS- Shri Pankaj Kumar, Additional Secretary & Mission Director- Shri Bharat Lal will be present in the conference. The conference is organized to discuss planning, implementation and progress made so far as well as the way forward so that the remaining households in villages get tap water connections at the earliest.

Reaffirming its commitment towards public health and well-being the Union Budget 2021-22 saw a quantum jump from Rs 11,500 crore in 2020-21 to Rs 50,011 crore in 2021-22. Immediately following the budget announcement,
Hon’ble Prime Minister chaired a high-level consultation with various stakeholders from private sector, policymakers, academia, to invite ideas on ways to speed up implementation of JJM in 2021-22.

Since announcement of Jal Jeevan Mission on 15th August 2019, significant progress has been made across the country and so far, more than 3.79 Crore rural households have been provided with tap water connections. Undeterred in the spirit of JJM, since the beginning of the Mission, as on date, more than 3.79 Crore HHS are provided with tap water connections, i.e. more than 7 Crore rural families (36.65%) started getting clean water in their homes, i.e. more than 1/3rd of rural household are getting potable water through taps. Every family living in 52 districts, 672 Blocks, 42,322 Panchayats and 81,863 villages are getting assured tap water supply in their homes.

In the conference - Hon’ble Minister Shri Gajendra Singh Shekhawat is scheduled to release the ‘Drinking water quality testing, monitoring & surveillance’ and launch the JJM - Water Quality Management Information System (WQMIS). The Mission has developed the online portal and mobile app on WQMIS in partnership with Indian Council of Medical Research (ICMR). The full automated data management system will test water samples and help in assuring safe supply of drinking water; and in case of contamination remedial action shall be initiated. For the first time, water quality data will be made available in public domain in line with Prime Minister's vision for transparency, accountability and good governance.

Under the mission aim is to provide 12 Crore household tap connections with an investment of more than 1 lakh crore annually for next three years. Further, water works are planned for remaining villages of the country. ‘Har Ghar Jal’ programme aims to skill 20 lakh skilled and semi-skilled workforce for building water supply infrastructure, water quality testing and for Operation & Management (O&M). The programme aims to mobilize people for long-term sustainability of water supply systems in rural India.

News on Air | 09 March 2021

The Centre has said that 3.77 crore rural households have been provided tap water connections under Jal Jeevan Mission. Ministry of Jal Shakti in a statement said that over seven crore families in rural areas now have an assured tap water connection. Prime Minister Narendra Modi had announced the life changing Jal Jeevan Mission (JJM) on 15th August, 2019, with an aim to provide tap water connection in every rural household by 2024. At the time when the Mission was announced, out of 18.93 Crore rural households, only 3.23 Crore had tap water connections and thus, about 15.70 Crore households were to be provided with tap water by 2024.

The programme directly benefits more than 19 Crore rural families, improving public health. The Ministry said, Goa has become the first state in the country to provide 100 per cent tap water connections followed by Telangana. Different states are competing with each other and focusing on the target to ensure that every household in the country gets safe drinking water. It said, despite COVID-19 pandemic and lockdown, the drinking water supply work continued to provide nearly 1 lakh connections every day.

Jal Jeevan Mission is implemented in partnership with States/UTs. The focus of the programme is to ensure regular water supply in adequate quantities of prescribed quality on a long-term basis. Under the mission, every rural household is to be provided with a functional tap water connection and no one is to be left out.


3.77 crore rural households provided tap water connections under JJM

JJM empowers India’s Rural Women, increases their participation: MoS Kataria

The Print | 08 March 2021

The Preamble to our Constitution starts with the lines “We the people of India”. Here ‘we’ refers collectively to men, women and the third gender. The makers of our Constitution did not envision any special privileges to any gender, thereby ensuring equality for one and all. As we come to celebrate the International Women’s Day on 8 March, it is time for us to celebrate the achievements of
Indian women in various fields. It is also an opportunity for us to assess, analyse and reflect upon the challenges that still exist in our society and act as a handicap for women.

Growing up in a small village in Haryana, my memory is replete with instances of my mother, sister and aunts walking long distances to fetch drinking water from designated wells and ponds. They endured immense social and physical hardships to secure drinking water for their families.

This has been a common story for most rural women numbering over 40.5 crore (2011 Census), because until 15 August 2019, only 3.23 crore rural households out of a total 19.18 crore had piped water connections. Mere data is not enough to assess the far-reaching implications that non-availability of potable piped water has on people belonging to the weaker most sections of society and especially women.

Women and girls in India spend a considerable time (up to 352 min./day) in performing the domestic chores. This is 577 per cent more than their male counterparts (52 mins/day) and 40 per cent more than women in South Africa and China (OECD data). Collecting drinking water for their families constitutes a major part of it. This poses a major barrier to enrolment of girls in schools, especially those belonging to below poverty line (BPL) households. The magnitude of the problem becomes clear with over 11 crore rural women pegged to be below the poverty line in India (Planning Commission estimates, 2004-05).

Variability in water supply due to heavy dependence on monsoon rains and ground water adds up to their vagaries. It exacerbates gender inequality. In India, about 70 per cent of the rainfall is received during the monsoon season and its intensity varies – each year, from one region to another. As a result, 42 per cent of Indian landmass is rendered drought prone (Drought Early Warning systems report: March 2019).

Impact of inadequate access

It is well known that extreme weather events like droughts have a devastating impact on weaker sections of society because they lose out on livestock and crop yield. Food prices shoot up and it has a crippling effect on their health and nutrition, ultimately affecting human capital. Women, and girl children, bear the brunt and are most adversely affected. It leads to their stunted growth, which gets passed down the generations. As per a World Bank study, it was observed that “women who experienced a large dry shock (below average rainfall) in infancy are 29 per cent more likely to have a child suffering from some form of anthropometric failure—that is, being significantly below average size in terms of height for age, or weight for age, or weight for height”. This reflects the urgency to provide potable water to each household to secure our human capital and to prevent stunting of our future generations.

About 90 per cent of the rural population is still dependent on ground water for their drinking water supply (CGWB). There is a huge reliance on hand pumps for catering to domestic and drinking water needs. As on date, there are over 58,31,253 operational hand pumps throughout the nation (JJM IMIS). The number is only indicative and not exhaustive. This leads to risk of consuming water contaminated with high amounts of arsenic, fluoride, iron and nitrates.

Researchers have established an inverse relationship between prenatal and early childhood exposure to contaminated water and cognitive abilities. Moreover, inadequate access to water for sanitation purposes, physical and psychological stress on account of fetching water from distance also leads to increase in rate of preterm birth (PTB) and low birth weight (LBW).

JJM, Modi govt’s resolve

Providing water to each household is an inescapable duty of any government. Water is the elixir of life and “is deemed to be a merit good that is something to which people have a right, regardless of (the) ability to pay – because it is essential for life.” It is enshrined as a human right in resolution number 64/292 of UNited Nations General Assembly (UNGA), which calls upon governments to ensure adequate and affordable quantities of safe water for domestic use.

Accordingly, in 2019, Prime Minister Narendra Modi announced his government’s resolve to provide piped water connections to every rural household under the flagship programme ‘Jal Jeevan Mission’. The newly formed Jal Shakti ministry is implementing the Scheme to provide ‘Nal Se Jal’ and to secure ‘Har Ghar Jal’ target by 2024.
In about a year, 3.04 crore households have been provided piped water connections under the JJM scheme. Goa and Telangana have achieved 100 per cent coverage. So far, 52 districts, 669 blocks, 41,835 gram panchayats and 81,154 villages in the country have achieved the targets of ‘Har Ghar Jal’

**Beyond water connection**

But the JJM has had a much bigger impact socially, due to the fact that water connection is becoming available to people of all caste, community, religion, etc. Truly, ‘no one is left behind’. Villages where the majority population comprises SC/ST are being given priority and the aim is to secure 55 litre per capita per day (lpcd) of safe drinking water. This inclusive approach largely benefits the weaker sections, especially women.

As part of the JJM’s bottom-up approach, water supply committees or Paani Samitis are created at the village level to prepare an action plan. As a rule, half of these committees’ members must be women because they are not only the most affected group but their participation plays a crucial role in the programme’s effective implementation. A UN study has shown that panchayats with more women as members perform better in projects such as drinking water supply and sanitation. The JJM seeks to provide a platform for their participation as well as empowerment.

Moreover, realtime nationwide water data is made available on www.ejalshakti.gov.in to ensure transparency. Also, people who have witnessed the ordeal of their mothers and sisters while walking long distances to fetch water can make contributions through the Rashtriya Jal Jeevan Kosh.

Hence, the outcome of JJM is not limited to the number of connections provided. It aims to mitigate the economic, social, and physical hardships that rural women have to endure in absence of supply of regular, reliable and safe drinking water at their doorstep. It aims at improving their ‘ease of living’ and providing them ‘dignity of living’.


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**Entire Gujarat To Be Under "Nal Se Jal" Scheme By 2022: Vijay Rupani**

**The Hindu | 06 March 2021**

All households in Gujarat will get tap water connections under the centre’s ‘Nal Se Jal Yojana’ by the year 2022, ahead of the year 2024 target set by PM, Vijay Rupani CM told the Legislative Assembly. Mr Rupani said 17 lakh households in the state are yet to be covered under the ambitious scheme aimed at providing drinking water through taps.

"People of north Gujarat suffered for years due to contaminated ground water. We want to eliminate our dependence on hand pumps and provide drinking water through tap connections. He was responding to queries raised by Congress MLAs on the status of water supply in the state.

CM said the state government had allocated ₹ 4,000 crore for the "Nal Se Jal" project and 82% of the total project work has already been completed.

"We are planning to provide 1 lakh tap connections every month to cover the remaining 17 lakh houses out of total 95 lakhs, in the next 17 months. "We are using the lift irrigation technology to bring water to the doorstep of each household. Not a single village will be left out by 2022," he said.

He said even shanties will be covered under this water supply scheme.

During the discussion, Congress MLA CJ Chavda cited a Central survey to claim that traces of Uranium were also found in water being supplied by the state government. Claim was dismissed by CM.

He said that they are supplying only rain water (accumulated in the dam) through Narmada canals. Over 9,000 villages and major cities get this fresh water. Rigorous testing mechanism is also in place to keep a check on the quality of water.

Relief devices need to vent to a safe location. Verify that the locations are actually safe.

On April 12, 2004, a company in Dalton Georgia, USA was contracted to make triallyl cyanurate. A runaway reaction occurred, and flammable and toxic allyl alcohol and allyl chloride were released to the atmosphere. Some material was released through a poorly sealed manway (Figure 1) and more through the rupture disc vent which discharged near the base of the reactor (Figure 2). The release forced the evacuation of over 200 families in the surrounding community. One worker received chemical burns and 154 people including 15 emergency responders had to be decontaminated and treated for chemical exposure. (Sources: CSB report 2004-09-I-GA. Figures from the CSB video “Reactive Hazards”)

Another company in the U.S. received a regulatory inspection. They were cited for not venting process relief valves to a safe location. While the vents discharged outdoors, the release point was directly over an exit from the process building. An employee exiting during a relief discharge could have walked right into a cloud of process materials.

1. Relief devices, whether used in process or utility service need to vent to a safe location. That can vary by the material being relieved.
2. Poorly sealed manways can release hazardous materials and expose workers in the process area. The relief device should be the only release point for overpressure.
3. Potential emissions from relief devices should be known and documented as critical safety and environmental data.
4. The safe location for a relief discharge needs to be in an area where volatile materials can disperse to the atmosphere or where liquids can be contained.
5. When vented materials collect, they can result in a cloud of flammable or toxic materials that could ignite or expose worker or the community.
6. Changes to other processes or equipment in the area need to be reviewed for any impacts on the dispersion of relief emissions.

Did You Know?

1. Search for relief device vents during your rounds in the unit. When you see one look for:
   a. Is it labelled as a relief line?
   b. Could it expose someone?
   c. Is there other equipment around it that could trap flammable or toxic vapors?
   d. If the answer to any of these is “Yes” report it to your supervisor.

2. If there are process or relief vents at a low level that could expose someone, report these too.

3. Ensure all openings (manways, charge ports, etc.) on equipment and piping flanges are properly tightened, so systems vent only as designed.

4. During MOC reviews, ask for details of a relief discharge location. The relief location needs to allow dispersion of gases, vapors and/or capture of liquids.

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India’s FY22 GDP may grow 7%, K-shaped recovery likely in APAC region: UNESCAP

The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) said it expects Indian economy to grow 7% in FY22 despite roll-out of the Covid-19 vaccine and against a contraction of 7.7% in the preceding year. It also said maintaining low borrowing costs while keeping non-performing loans in check would be a challenge for the country. The Asia Pacific region, including India, is staring at a “K-shaped recovery” of their economies, as per the UN agency in the report titled ‘Economic and Social Survey of Asia and the Pacific 2021: Towards post-Covid-19 resilient economies’.

As per the report, India entered the pandemic with subdued GDP growth and investment. Following one of the most stringent lockdowns in the world, the economic disruptions that the country experienced mounted in the second quarter of 2020. A subsequent change in lockdown policies and success in reducing infection rates supported an impressive economic turnaround in the third quarter. “However, the pace of recovery moderated in the fourth quarter with estimated year-on-year growth still close to zero,” it said. The National Statistical Office (NSO) has projected an 8% contraction in India’s FY21 GDP. UNESCAP said China’s swift and effective response to Covid-19 enabled it to become the only major economy worldwide to achieve a positive annual economic growth rate in 2020.

Make every drop of water count for sustainable agriculture

Indian Express | 29 March 2021

On World Water day (March 22) Prime Minister Narendra Modi launched the “Catch the Rain” campaign under the government’s flagship programme, Jal Shakti Abhiyan. He emphasised the importance of using every penny spent under MGNREGA to conserve water.

As per the Central Water Commission’s reassessment of water availability using space inputs (2019), India receives a mean annual precipitation of about 3,880 billion cubic meters (BCM) but utilises only 699 BCM (18 percent) of this; the rest is lost to evaporation and other factors. The demand for water is likely to be 843 BCM in 2025 and 1,180 BCM by 2050. So, the targets are not beyond our reach, if we remain focused and follow an appropriate strategy that not only “catches more rain” but also ensures better demand management of this precious resource.

How does one move forward? Agriculture uses about 78 per cent of fresh water resources. And as the country develops, the share of drinking water, industry, and other uses is likely to rise. Unless one learns to give effect to the credo of “per drop more crop” in agriculture, the challenge can be daunting. We need a paradigm shift in our thinking and a strategy to not just increase land productivity measured as tonnes per hectare (t/ha), but also maximise applied irrigation productivity measured as kilogrammes, or Rs,
per cubic metre of water (kg/m³).

So far, with decades of large public and private investments in irrigation, only about half of India’s gross cropped area (198 million hectares) is irrigated. Groundwater contributes about 64 per cent, canals 23 per cent, tanks 2 per cent and other sources 11 per cent to irrigation. This results primarily from the skewed incentive policy of free or highly subsidised power, particularly in the country’s north-west, the site of the erstwhile Green Revolution. Over exploitation of groundwater has made this region amongst the three highest water risk hotspots, the others being north eastern China and south western USA (California). Overall, about 1,592 blocks in 256 districts in India are either critical or overexploited.

When it comes to the issue of using water more wisely in agriculture, two crops — rice and sugarcane — deserve special attention. As per a NABARD-ICRIER study on Water Productivity Mapping, these crops alone consume almost 60 per cent of India’s irrigation water. Figure 1 shows applied irrigation water productivity against land productivity for rice and sugarcane in important growing states. It is interesting to note that while Punjab scores high on land productivity of rice, it is at the bottom with respect to applied irrigation water productivity. Similarly, in the case of sugarcane, irrigation water productivity in Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu is only 1/3rd of that in Bihar and UP (Figure 2). There is, thus, a need to realign cropping patterns based on per unit of applied irrigation water productivity.

There are technologies to produce the same output of these two crops with almost half the irrigation water. Jain Irrigation, for instance, has set up drip irrigation pilots for paddy in Karnal (Haryana) and Tamil Nadu and for sugarcane in Maharashtra, Karnataka and Andhra Pradesh. The results of these pilots indicate while it takes 3,065 litres of water to produce 1 kg of paddy grain (yield level 7.75 t/ha) under traditional flood irrigation, under drip, it can be reduced to just 842 litres. The benefit cost ratio of drip with fertigation in case of sugarcane in Karnataka is observed to be 2.64. An extension to this is the “Family Drip System” innovated by the largest drip irrigation company in the world, the Israel-based — Netafim. The company has also launched its largest demonstration project in Asia at Ramthal, Karnataka.

Technologies like Direct Seeded Rice (DSR) and System of Rice Intensification (SRI) can also save 25-30 per cent of water compared to traditional flood irrigation. Unfortunately, however, technological solutions cannot make much headway unless pricing policies of agri-inputs are put on the right track and farmers are incentivised for saving water.

Second Covid wave unlikely to derail India’s growth: RBI Governor

Business Standard | 26 March 2021

Reserve Bank of India (RBI) Governor Shaktikanta Das expressed confidence that the second wave of Covid infections will not derail India’s economic journey. He maintained the RBI’s recent 10.5-per cent growth forecast for the coming fiscal year (2021-22, or FY22).

His assurance assumes significance amid apprehensions about surging Covid infections and resultant lockdowns being clamped in many cities.

“Revival of economic activity should continue unabated. I don’t see a downward revision in 10.5 per cent growth estimate for FY22, which the RBI had given last month,” Das said at the Times Network India Economic Conclave, adding he also did not foresee a repeat of the nationwide lockdown that the country had witnessed last year.

On the government move to privatise more state-run banks, he said the central bank is in discussions with the government on the same. The Centre “always takes into consideration the viewpoint of the regulator” on such issues, he said.

The RBI is also working on a central bank digital currency (CBDC), albeit with utmost precaution, he said.

“While we are working on introducing a digital version of the fiat currency, the RBI is also assessing the financial stability implications of introducing such a CBDC,” he said in his keynote address.

“It needs to be appreciated that there are not many practical instances of operationalisation of CBDC the world over. This calls for utmost precaution, so that we can produce a safe and robust model,” he clarified. He said the unified payments interface has the potential to “unfold into a cheaper and faster alternative to available means for multilateral cross-border payments as well”.

The RBI’s real-time gross settlement system has multi-currency capabilities. With 24x7 operations now, “there is a scope to explore whether its footprint maybe be expanded beyond India”, he said.

“With the RBI at the forefront of nurturing innovation, the day is not far when we will experience cheaper, faster, and safer cross-border remittances,” he said, adding, the home-grown RuPay card network might “make a mark in the global financial landscape”.

India is also on the way to becoming Asia’s top financial technology (fintech) hub, with 87 per cent fintech adoption rate, against the global average of 64 per cent. The fintech market in India was valued at Rs 1.9 trillion in 2019 and is expected to reach Rs 6.2 trillion by 2025 across diversified fields, he added.
The Union government has urged all ministries and departments to hire only certified skilled workers for contract work, underlining that this will not only drive formality in the labour market but also help cut down government expenditure on skill training.

The skills and entrepreneurship ministry has written to all other ministries and departments suggesting that it be done in the next fiscal and said that if it is not possible to do it in one go, it should be done in a staggered manner with the aim of achieving 100% implementation in five years.

If implemented well, the move would not only improve productivity of contract workers but also boost wage premium, the ministry said. It shall also create demand for skill trained person in industries and in the larger labour force, it said in the letter.

A government job being aspirational, even if it is contractual, will eventually attract more people to the skilling ecosystem and encourage them to pay for skill training themselves, the ministry said. Thus, it will help “do away with the present system of government driving skillling through funding” over a period of time.

“As you might be aware, the government has been trying to bring in an elaborate skilling ecosystem, so as to change the labour market structure from a larger unskilled one to a predominantly formerly skilled one. However, as per PLFS (period labour force survey) in 2018-19, only 2.4% of the workforce in the country is formally trained,” the ministry said in its letter.

It underscored that this is because of the practice of not using only certified workers, especially contractors, even for government contracts.

**Is Ease of Doing Business ranking over-rated?**

In recent years, the Ease of Doing Business (EoDB) has gained significant traction in India. Prime Minister Narendra Modi wants India’s national ranking in World Bank’s EoDB Index to be under 50 (it is presently 63). Realising that much of the work has to be done at the State level, NITI Aayog came out with a State-level EoDB ranking as well.

The annual ranking, in 2019, evaluated States on an 80-point check-list of reforms across 12 broad areas. States that top the ranking go to town with it when they conduct roadshows to attract investments.

But the ground reality is that there is hardly any correlation between the ranking and flow of investments. According to Centre for Monitoring Indian Economy (CMIE) data, Tamil Nadu got 15.9 per cent of all investments as of the third quarter of FY21. Its EoDB ranking in 2019 was 14. Maharashatra, which came next with 9.8 per cent share, was ranked 13 and Gujarat with 8.6 per cent was ranked 10 while Karnataka with the same share was 17 in the EoDB pecking order. Andhra Pradesh (AP), which tops the EoDB ranking, got only 6.8 per cent of the investment flow while Uttar Pradesh, ranked second, got 5.3 per cent share and Telangana just 4.3 per cent though ranked third in Ease of Doing Business. India’s most investor-friendly States, per the EoDB ranking, are not top investment draws.

This is true when it comes to the global ranking as well. India, despite its poor World Bank EoDB ranking of 142 in 2014, was the ninth largest recipient of foreign direct investment (FDI). By 2019, it had dramatically improved its ranking to 63 but it still continued to be ninth in the FDI sweepstakes. Global investors came to India because of its attractiveness as a large market with a burgeoning middle-class and a production cost that was far lower than mature economies. Its 142nd rank did not act as a deterrent. Similarly, China tops when it comes to FDI flows taking in $141 billion in 2019 despite being ranked 31 while New Zealand, No 1 in the EoDB ranking, managed FDI of just $5.4 billion, a tenth of what India got.

Investors, it appears, are going where opportunities are and where infrastructure exists to tap those opportunities. The EoDB ranking does not seem to be on top of their minds. If Tamil Nadu has topped the flow of investments this year, it is because it has the necessary building blocks. It has good connectivity: three ports near Chennai alone, more than one international airport and a strong road network. It has the necessary eco-system, especially the vendor base. Auto majors such as Ford, Hyundai, Renault, Nissan, Ashok Leyland and BMW, which have set up their manufacturing facilities in and around Chennai, get almost all their supplies from within a 100-kilometre radius of their plants.
Then there is human resource. Skilled and educated manpower is critical for any investor. If that is not available, no investor would want to invest in a State however high its EoDB ranking. Bulk of the recent investments into AP came to Sri City, an SEZ located on the Tamil Nadu border. Its major attraction is that it uses much of the hard and soft infrastructure from Chennai.

Cost is an important factor, too. Availability of land, electricity and labour at relatively low costs is critical. Overall governance and state of social infrastructure also play a part. Like Tamil Nadu, Maharashtra, Gujarat and Karnataka boast of similar strengths. That explains why investors flock to these States despite their not being ranked in the EoDB Top 10.

Does this mean the EoDB ranking is meaningless? Not really. It does serve a purpose of simplifying the investment process. It helps the States to look inwards and weed out unnecessary laws, inspections and permissions/permits. Any investor, instead of running pillar to post across multiple departments, will welcome a single window system of clearing various proposals. What is causing the dissonance between the ranking and the actual investment flow is the fact that the EoDB ranking focuses on parameters that are much lower in the order for an investor. A top rank without the basic infrastructure — connectivity, strong eco-system, skilled manpower and lower cost of production — is of no use to the investor, domestic or foreign.

The government has been hyping up the EoDB ranking of States in a bid to get more of them on board and compete so that Ease of Doing Business improves in India, overall. Quite understandable. But it is not everything when it comes to attracting investments. States should be encouraged to develop other more important parameters that investors give a larger weightage to when deciding where to invest. Otherwise, the index runs the risk of becoming meaningless over time. When Lakshadweep is ranked higher than Karnataka, you know things are heading that way.

Also, the index would work best for States that are today topping the investment flow but rank lower down the order when it comes to EoDB. Such States should be pushed by the Centre to wholeheartedly embrace the ranking as a better performance, coupled with their existing strengths on the ground, would give them a competitive advantage not just with other competing States but also other countries like Vietnam or Thailand.

So, as things stand today, the EoDB ranking is over-rated. The Centre is giving undue importance to it. In fact, when it came out with the Good Governance Index recently, it chose to use the EoDB ranking as the input to factor in the industrial performance. That meant that Uttar Pradesh got much higher marks than highly industrialised Maharashtra, Gujarat or Tamil Nadu (which topped the overall Governance Ranking).

The EoDB ranking has a role to play in making India a better place to do business in. But it is not ‘be-all and end-all’ when it comes to investment attractiveness. Quicker the Centre and the States realise this, faster will the country become the go-to-destination for investors.

**Climate Action: Getting back on Paris climate track**

*Financial Express | 24 March 2021*

With the formation of the new Apex Committee for Implementation of Paris Agreement (AIPA), India is again strengthening its global leadership role in combating climate change. At the same time, India, along with many economies around the world, is being severely affected by the spread and impact of the Covid-19 pandemic. The good news is: Recovering from the economic shocks of the Covid-19 pandemic, and avoiding severe future shocks triggered through the climate crisis, do not represent conflicting interests but instead a mutually-reinforcing coping strategy. India has tremendous potential for a ‘green recovery’ from the impacts of Covid-19: The decarbonisation of India’s energy sector has a strong role to play in reviving the economy and the health system by boosting employment, fostering rural electrification as foundation of local value creation, and unburdening national health systems by reducing the prevalence of respiratory diseases.

The various co-benefits that accompany climate action link the missions and mandates of several ministries. The new AIPA committee, with members representing 14 ministries, is, therefore, perfectly suited to not only “generate a coordinated response on climate change matters,” but also to maximise and coordinate the multiple social and economic co-benefits that accompany ambitious climate action.

For example, India can significantly boost employment by increasing the share of renewables in the energy mix. Renewables tend to be more labour-intensive than conventional energy technologies; by 2050, more than 3.5 million people could be employed in the renewable energy sector—five times more than the entire Indian fossil-fuel sector (coal, gas, nuclear) employed in 2020. These are the findings of a recent Policy Report for India by The Energy and Resources Institute (TERI) and the Institute for Advanced Sustainability Studies (IASS) Potsdam, Germany.

The report also finds that India can markedly improve the livelihoods of its citizens by reducing ambient air pollution. In a business-as-usual scenario, during 2020, almost 500,000 people will die prematurely due to exposure to particulate matter (PM10), increasing to 830,000 premature deaths during 2050. By moving to a
India’s goods exports likely to be 8-10% lower in 2020-21, says Goyal

Business Line | 23 March 2021

India’s goods exports is likely to be just 8-10 per cent lower in financial year 2020-21 compared to the previous fiscal while services exports, barring hospitality and tourism, too, may show not more than a 10 per cent dip, Commerce & Industry Minister Piyush Goyal has said.

This will translate into goods exports probably crossing $280 billion in 2020-21 compared to $ 314 billion in 2019-20.

Containers’ supply

Given the ramification of the pandem- ic globally, the fact that parts of the world are still in lockdown, containers are in short supply and shipping freight is high, this is a commendable achievement, Goyal said. He added that Indian exporters have honoured their commitments made to the world despite the harsh circumstances.

“... this shows everybody that India is a trusted partner and is ready to pick up the gauntlet in the most severe of circumstances,” he said.

India’s exports in April-February 2020-21 at $256.18 billion are 12.23 per cent lower than exports in the same period last year, per data released by the Commerce Department. Services exports from the country in the April-February 2020-21 period estimated at $183.46 billion is about 7 per cent lower compared to the previous fiscal.

DGFT plans to expand virtual presence

Live Mint | 23 March 2021

The Directorate General of Foreign Trade (DGFT), the nodal agency under the ministry of commerce and industry facilitating export and import, is gradually expanding its online presence across India, replacing physical offices with virtual ones to promote automated paperless processes.

“DGFT will be transformed further into more trade promotion roles so that it acts as a single-window for trade promotion activities. With all processes online, DGFT would move more and more in the direction of data-driven and empirical policy formulations. This would provide for agile trade policy formulations, which are more responsive to changing scenarios of international trade,” the commerce ministry said in a booklet on Electronic Governance and Trade Facilitation Reforms.

“Within a very short time frame, the entire gamut of our approval process will become paperless and go online,” DGFT has been exchanging online data with departments and agencies, such as income tax, customs, ministry of corporate affairs, banks, and the Unique Identification Authority of India, besides special economic zones, to facilitate e-verification. The move provides confidence in the online system and will ensure that the same data will not have to be submitted at multiple places.

DGFT also plans to remove the existing process of queuing up for benefits and approvals wherever possible. “The exporter or importer will not have to wait on DGFT for any business approval. DGFT would be implementing post-issuance audit systems for managing any risks for such a business-friendly, flexible system,” according to the booklet.

As part of its National Trade Facilitation Plan 2020-23, DGFT plans to transform the cross-border trade ecosystem via transparent, risk-based and technology-driven procedures which is supported by state-of-the-art IT infrastructure and data integration. It also aims to bring down the issuance and approval time for export benefit, export promotion schemes, for import and export licences for restricted items.

DGFT to go fully digital, contactless, faceless, paperless: Commerce Secretary

Business Line | 22 March 2021

The Directorate General of Foreign Trade (DGFT) will soon be completely digitised with the rollout of newer IT systems in a phased manner, enabling virtual offices to be created that are faceless, contactless and paperless, Commerce Secretary Anup Wadhawan has said.

The Commerce Secretary also said that the Ministry was preparing a district export plan to boost shipments and the DGFT will assist States/UTs in preparing an annual “Export Ranking Index” of different districts to rank each district on its export competitiveness. This would provide for agile trade policy formulations that are more responsive to changing scenarios of international trade, a paper on electronic governance and trade facilitation reforms put together by the Commerce Department pointed out.

DGFT would be moving to a paradigm where business would lead and not be held back while waiting for specific confirmations. The usual process of queuing up for benefits and approvals would be removed wherever possible. The exporter or importer would not have to wait on DGFT for any business approval. DGFT would be implementing post-issuance audit systems for managing any risks for such a business-friendly, flexible system, the paper said. On the initiative of developing districts as export hubs, Wadhawan said that the idea was being seriously pushed at all fronts since every district has products and services that are being exported, and can be further promoted, along with new products/services. This would increase
production, grow exports, generate economic activity and achieve the goal of Atmanirbhar Bharat, Vocal for local and Make in India.

The DGFT is working with State/UT governments in a phased manner to achieve this objective. “In the initial phase, product/services (GI products, agricultural clusters, toy clusters, etc) with export potential in each district have been identified and institutional mechanism in the form of State Export Promotion Committees at the state level and District Export Promotion Committees (DEPCs) at the district level are being created to provide support for export promotion and to address the bottlenecks for export growth in the districts,” according to an internal paper on ‘districts as export hub’.

State/UTs will also be assisted by DGFT in preparing an annual “Export Ranking Index” of different districts in a particular State/UT to rank each district on its export competitiveness.

The five-year Foreign Trade Policy to be announced shortly is likely to have a focus on developing districts as export hubs.

Containerised import and export trade contracts 6.5%  
*The Sentinel | 20 March 2021*

For Indian trade, 2020 was a year dominated by unprecedented challenges, irregular manufacturing and buying patterns, disrupted trade environments and lack of predictability, Maersk report said. With the COVID-19 pandemic spreading across the world in a staggered manner and in varying proportions, the impact on containerised trade was felt the most in Q2/2020 when exports contracted by 34 per cent.

As societies began to find ways to coexist with COVID-19, trade started recovering in the second half. Exports ramped up sharply in Q3, not only recovering from Q2 slump, but even increased by 14 per cent year on year, however the economic impact on consumers led to substantially lower imports, which dropped by 28 per cent as compared to the same period of 2019. The last quarter of the year showed growth in both imports and exports, thus making solid strides towards returning to normalcy. The demand for Indian exports across multiple categories continued to remain exceptionally strong, much of it driven by consumer demand in North America and Europe.

Steve Felder, Managing Director, Maersk South Asia, said, “Despite unprecedented challenging conditions, stakeholders across supply chains — from manufacturers to consumers, from government bodies to logistics enablers — all stood up cautiously to fight the pandemic. Without the contribution from all the moving parts in the complex machinery of global trade, the path back to normalcy would not have been possible.”

**India’s economy is likely to grow at 12% in 2021, says Moody’s Analytics**  
*Business Stantard | 19 March 2021*

India’s economy is likely to grow by 12 per cent in 2021 following a 7.1 per cent contraction last year, as near-term prospects have turned more favourable, Moody’s Analytics said.

A stronger than expected December quarter GDP growth of 0.4 per cent following a 7.5 per cent contraction in the previous three months has turned India’s near-term prospects more favourable, it said.

Domestic and external demand has been on the mend since the easing of restrictions, which has led to improved manufacturing output in recent months.

Moody’s saw real GDP growth of 12 per cent in the 2021 calendar year, partially due to a low base-year comparison.

“This forecast is equivalent to real GDP, in level terms, growing by 4.4 per cent above pre-COVID-19 levels (as of March 2020) by the end of 2021, or equivalently, by 5.7 per cent above the GDP level in December 2020 by the end of 2021,” it said.

It said monetary and fiscal policy settings will remain conducive to growth.

“We do not expect any additional rate cuts this year below the current 4 per cent at which the benchmark repurchase rate is being maintained,” it said.

It saw some additional fiscal support being mobilised during the second half of the year, depending on the softness in domestic spending.

Direct forms of fiscal support such as income tax cuts, however, are less likely in the current setting.

“We expect the budget for fiscal 2021-2022 to drive the annual fiscal deficit to nearly 7 per cent of GDP,” it said. “It includes additional expenditure on infrastructure development, and the associated benefits in the form of employment creation should accrue over the coming quarters.”

Core inflation is likely to see a more controlled rise in 2021, although food-price or fuel-driven inflation can become a recurring factor, weighing on household disposable income.

Moody’s Analytics said a strengthening second wave of COVID-19 remains the key risk to recovery in 2021.

“The good news is that the resurgence appears to be limited to just a few states, which should increase the chances of containing the spread at an early stage,” it said. “Our baseline forecasts assume that state governments are likely to adopt a targeted approach through limited-duration
Trade has been the key for the rise of economic superpowers like China as well as the tiger economies of South-east Asia. India, on the other hand, has not paid enough attention to exports. As a result, the sector has faced roadblocks like red-tape and a failure to outline a long-term approach, especially in agro and commodity exports.

As of now, India’s share of world trade is a meagre 1.7 per cent. This needs to be raised significantly in the years to come. The pandemic may be one reason for slowing exports, but these had fallen by 1.36 per cent even in 2019-20. A turnaround is definitely possible as exporters’ associations claim higher orders have already come in for processed food, pharmaceuticals, chemicals and electronics. But there has to be recognition within the government that exports are essential for reviving the economy. This has to be in tandem with a long-term vision for exports involving effective bilateral and regional trade pacts and cutting the red tape around export incentives.

‘Take steps to contain further worsening of exports, imports’

A parliamentary panel has suggested to the Department of Commerce to take appropriate measures to check further deterioration in exports and crucial imports for preventing more disruptions in the supply chains. A report by the department-related Parliamentary Standing Committee on Commerce said the committee is perturbed to note the “precipitous” decline in both exports and imports in 2020 which is to the tune of around $50 billion and around $150 billion, respectively. The sluggish growth in exports before the occurrence of the COVID-19 pandemic has further witnessed a downturn in the event of measures taken globally to combat the pandemic, it said.

It has also recommended that a spur in the growth of both exports and imports is required by addressing the supply side constraints and easing the trade procedures. The committee suggested a comprehensive study to identify the major issues/challenges impacting the trade activities in India in the times of the COVID-19 pandemic. “The study would help in identifying the structural infirmities existing in trade and exports that aggravated the deterioration of overall commerce of the country in times of crisis,” it added. It has also recommended that any sudden and abrupt changes in freight rates may be countered by interventions by the government to impose regulations against cartelisation of rates and increasing the container production and shipping services.

“To tide over the paucity of the containers which was aggravated during Covid-19 pandemic, resulting in increased freight charges by shipping companies, the committee recommends that the prospect of manufacturing containers in the country may be explored with the infrastructure available in existing shipyards by providing them facilities/incentives,” it added. To regulate the shipping freight rates in a fair and transparent manner, a national shipping regulatory body may be constituted on the lines of the Insurance Regulatory and Development Authority (IRDA) and Telecom Regulatory Authority of India (TRAI), it added. On the scheme for Remission of Duties and Taxes on Exported Products (RoDTEP), it said the determination of ceiling rates for refunds under the scheme by the G K Pillai committee should be expedited to avoid any delay. The panel has also recommended to further extend the interest subsidy scheme for a year since the abrupt discontinuation would adversely impact the MSME exporters in these difficult times.
India-EU trade talks may see progress at Portugal summit

Live Mint | 17 March 2021

India and the European Union (EU) may announce some progress in negotiations relating to a broad-based trade and investment agreement during the India-EU summit scheduled for 8 May.

Prime Minister Narendra Modi’s meeting with EU leaders in Portugal will be an opportune moment for both sides to announce a possible way forward, said Klas Molin, Sweden’s ambassador to India in a recent interview. “Clearly the EU would like to see a comprehensive free-trade agreement (FTA), including investment protection in it... It’s for the (European) Commission to negotiate but we would like to make progress,” Molin said.

During the India-EU summit in July 2020 a high-level mechanism was set up with Union trade minister Piyush Goyal helming deliberations for India, while the executive vice-president and commissioner for trade Valdis Dombrovskis led the EU delegation. The two sides had last met in February for talks.

“You have a few FTAs and I know there is concern that your trade deficits have increased after you have entered into these free trade agreements. Naturally that needs to be addressed,” he said while adding that parties only enter agreements that are agreeable to them.

India and EU began negotiations on an FTA in 2007 but in 2013, it came to a halt due to differences over tariff levels of wines and spirits, auto components and data security. Since then, there have been efforts to resume discussions but progress has been sluggish.

India considers net zero goal around 2050, a decade before China: Report

Business Standard | 17 March 2021

Top Indian government officials are debating whether to set a goal to zero out its greenhouse gas emissions by mid-century, an ambitious target that would require overhauling its coal-dependent economy.

Officials close to Prime Minister Narendra Modi are working with senior bureaucrats and foreign advisers to consider ways to meet the 2050 deadline, according to people familiar with the matter. A 2047 target is also being considered, they said, to mark the centenary of India’s independence from British rule. The people asked not to be identified because the discussions are private.

India, the world’s third-biggest emitter, has come under pressure to make a net-zero pledge ahead of global climate talks in Glasgow, Scotland, this year. Signatories of the Paris Agreement are expected to boost their commitments to slow global warming, and China -- the biggest polluter and a rival of India -- won international praise for setting a 2060 net-zero target in September.

Once the U.S. adopts a widely anticipated net-zero goal, nine of the 10 largest economies will have made pledges to neutralize emissions. If India does so, too, it would mark a significant step toward the Paris Agreement aspiration of keeping average temperatures from rising more than 1.5°C above the pre-industrial period.

Over the past decades, developing countries have contributed far less greenhouse gases to the atmosphere than nations that industrialized earlier.

As of 2018, India ranked sixth among top historical polluters, after the U.S., China, Russia, Germany, the U.K. and Japan.

Even the Paris accord acknowledges this reality, noting that nations have “common but differentiated responsibilities.” The clause has been used to support arguments that rich countries should cut their emissions faster, allowing poorer countries to use fossil fuels for a bit longer to help them achieve the prosperity which the West has enjoyed for decades.

India’s existing commitments are already relatively ambitious, with non-profit Climate Action Tracker giving it the best rating among large economies. The country wants to expand renewable power to 450 gigawatts by 2030, almost five times existing capacity, and to cut emissions intensity by at least a third from 2005 levels by the end of the decade.

Achieving net-zero emissions would require India to set even more aggressive renewable energy targets, electrify not only its transport sector but most industrial processes, find solutions for hard-to-abate sectors like construction and agriculture, and dramatically boost commitments to reduce consumption of almost every conceivable product.

With a growing population and still-industrializing economy, a net-zero goal for India will be a much bigger lift than for most economies. “The country may not agree to any net-zero targets by 2050 without external financial support,” said BloombergNEF analyst Shantanu Jaiswal

FIEO launches “Container Demand e-module” to Address Containers Un-availability

FIEO | 17 March 2021

To facilitate assessment of container requirement as well its fulfilment,
FIEO has developed a first level marketplace wherein exporters can post their container demands online.

The e-module will help in ground level assessment of containers required in the country while simultaneously enabling the exporting community to negotiate competitive quotes for their requirements. The web link has been made live and exporters across the country have started posting their container requirement for various origin-destination pairs.

The containers requirement uploaded through the e-module are also made visible to Shipping lines/Freight forwarders/others so that they can express their interest to fulfil such demands. This will also help them to better assess the demand of container in the company so as to meet it with repositioning of containers or bringing empties.

The e-module will also address the issue of container shortage reported by exporters, affecting their shipments and pulling down country’s exports and claims made by shipping lines that they are fully equipped to provide containers between 1-3 days at all locations for all destinations except for few destinations in Africa as congestion and berthing of ships at these destinations is taking 8-10 days time.

Trade & Industry has welcomed the move calling it the most timely initiative to address biggest supply side disruptions faced by them in the current times.

**Hit to exports: Exporters fear low RoDTEP refunds**

*Financial Express | 15 March 2021*

As the government prepares to notify refund rates under the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme, exporters fear the rates may turn out to be lower than recommended by a technical committee. Inadequate remission of taxes would result in residual embedded taxes in export products and hit Indian industry’s competitiveness in world markets at a time shipments are witnessing a nascent recovery, they warn.

The government has budgeted only Rs 13,000 crore for the RoDTEP scheme for FY22, which is way below the scheme’s initial estimated annual cost of Rs 50,000 crore. Also, it’s only a third of the Rs 39,097 crore the government approved for exporters in FY20 under the Merchandise Exports from India Scheme (MEIS) for many sectors.

The GK Pillai committee, tasked with recommending the RoDTEP rates, will submit its report to the government on Monday. The scheme is supposed to reimburse various embedded levies (not subsumed by GST) paid on inputs consumed in exports.

Pillai told FE: “RoDTEP is an entirely new scheme meant for remission of taxes embedded in exports. It cannot be compared with the MEIS, which was an incentive scheme, where the benefits could have been extended in an arbitrary manner.”

Asked about the gap between the budget outlay and exporters’ estimate of the refunds required to offset all taxes, Pillai, who was formerly commerce secretary, said ‘low budget outlay’ was unlikely to be a constraint for meaningful implementation of the scheme. “The finance minister has already indicated that enough funds would be made available… Also, much of the amounts (to be reimbursed to exporters) could be in the form of drawbacks (which will get reflected in the net tax income of the government, rather than budgetary outlay),” he noted.

Since exporters themselves have no foolproof data or even complete knowledge of all taxes embedded in the export products, the committee has had a difficult task of determining the RoDTEP rates for as many as 8,000 tariff lines. The exercise has been done in a manner as comprehensive as possible in keeping with principle that taxes are not meant to be exported, Pillai said, but added the scheme could still take 2-3 years to stabilise.

Sections of the exporters’ community, however, fear the government could slash the RoDTEP rates to limit the cost to the exchequer. Any such move will delay a recovery in exports, which have maintained a roller-coaster ride in the wake of the Covid-19 outbreak. The government, they said, should keep the RoDTEP outgo open-ended and not curtail the rates to limit refunds to a certain annual budgetary outlay, if the idea is to keep exports truly zero-rated in sync with global best practices.

The RoDTEP replaced the ‘WTO-incompatible’ MEIS from January 2021 but the refund rates are yet to be declared. Under MEIS, most exporters were getting scrips amounting to 2-5% of the freight-on-board value of the shipment.

Indian exporters are already struggling with volatility in demand from many key markets like the US and EU in the aftermath of the pandemic; the need for a higher-than-usual degree of market diversification is another challenge.

In a letter to finance minister Nirmala Sitharaman on February 25, the Aluminium Association of India said even the MEIS reward rate of 2% for aluminium exports won’t “provide ample cushion to remain competitive against current bearish market condition”.

According to an FIEO estimate, after a Covid-induced contraction this fiscal, India’s exports could rise to $340-350 billion in FY22 as the advanced economies are expected to recover from the shock of the pandemic. However, much depends on how the government implements the RoDTEP and remove other irritants, exporters say. Exports are expected to drop by about 8%, year on year, to $290 billion in FY21.
FTA partners upset over India’s new rules to trace goods’ origin

Live Mint | 15 March 2021

India’s free trade partners have raised concerns at the World Trade Organization (WTO) that its insistence on additional documents to determine the origin of imported goods could raise non-tariff barriers to trade. Countries such as Japan, South Korea, Indonesia, Malaysia and Sri Lanka have sought clarifications on the new rules during India’s quadrennial trade policy review (TPR) at WTO.

Following an amendment to India’s 1962 Customs Act in the FY21 budget, the finance ministry issued a notification under Customs (Administration of Rules of Origin under Trade Agreements) Rules, 2020 (CAROTAR), mandating documents beyond the usual certificate of origin (COO) to claim tariff benefits under free trade agreements (FTA).

The CAROTAR rules were implemented in September to strictly verify the rules of origin under FTAs to guard against misuse of benefits. This has shifted the burden of proof to the importer from the exporter who is often struggling to comply with the new obligations, making the customs clearance process more complex. In cases where origin declared in a COO is doubtful, the customs officer under the CAROTAR is mandated to demand relevant origin details from the importer, before seeking verification from the partner country.

South Korea in its objection called for a review of the CAROTAR regulations. “First, we request that India take a critical look at its new regulations on the rules of origin, namely CAROTAR 2020. Korean firms raise increasing concerns which include: an excessive demand for submission of origin-related information; retrospective applications of law; and arbitrary interpretation of the regulation by the customs authorities,” it said during India’s TPR.

Documents released by the WTO showed that South Korea asked, “Wouldn’t the rules increase the cost of applying preferential tariffs and act as obstacle to the use of trade agreements?”

Indonesia in its submission said it seems that the verification and clearance process has become longer, and is not in line with the spirit of trade liberalization as agreed in the Asean-India FTA. “Besides, the request to provide a business process information for importers would also pose a risk from unauthorized parties such as information leakage issue under the CAROTAR scheme. The stringent requirements will impact the importers, especially those who are legitimately claiming Preferential Tariff Treatment,” it added.

To most questions raised by FTA partners on CAROTAR, India offered a standard response that the matter cannot be raised at WTO and needs to be bilaterally discussed. “The CAROTAR 2020 relates to imports under bilateral FTA, which does not fall within the purview of (Trade Policy Review Mechanism) TPRM [the function of the TPRM is to examine the impact of a member’s trade policies and practices on the multilateral trading system]. However, a comprehensive document containing relevant information on the CAROTAR 2020 is available in public domain,” it said.

Abhishek Jain, tax partner at EY India said when CAROTAR was introduced, the industry initially faced production lags and fund management issues; however, more and more companies have streamlined the process of collating requisite data from their vendors.

Revenue department goes slow on several anti-dumping cases

The Times of India | 11 March 2021

What’s common between Thai radial tyres for buses and lorries and Chinese caustic soda? They are among a whole host of items on which the revenue department has not imposed anti-dumping duty, despite the directorate general of trade remedies (DGTR) recommending action.

The list of such items is only growing by the day, with industry estimates suggesting that there are 25-30% of the products on which the DGTR’s recommendation has been rejected during the last 18-20 months. DGTR is the agency housed in the commerce department. In contrast, during the earlier months, revenue department’s strike rate in acting on DGTR’s recommendations was as high as 90%. Between January 2018 and May 2019, there were 33 investigations by the agency and the number nearly doubled during the next 18 months.

The revenue department’s reluctance to act on a significant chunk of the recommendations is seen as a change of stance and coincides with NITI Aayog’s analysis that a large number of anti-dumping and safeguard actions were against inputs and raw materials, which pushed up costs for local producers, rendering them uncompetitive. Nearly 85% of the goods facing antidumping levies are inputs, NITI Aayog had assessed.

While globally too inputs face the highest number of action, a section in NITI Aayog and revenue department viewed these actions as protectionist, although they are trade defence measures provided by the World Trade Organization (WTO). Since it got the powers under the WTO regime, India is the world’s biggest user of the anti-dumping weapon.

Even now industry believes that the revenue department’s decision against imposing the recommended levies, meant to protect domestic industry against cheap imports, is resulting in imports of around Rs 20,000 crore annually and hurting them. A bulk of these shipments are coming from
China and causing job losses, industry representatives said.

For instance, of the 68 cases investigated by DGTR between June 2019 and December 2020, over half involved imports from China, government sources confirmed. To impose anti-dumping duty, DGTR has to establish injury to the domestic industry due to exports of goods at a price lower than the domestic market. In most cases India’s actions have been aimed at Chinese goods.

Global GDP to surpass pre-pandemic level by mid-2021: OECD

Business Standard | 10 March 2021

The Organisation for Economic Co-operation and Development (OECD) sees global GDP growth at 5.6 per cent this year, an upward revision of more than one percentage point since its projection in December 2020, and 4 per cent in 2022.

World output is expected to reach pre-pandemic levels by mid-2021 but the pace and duration of the recovery will depend on the race between vaccines and emerging variants of the virus, according to the OECD’s latest interim economic outlook.

It said a global economic recovery is in sight but a faster and more effective vaccination rollout across the world is critical while respecting necessary health and social distancing measures.

Activity in many sectors has picked up and adapted to pandemic restrictions over recent months. Vaccine deployment although uneven is finally gaining momentum and government fiscal stimulus -- particularly in the United States -- is likely to provide a major boost to economic activity.

But the pandemic is widening gaps in economic performance between countries and between sectors, increasing social inequalities, particularly affecting vulnerable groups, and risking long-term damage to job prospects and living standards for many people.

Prospects are brighter in the Asian Pacific region where several countries have effectively contained the virus and where industrial activity has regained dynamism. In China, GDP growth is projected to be 7.8 per cent this year, in Japan 2.7 per cent, in South Korea 3.3 per cent and in Australia 4.5 per cent.

The recovery is likely to be more moderate in the emerging market economies of Latin America and Africa amid a resurgence of the virus, slow vaccine deployment and limited scope for additional policy support.

The improved prospects of a global recovery have led to financial market expectations of higher inflation although the OECD’s outlook said underlying price pressures generally remain mild in advanced economies.

In emerging market economies, inflation could rise further. Public debt levels have risen sharply almost everywhere but debt servicing costs in most OECD economies continue to benefit from very low interest rates protecting fiscal sustainability.

The report said the vital support provided by governments to preserve jobs and businesses should remain in place while economies are still fragile and hampered by containment measures.

India’s GDP to grow 11% in FY22, contract 8% in FY21, says CRISIL

Business Standard | 09 March 2021

CRISIL has projected India’s economy to grow by 11 per cent in the next fiscal year against expected contraction of 8 per cent in 2020-21, but GDP will still tread below the pre-Covid trend. It also said next year would be a story of two halves with broad-based recovery to come in the second half.

GDP is likely to touch the pre-pandemic level only by the second quarter of fiscal year 2022, it said. By the end of fiscal 2021-22, GDP will only be about 2 per cent higher than fiscal year 2019-2020 level and 10 per cent below its pre-pandemic trend level.

The rating and research agency said India’s GDP growth will average to
Despite the growth, the Indian economy will suffer a permanent loss of 11 per cent of GDP in real terms over fiscal years 2022-2025,” CRISIL said.

Next financial year, the economy would see convergence of four drivers — people learning to live with the new normal; flattening of the Covid-19 infection curve; roll-out of vaccines, and investment-focused government spending.

**Infra spends, PLI projects to drive growth next fiscal: Report**

*The Economic Times | 09 March 2021*

Projecting next year’s growth to be a story of two halves, with the low base effect lifting the growth engine in the first half and a broad-based recovery in the second, a report said higher infrastructure investments and PLI projects will drive investments and thus GDP. Like others, NSE -1.00 % also expects growth to rebound to 11 per cent in the financial year 2021-22, after “an estimated 8 per cent contraction” this fiscal. The agency sees four positive drivers converging net fiscal -- people learning to live with the new normal after the pandemic, flattening of the coronavirus infection curve, more vaccinations, and investment-focused government spending. “Our medium-term growth now hinges on a kick-start of the investment cycle.

Crisil Managing Director and Chief Executive Officer Ashu Suyash said, “There are early positive signs, powered by government spending through the national infrastructure pipeline, demand-driven capex (capital expenditure), and the production-linked incentive (PLI) scheme.”

But, the pace of growth will be different in the first and second halves as was in the outgoing year, with the first half benefitting optically from the low-base effect, second half seeing a more broad-based pick-up in economic activity, owing to rising commodity prices, large-scale vaccination and a likely stronger global growth, she said. She was also quick to warn that recovery will not be easy, with small businesses and the urban poor still suffering from the impact of the pandemic, and urban markets and services still lagging manufacturing in recovery, even as the rural economy remains more resilient. Trade has also normalised faster than the rest of the economy with both exports and imports scaling back to pre-pandemic levels. Expecting the dynamics of domestic demand and trade to continue to be unfavourable for small businesses, he called for continued policy support for them and for the urban poor, who have borne the brunt of the pandemic. Meanwhile, corporate revenue growth has surprised with a V-shaped recovery in the first nine months of this fiscal by cresting three tailwinds — resilience in software and pharam exports, the commodity upcycle, and price hikes offsetting volume declines in automobiles.

According to Crisil analysis, the potential incremental revenue generation from the PLI scheme is Rs 35-40 lakh crore over the next five years across 14 covered sectors.

**US criticizes India at WTO over increasing restrictions on trade**

*Live Mint | 08 March 2021*

In the first instance of US President Joe Biden’s administration expressing its views on India’s trade policy, Washington criticized New Delhi at the World Trade Organization (WTO) over its growing protectionist measures including tariff hikes, domestic testing requirements on imports, restrictive rules in e-commerce and cross-border data flows.

The US comments come at a time when India is seeking to make a fresh beginning with the US on the trade front after four acrimonious years under the administration of then President Donald Trump. India’s trade minister Piyush Goyal has hinted that both sides may work to put together a new trade package, junking the one under negotiation with the previous administration.

During India’s 7th latest Trade Policy Review (TPR) at the WTO, the US side said it is disappointing to see India’s restrictive trade measures, urging it to significantly reduce tariffs and remove non-tariff barriers on imports. “For example, since India’s last TPR, India’s simple average MFN applied tariff rate has increased from 13.5% in 2015 to 17.6% in 2019, according to the WTO tariff profiles. This will not facilitate India’s integration into global supply chains,” the US said. India’s TPR was released in January, but the minutes of the discussions were released last week.

Brajendra Navnit, India’s ambassador to the WTO countered the US view, holding that it has been undertaking regular tariff liberalization like other WTO members and its tariffs are within its WTO commitments. “India’s average bound MFN rate for all products is about 50%, while the applied rates are much lower. I wish to assure the membership that extensive deliberations and well laid out policy modalities and contours ensure that India’s tariff changes are transparent and rational, and thereby provide a stable policy environment,” he said.

The US said it has also seen a recent increase in measures that could create technical barriers to trade in other sectors, including in information and communication technology products, medical devices, and chemicals.

“India continues to expand the list of products required to undergo conformity assessment only in India. Such testing requirements and mandatory quality control orders that are not in

6.3 per cent between 2022-23 and 2024-2025, which would be higher than the average of 5.8 per cent in the previous three years. The pace of growth would be lower than the 6.7 per cent seen in the decade preceding the pandemic, CRISIL said.
line with international standards continue to limit India’s ability to attract investment,” it said.

Navnit clarified that most of India’s technical regulations rely on international standards and are implemented in close consultation with all stakeholders. “None of these measures are discriminatory or create any unwarranted obligations that could be termed as trade barriers. They are also equally applicable to both domestic and foreign manufacturers,” he said.

The US complained that while India has benefited from access to WTO members’ services markets around the world, India prohibits or significantly limits foreign participation in sectors such as retail, e-commerce, and insurance. “The digital economy is also a powerful force for domestic and global economic growth, but India has implemented digital trade barriers that likely will undermine that growth. The US encourages India to refrain from introducing barriers to digital trade, including restrictions on cross-border data flows and data localization requirements,” it said.

‘I’ve never seen anything like this’: Chaos strikes global shipping

The Indian Express | 07 March 2021

Around the planet, the pandemic has disrupted trade to an extraordinary degree, driving up the cost of shipping goods and adding a fresh challenge to the global economic recovery. The virus has thrown off the choreography of moving cargo from one continent to another.

At the center of the storm is the shipping container, the workhorse of globalization.

Americans stuck in their homes have set off a surge of orders from factories in China, much of it carried across the Pacific in containers — the metal boxes that move goods in towering stacks atop enormous vessels. As households in the United States have filled bedrooms with office furniture and basements with treadmills, the demand for shipping has outstripped the availability of containers in Asia, yielding shortages there just as the boxes pile up at U.S. ports.

Containers that carried millions of masks to countries in Africa and South America early in the pandemic remain there, empty and uncollected, because shipping carriers have concentrated their vessels on their most popular routes — those linking North America and Europe to Asia.

And at ports where ships do call, bearing goods to unload, they are frequently stuck for days in floating traffic jams. The pandemic and its restrictions have limited the availability of dockworkers and truck drivers, causing delays in handling cargo from Southern California to Singapore. Every container that cannot be unloaded in one place is a container that cannot be loaded somewhere else.

“I’ve never seen anything like this,” said Lars Mikael Jensen, head of Global Ocean Network at A.P. Moller-Maersk, the world’s largest shipping company. “All the links in the supply chain are stretched. The ships, the trucks, the warehouses.”

Economies around the globe are absorbing the ripple effects of the disruption on the seas. Higher costs for transporting U.S. grain and soybeans across the Pacific threaten to increase food prices in Asia.

Empty containers are piled up at ports in Australia and New Zealand; containers are scarce at India’s port of Kolkata, forcing makers of electronics parts to truck their wares more than 1,000 miles west to the port of Mumbai, where the supply is better.

The chaos on the seas has proved a bonanza for shipping companies like Maersk, which in February cited record-high freight prices in reporting more than $2.7 billion in pretax earnings in the last three months of 2020.

No one knows how long the upheaval will last, though some experts assume containers will remain scarce through the end of the year, as the factories that make them — nearly all of them in China — scramble to catch up with demand.

Since they were first deployed in 1956, containers have revolutionized trade by allowing goods to be packed into standard size receptacles and hoisted by cranes onto rail cars and trucks — effectively shrinking the globe.

Any hitch means delay and extra cost for someone. The pandemic has disrupted every part of the journey.

“Everybody wants everything,” said Akhil Nair, vice president of global carrier management at SEKO Logistics in Hong Kong. “The infrastructure can’t keep up.”

India needs to home in on trade pacts fast

The Hans India | 06 March 2021

The economy seems to be slowly returning to a path of positive growth, but one sector continues to be a laggard and that is trade. Exports which had crashed about a year ago after the onset of the pandemic are slowly inching back on to a positive track. Imports especially of the non-petroleum segment are raising faster, an indication that domestic industrial output is picking up. The pace of growth for both inward and outward trade, however, is uneven. Exports in January, for instance, rose by 6.16 per cent year on year, while there is now a dip in February by 0.3 per cent. As for imports, these rose by a meagre 2 per cent in January but spurted by 7 per cent in the following month.

Regarding overall exports, the apex export body, the Federation of Indian Export Organisations (FIEO) has esti-
mated there could be a 7.3 per cent decline to $290 billion in 2020-21 from $313.36 billion in the previous fiscal. The fall is obviously due to disruptions caused by Covid. This is both in terms of lower production within the country as well as collapse in demand in traditional markets like the US and Western Europe. At the same time, FIEO is quite upbeat about the current fiscal and expects exports to reach a height of $350 billion, largely based on the higher order bookings for products like processed food, pharma, medical and diagnostic products, chemicals and electronics.

This ambitious projection is only likely to be achieved in case demand revives sufficiently in developed country markets that have been this country’s major trade partners. The dip in exports for February underlines the fact that the path to higher export growth is not going to be an easy one. India’s exports, however, need to be viewed in the context of world trade during 2020 and predictions for growth in 2021.

According to the World Trade Organisation (WTO), global trade was expected to decline by 9.2 per cent in 2020, followed by a 7.2 per cent rise in 2021. The International Monetary Fund (IMF), on the other hand, expected a decline of 10.4 per cent in 2020 and a growth of 8.3 per cent in the volume of global trade. Trade in services is expected to grow more slowly given the curbs on cross-border tourism and business travel.

In other words, even the predictions for the current year do not envisage a return to pre-pandemic trade volumes. It will take another year or so for international trade to return to normal levels. For India, therefore, it is critical to review its trade arrangements at both the multilateral, regional and bilateral levels to study where it can gain the maximum advantage. On the regional front, it has already shied away from joining the giant Regional Comprehensive Economic Partnership (RCEP) on the grounds that it was not in its self-interest. At the bilateral level, it is in the process of negotiating a number of key free trade agreements including with the European Union and the US which have taken an inordinately long time to complete. It has not concluded any new FTA since 2012.

**Inflexion Points: India doing well on reducing emission intensity**

*Financial Express | 05 March 2021*

As an emerging economy, India’s greenhouse gas (GHG) emissions continue to rise. But it has also committed to reducing the emissions-intensity of its GDP by 33-35% over 2005 levels by 2030. It wants economic growth with lower emission. Between 2011 and 2016, while its GDP (current prices) rose at 12% CAGR, emissions increased at 4% CAGR. This is revealed in India’s latest Biennial Update Report (BUR) submitted to the UN Framework Convention on Climate Change.

BURs are the foundation of transparency in the international climate regime, to check how countries are doing against stated goals. Here, India scores a point. Its measurement, reporting and verification has sound foundations comprising dashboards/ portals, apps, data repositories and initiatives by non-governmental institutions. While 63 countries have submitted BUR-1 and 31 have submitted BUR-2, India is one of only 13 to have published BUR-3 (three countries have submitted BUR-4). China and the US, the largest current and historical polluters, respectively, have submitted two reports.

Broadly, emissions can be lowered by reducing energy used or the carbon content of the energy mix. During 2012-16, emissions intensity of GDP reduced by 11% at constant 2011 prices (24% reduction since 2005). By contrast, energy intensity of GDP decreased 7% at constant prices (see graphic). While the share of agriculture emissions fell, energy-use emissions increased to three-fourths of all emissions. Emissions from residential and commercial energy use grew the fastest (12% CAGR, signalling rapid urbanisation), followed by energy industries, manufacturing and transport (CAGRs of 5%, 3% and 4%, respectively).

Thus, bulk of India’s achievement in reducing emissions intensity has been thanks to energy efficiency. Programmes include Ujala scheme for
LED light bulbs (180 million tonnes of CO₂, or mtCO₂, saved between 2014-15 and 2019-20), Perform, Achieve and Trade scheme for industries (31 mtCO₂ saved during 2012-15 and 61 mtCO₂ during 2016-19), efficient street lighting (14.82 mtCO₂ saved between 2015-16 and 2019-20), the Krishi Sinchayee Yojana for agriculture (11.979 mtCO₂ saved during 2017-19), and 20.69 mtCO₂ avoided by March 2017, thanks to supercritical coal power plants (avoiding sub-critical units). Smaller savings have come from fuel efficiency norms for passenger cars, support for EVs, energy efficiency schemes for small industries, efficient water pumping in cities, and building retrofits. Together, these resulted in a net reduction of 23.728 million tonnes of oil equivalent in 2018-19, roughly 6% of total energy consumption that year.

In future, too, energy-use sectors will determine how quickly India’s decarbonisation unfolds. Across energy-intensive industries, cement and non-ferrous metals had the highest reduction in energy intensity (21% and 14%, respectively), but iron and steel increased energy intensity of output. These heavy industries will continue to pose a challenge.

Despite massive deployment, the share of renewables in India’s primary energy mix has increased from 0.1% to merely 2% during 2011-19. Electricity still accounts for only about 26% of India’s final energy consumption and renewables have only a 9% share in power generation. For faster decarbonisation, there must be a double transition: faster electrification of sectors and rapidly rising share of renewables in power generation. The Railways, for instance, will become the first major railway system to be fully electrified and seeks to become a net-zero emitter by 2030. For heavy industry, the recently announced National Hydrogen Mission could be fundamental in switching to renewables-derived hydrogen instead of coal.

Compared to other countries, India does better. According to the International Energy Agency, barring China, India outperforms many major emitters (the US, EU-4, Japan, Russia and Brazil) in reducing energy intensity of GDP during 2011-17 (see graphic). The BUR calculates a carbon budget based on equal per capita allocation. There is no set rule to allocate a carbon budget across the world’s population; each country looks for ways to have a larger share of a shrinking pie. Nevertheless, using such a definition, India’s per capita cumulative emissions during 1990-2017 was only 27% of its fair share of emissions. This contrasts with emissions exceeding the fair share in the US (417%), Germany (242%), Japan (211%), or China (109%). Moreover, rich countries have failed to redeem past commitments to cut emissions. Under the Kyoto Protocol, they were meant to cut these to 5% below 1990 levels during 2008-12. Not all rich countries participated, the US being the most notable case.

By one measure, participating countries did well with 22% reduction. But this largely owed to inflated base year emissions. For 15 economies in transition (former Soviet bloc countries), CEEW analysis finds, emissions fell by 37% on average during 1990-1997. These reductions were not due to any concerted effort to cut emissions but the result of economic collapse. Claiming this as an achievement is akin to saying that fall in emissions during the pandemic is appropriate climate strategy!

Thereafter, the Doha Amendment to the Protocol set out a second commitment period (2013-20). Participating countries were nudged to reduce emission by at least 25-40% below 1990 levels by 2020. This time, several more major emitters (Canada, Japan, Russia) did not participate.

The reality of developed-country emissions becomes stark when the performance of the non-participating countries is considered. Their aggregate emissions increased 106% against the business-as-usual scenario in the first commitment period. In the second period, emissions dropped, but only 12% against BAU. Net of economies in transition, aggregate emissions of developed countries decreased only by 1.6% during 1990-2018—the needle of emissions reduction barely budged.

India is going to meet its emissions intensity targets. But that is not the same as emissions reductions. Its transformation to a prosperous yet low-carbon economy needs big bets on technology for industry, transport and cities. Better performance compared to developed countries positions India as a reliable climate stakeholder. International climate discussions must recognise it as such. However, faced with extreme climate vulnerability, it must continue to show the path forward.

**Plastic industry urges govt to streamline raw material supply as industry struggles with polymer shortage**

*Hindustan Times | 02 March 2021*

Plastics processing sector have urged the government to streamline the supply of raw materials as the industry is grappling with raw material shortage which will lead to the closure of many units across the country.

“The industry is facing acute shortage of polymers, the main raw material for plastics goods production, which has varied application in nation-building including agriculture, healthcare, food and toy sector,” All India Plastics Manufacturers Association (AIPMA) President Chandrakant Turakhia said in a statement.

The plastics processing sector has sought immediate government intervention to ensure raw material supply by Indian petrochemical companies...
Audits and reduce their groundwater extraction. Around 50,000 units in the plastics processing sector, which offer employment to about 50 lakh workers in the country, are already operating below 50 per cent of their capacity, Turakhia said adding that if the crisis prolongs, then thousands of MSME’s will have to close down.

All India Plastic Industry Associations includes All India Plastics Manufacturers Association, Organization of Plastics Processors of India, Plastic Export Promotion Council, Gujarat State Plastics Manufacturers Association, Indian Plastics Federation-Kolkata, Karnataka State Plastics Association, Maharashtra Plastics Manufacturers Association, Kerala Plastics Manufacturers Association, Telangana and Andhra Plastics Manufacturers Association and Canara Plastic Manufacturers and Traders Association.

“The increase in raw material costs and its acute shortage in market is leading to escalation in project costs and is adversely impacting the cost competitiveness of MSMEs,” AIPMA Chairman, Governing Council, Arvind Mehta noted.

The associations urged the government to ask Public Sector Units, including Indian Oil Corporation, GAIL, OPAL, Haldia Petrochemicals, MRPL to streamline supply of raw materials in adequate quantity to the MSME sector at fair prices.

**New groundwater norms to make industries more water-responsible**

*Business Line | 01 March 2021*

Commercial and bulk users of groundwater in the country will have to mandatorily get a no-objection certificate (NOC) and those who draw more than 100 kilolitres per day (KLD) will have to carry out annual water audits and reduce their groundwater extraction by 20 per cent over the next three years.

These groundwater usage guidelines have come into force since September last year, but industries and infrastructure projects will have time till June this year for procuring an NOC as the Central Groundwater Authority (CGWA) has extended the deadline multiple times considering the pandemic situation in the country.

“The notification has come into force since September 26. Half of the establishments, however, are still not aware of the existence of such guidelines. Not just industries, establishments such as residential colonies, hospitals, schools and malls, etc. have to apply for such an NOC. If they do not apply before the deadline, all defaulters have to pay fine, which can run into a few lakhs of rupees,” said a source in the know of development.

Establishments which are drawing water more than 100 KLD will have much more stringent rules in place. They not only have to install tamper-proof flow meters to monitor groundwater extraction, but also do annual water audits and have to commit to reduce groundwater extraction by 20 per cent by three years. It is said that there are around 30 lakh establishments which would have to comply with the new rules.

These stringent guidelines are being put in place following the orders of the National Green Tribunal to regulate groundwater usage in the country. While agriculture, individual households, some military and police establishments and small industries using less quantities of water are exempted from these groundwater regulations, all others that have borewells — existing or new — have to get an NOC from the CGWA or State groundwater bodies.

While a section of industries is aware of the new guidelines and already taking steps to implement them, there are others who do not how to go about doing this. Textile industry comprising small players, for instance, thinks that it may not be in a position to take adequate measures to reduce water consumption without support from the government.

“Taking steps to cut down water usage will definitely increase the cost of the industry, and it will also be very difficult for the MSMEs to invest in the same,” said Sanjay Jain, a Delhi-based textile manufacturer and past Chairman of industry body Confederation of Indian Textiles Industries.

According to Jain, the government should also take steps to enable the industry to follow its notification. “Along with the issuing of the notification, it is important that the government creates a panel of vendors and generates ideas for implementing measures in a reasonable way. There could be a subsidy for those being responsive by reducing the equipment cost,” Jain suggested.

An expert committee set up by the CGWA is currently finalising the specifications for flowmeters. “There is a need to have battery-operated flowmeter with telemetry for tamper-proof metering of groundwater usage. A meter that works on electricity can be easily manipulated,” said Vinay Chatraju, Co-founder and Business head of Kritsnam Technologies, a startup incubated at the Indian Institute of Technology-Kanpur, which has developed sophisticated tamper-proof flowmeters that cost much lower than those currently available in the market.

**CHEMICALS AND PETROCHEMICALS**

Chemical sector to grow at 1.2x-1.3x of GDP multiplier, says India Ratings and Research

*Pioneer | 22 March 2021*

The chemical sector is expected to
grow at 1.2x-1.3x of the GDP multiplier in FY22, India Ratings and Research (Ind-Ra) said.

Accordingly, the ratings agency has assigned the sector an improving outlook for FY22. It expects favourable market conditions across the broad chemical subsectors, along with a healthy rebound in end-user industries, following the Covid-19 led business disruptions in 1HFY21.

“Ind-Ra expects GDP growth to rebound to 10.4 per cent in FY22, and the chemical sector to grow at 1.2x-1.3x of the GDP multiplier. Chemical sector participants are impacted by a varying degree of end-market demand pressure,” the agency said in a report.

**India Chem 2021: India to set emerge as a hub of chemical and petrochemical industry globally**

*Indian Chemical News | 19 March 2021*

Union Minister of Chemicals and Fertilizers D.V. Sadananda Gowda inaugurated the 11th Edition of India Chem 2021 in New Delhi with the theme “India: Global Manufacturing hub for chemicals and petrochemicals”. He stated that the Indian chemicals and petrochemicals industry is growing to new heights, and informed that an investment of Rs 8 lakh crore is anticipated in the sector by 2025.

During his speech, Sadananda Gowda also appreciated that the Department of Chemicals and Fertilizers and Federation of Indian Chambers of Commerce and Industry (FICCI) for organizing the event. He added that the growth in the chemical and petrochemicals industry is also contributing to the Prime Minister’s vision of Atmanirbhar Bharat. He informed that Government has launched 12 PLI schemes for different sectors which will directly or indirectly benefit the chemicals sector. He also stated that the Government is prioritizing the sector and in the Budget 2021-21, the import duty on Naphtha has been reduced from 4.0% to 2.5%.

India is emerging as one of the fastest-growing economies in the world, stated Yogendra Tripathi, Secretary, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers. “The vision of India Chem-2021 is to seize the opportunity to establish India as a leading chemicals and petrochemicals hub, he added. He highlighted the various factors such as the development of industrial corridors, commitments in National Infrastructure Pipeline, competitive wages rates give India a competitive advantage.”

Tripathi further highlighted the fact that there is ample opportunity across the whole value chain, specifically PVC, methanol, and polycarbonate. “There is a potential US$ 17.1 billion opportunities in the petrochemicals sector. Under consideration is US$ 87.4 billion. It is the right time to invest in India. The state can play an important role in providing investments and creating an ecosystem besides providing incubation.”

Sharing the details of the event, Samir Kumar Biswas, Additional Secretary, Department of Chemicals and Petrochemicals, mentioned that the 11th edition of IndiaChem2021 in its physical as well as digital format witnessed 24 participating countries and the presence of 100 plus exhibitors, 500 plus delegates, and 600 visitors.

During the course of the event, a global CEOs roundtable also took place wherein various investment opportunities available in India were discussed.

**India Chem 2021: A clear policy vital for growth of specialty chemicals**

*Indian Chemical News | 19 March 2021*

The top chemical industry leaders speaking at ‘India Chem 2021’ called for creating opportunities to attract investments in various sub-segments of specialty chemicals, thereby reducing the dependence on imports. The session focused on specialty chemicals witnessed discussions on the various key issues including investment facilitation and incentivization, the expedition of clearance and approvals, implementation of mandatory standards, and development of downstream industries.

The 11th Biennial International Exhibition & Conference is being jointly organized by the Department of Chemicals and Petrochemicals, and the Federation of Indian Chambers of Commerce and Industry (FICCI) from March 17-19, 2021 at New Delhi.

Vinati Saraf, MD & CEO, Vinati Organics believes that public-private partnerships are necessary for pushing the R&D. “The onus is on the government to help in building collaborations. There is no dearth of scientific talent but it needs to be connected to others in the ecosystem. The CSR in R&D must be mandatory.” Saraf terms the scalability as a challenge due to lack of special zones and other infrastructure besides lack of investment and too much risk in terms of capital that acts as hampers of growth.

From market to consumers, we have believed in consumer satisfaction. Our strong process development has come from the commitment to creating applications for customers, says U Shekhar, Chairman, Galaxy Surfactants whose company has applied for 92 patents and has been already granted 72. Shekhar believes that much remains to be done in terms of non-hazardous processes that are eco-friendly. “The green process chemistry requires molecules that establish benefits for consumers. We require consistency in policy and trust with the government. The decision making at the ground level is very important. On the industry’s part, we
need zero discharge, ethical business practices which I am sure is happening over the period of time.”

As per Siddharth Sikchi, Director, Clean Science & Technology, high-interest rates of fund providers and unclear government policies are a big hurdle. “We started the company in 2007 and faced common issues as experienced by the industry. However, we kept going and overcome issues. We have developed processes globally. We have a strong catalysis team for the right chemical transformation. For us, R&D is very important. We focus more on chemistry and supply to all segments and, therefore, aren’t restricted to any one particular area. We work on building fewer plants that are of global standards rather than multiple ones.”

Sharing his perspective on the ingredients of success, Rajen Mariwala, MD, Eternis Fine Chemicals says, “We are focused on building scale. Having started with a single product 25 years ago, we have over the last ten years focus on R&D and de-bottlenecked our plants. We offer fewer products but with quality. We spent a lot of time with our customers. Acquiring a market platform was helpful to us.”

Shohab Rais, COO, Indian Chemical Business, Tata Chemicals says “Apart from scale and reliability of supply chain and operations, there will be a continuous requirement of alternatives at various level of operations. For the scale-up, the right technologies and skills will have to be acquired. In case of R&D, continuous innovation to develop new molecules is the only way forward.”

Calling for the diversification of the workforce to create true multi-nationals, Adnan Ahmed, Head of Country Cluster, Clariant points out that the workforce in Indian MNCs like his are mostly natives and hardly any expats. “We need to increase our horizons in terms of knowledge sharing and talent acquisition.” Ahmed added, “We are moving in the right direction. We need a clear industrial policy and the Department of Chemicals and Pharmaceuticals has come up with a good one but it needs to be implemented soon. We need to work with the government and help in building sustainability.”

Calling R&D a must for the next phase of growth, Deepak C Mehta, Chairman, FICCI National Chemical Committee and CMD, Deepak Nitrite stated that the value chains have to seen growing in the same way. “More opportunities of the consortium to co-produce and share the expertise exist and it needs to be ensured that the intermediate is competitively available. Upstream, middle stream and downstream is addressed. We need chemical clusters where byproducts of one company are used by the others.”

Optimistic about the future growth of the chemical industry and especially specialty chemicals, Yogendra Tripathi, Secretary, Department of Chemicals & Petrochemicals, opined, “The focused attention by the government including PLI schemes will certainly show results. 11 to 12 percent growth expected in the specialty chemical sector. In 3-4 years we will reach 15% per annum. Over a period of time, infrastructure has improved and some of the things have been sorted out. We will work together to address the issues and difficulties. I can only assure you that we can help in bridging pain points.”

Tripathi also outlined the need for a homegrown model of research and scaling up. “We need a mechanism of creating a molecule, customizing and converting it into the customer-driven product. In the next decade, at least 4-5 products must be ready. We have no dearth of talent and expertise, rather industry players with knowledge who I am sure will make good use of existing opportunities,” he concluded.

India Chem 2021: ICN launches its annual compendium, ‘Chemical Industry Outlook’

Indian Chemical News (ICN) has launched an annual handbook called “Chemical Industry Outlook”, a compendium in exploring new horizons of growth to give industry CXOs 360 degree view about global trends, India trends, market sizing with respect to different segments, and future industry outlook.

The annual compendium, ‘Chemical Industry Outlook 2021’ was released at India Chem 2021, the largest event of the chemicals and petrochemicals industry to be held from March 17-19, 2021. ICN is the official media partner for the 11th Biennial International Exhibition & Conference being jointly organized by the Department of Chemicals and Petrochemicals, Government of India and Federation of Indian Chambers of Commerce and Industry (FICCI) in a hybrid model where the conference is being physically conducted at Hotel Taj Palace, New Delhi and exhibition conducted on FICCI Bike Platform virtually.

The ICN team presented the compendium to the Union Minister of Chemicals and Fertilizers D.V. Sadananda Gowda; Union Minister of State for Chemical and Fertilizers, Mansukh L Mandaviya; and Secretary, Department of Chemicals & Petrochemicals, Yogendra Tripathi, and a host of other dignitaries including industry leaders and bureaucrats among others.

The “Chemical Industry Outlook 2021” covers four verticals - Chemicals, Petrochemicals, Pharmaceuticals, and Digitalization. Each vertical has three sub segments – Overview, Column, and Interview. The overview provides key recommendations of each sector. The compendium also
has guest column from senior industry experts from diverse background to make it more complete in nature. Guest column has been taken from select industry leaders in the industry, academia, industry associations, R&D Organizations and others to give it a 360 degree view. The CXO interviews give an update on what is happening in respective industries and how these industries are gearing up for India opportunity.

The compendium that was well received by the delegates also has a section called InFocus which focuses on emerging trends in the chemicals, petrochemicals, and pharmaceuticals. The topics covered are: Green Chemistry, Sustainability, Responsible Care, Start-Ups, Hydrogen, Electric Vehicle (EV) and Gas.

The compendium focuses on innovation, better supply chain management, increasing domestic demand, enhancing global competitiveness, green technologies, leveraging exports, disaster management, and others. All these topics will make India globally competitive in the long run if we proceed in a collaborative manner with the right intent. It aims to spread awareness on the trends in India and globally help companies position themselves appropriately in the global market.

For reaching US $300 billion number, the Indian chemical industry needs to accelerate its production capacity, increase its focus and budget on R&D, needs financial support from the government, faster environment clearances from the ministry and collaborate with foreign counterparts. The close bonding with the government, research & academic institutions, and chemical industries will also act as a catalyst and provide momentum to the India growth story.

Olin reduces chlor alkali production capacity by 50% permanently at Alabama facility

Indian Chemical News | 17 March 2021

Olin Corporation, leading manufacturer and distributor of chemical products, announced that it plans to permanently shut down approximately 50% of its diaphragm-grade chlor alkali capacity (approximately 200,000 tons) at its McIntosh, Alabama facility.

The closure is expected to be completed by March 31, 2021. This action is expected to be cash flow accretive. Olin's first quarter 2021 results are forecast to include approximately $5 million of restructuring charges associated with this plan.

This is yet another step in Olin's efforts to right-size our asset base and achieve reinvestment economics across our complete Electrochemical Unit portfolio, remarked Scott Sutton, Olin President and Chief Executive Officer.

PVC pipe price hike is because of persistent supply-side issue: ICICI Securities

CNBC | 16 March 2021

PVC prices have increased in Q4 so today the hike came into effect and increase by Rs 7 per kg or it is a 5.50 percent hike and it is a fourth price hike in the fourth quarter.

So far the in Q4 the price hike for PVC has been around 16.50 percent and the prices are now at Rs 136 per kg.

According to ICICI Securities, since this hike is largely because of the persistent supply-side issue, this time around it will be negative for the unorganised sector because they will not be able to source it at a cheaper price.

The brokerage said there will be working capital challenges but even the organised players might see some difficulty this time around to pass on these price hikes.

Pandemic prompted chemical sector to accelerate digital adoption: Experts

Indian Chemical News | 12 March 2021

Leading experts discussed how digital technologies can help build resilience into chemical business and how better prepared are companies for future disruptions at the recent E-Conference, ‘Digital lessons from 2020: Preparing for the new normal’ held by Indian Chemical News. The session was moderated by Pravin Prashant, Editor, ICN.

Outlining how things have changed during the pandemic, Sanath Kumar, Executive President and Whole Time Director, Gujarat Fluorochemicals says, “It took some time to figure out what exactly should we do digitally. Understanding customer needs, information sharing, and digital improvements at the factory level are a part of this learning besides shift operations, transport of people from one place to another. In fact, it took people decades to understand the benefits and added advantage of running the operations remotely. There used to be questioned, how safe it is? However, we moved gradually from pneumatic to digital loop systems and now the wireless. We have taken it forward in many phases. ”

Kumar feels there is a big opportunity for services provides. “There is a lot of potential in the digital and a lot of work remains to be done. The factors such as safety aspects, acquisition of knowledge and its implementation will shape this sector. The onus is on both, service providers and factory owners. There are two areas where
the chemical can get benefited. One is data analytics and another is data trends. The question is how well we are able to maintain and build confidence in the most economical way. We can make it safer together and develop techniques. The profitability can be definitely achieved if we work smartly. We are at 20-30% of the benchmark and are moving forward. I would like GFL to build a better-integrated system to ensure safety.”

According to Partha Sur, GM – Technology, Haldia Petrochemical, «At HPL, we were already using the digital tools in few operations. We are good at SAP in the transactions besides in the areas such as internet-based MOC, plant change, accident, the digital platforms were already there and we did it without hindrance. During pre-covid, we were moving towards rationalization and shared services. For the centralized services, technologies were assimilated and scaled up in 2016 and we did integration in 2017. Onwards we understood that we are looking at data. We remapped the entire manufacturing and did centralization of data where we connected all the manufacturing units. It took one year to assimilate and understand as it was a process in itself. Then came the pandemic, the challenge was to maintain a safe distance. We promptly moved from fingerprint to face recognition. The entire infrastructural part was addressed.”

Sur emphasizes building the right kind of infrastructure and the need for the mapping of the entire process including mapping of assets, monitoring, control valve followed by the integration. «Predictive analytics will help us in simulation tools when integrated with real-time data. Converging reality with the first principle model. From the business level, there is one priority but at the operational level, safety is a topmost priority since a lot of chemical engineering is required. AI and big data can provide can give some inputs to prepare better and improvements. We are moving towards molecule level optimization.”

The covid-19 was a jolt to the industry, says Harendra Pandya, Joint President, Aarti Industries opines, «With respect to sustainability, we needed a better outlook. Therefore, we are here to work as partners. The combined knowledge of stakeholders and service providers will help the industry in expanding its base. The new-age digital tools such as Machine Learning can unlock huge potential.”

Calling for the creation of an index in the chemical industry to get factual data from the ground level, Pandya stresses, «We need to develop a chemical index to provide key information including how many people are in a square kilometre of a chemical factory. At least 25 square metre space is ideal for worker safety. That is vital for growth.”

Sunil Patil, Director – APJ Solution Consulting, AspenTech says, «For most of us, digital technologies have enabled critical capabilities during this turbulent time. The day starts with smartphone screens and all along most of us are using digital capabilities to run projects, operate plants and continue product development. I believe AI is the future for the industry, also called the Industrial AI hybrid model. The aim is to bring in safety, and sustainability. At AspenTech, we invest heavily in R&D and already have 100 patents in our kitty. We have a skilled team that develops hybrid simulation technologies. At the same time, we keep acquiring the newer technologies for 3D modelling, and simulations and further enhance our rich domain expertise.”

**Tackling hazardous chemical accidents requires a holistic approach, say experts**

*Indian Chemical News | 04 March 2021*

To ensure safety from industrial hazards, attention is required not only towards the in-house prevention but also beefing up preparations outside the chemical plants. This came to the fore during discussions at the webinar, ‘Are we learning from industrial accidents?’ to mark National Safety Day by FICCI.

Outlining the risk considerations in decision making across the supply chain, Janardhanan Ramanujalu, Co-Chairman, FICCI Petrochemicals Committee and Vice President & Regional Head – SABIC stresses the need to put all the safety aspects together. “Companies must not worry about the cost factor during preparation for hazards but see it as a future investment. We can’t afford to only focus on manufacturing and say we are done with our responsibility. There is logistics, storage, and transportation. We see a lot of chemicals getting shipped by road in tankers and from abroad in ships. The accidents could be happening anywhere and then the contamination of chemical is a major issue. In such a scenario, you can’t rely on supplier and transporter as they might not be specialized in dealing with such a situation. Besides the parameters such as temperature and humidity, storage is a science in itself and needs preventive actions. Educating drivers about the chemicals and mandating them to call for any help if needed is important.”

As per Joseph Oommen, Director, DuPont Sustainable Solutions India, it is not a person who simply dies due to an industrial accident but a lot many other lives too are affected. “Since the soil and air are getting contaminated due to man-made chemicals, companies around the world are diversifying their supply chain. There is regulatory compliance and we have to ensure safe operations. To prevent accidents, process safety needs to be taken seriously and process hazard measures have to be in place.”

Speaking on the learning from the styrene vapour release accident at LG Polymers India, Dr. P.S.G. Krishnan, Principal Director, CIPET Bengaluru
said, “On 7th May 2020 in Vizag, the accidental release of styrene from a storage tank killed 12 people and affected 800 people. Even animals were affected as well. It was a first of kind incident amid lockdown and thus an unprecedented scenario. Although a mock drill was carried out earlier, it was only for fire and styrene release was never thought of. People living around weren’t prepared as they had no idea about such a situation.” As per Krishnan, an average of 1000 people in India get affected due to accidents every year. “Comparatively in Japan and US too have the cases right from 1994 but fatalities are lesser than in India because of the presence of better system in place.”

VV Surya Rau, Head - Safety, Reliance Industries on what more to do while learning from incident says, “Culture of safety determines the performance. People must know what is appropriate and inappropriate behaviour in paper and it should get displayed prominently. The consequences must be made clear on regulatory procedures. Most of the accidents are man-made. 80% are man-made and even only 4% are by act of God. The right behaviour, community awareness and pandemic wisdom are the keys to prepare well for any such accidents.”

Sharing his thoughts on the business impact of safety incidents, Rupark Sar SWAT, CEO, India Glycols says, “There is a cascading effect. About 31 crore people are affected by non-fatal accidents. There are huge costs, be it the Bhopal incident or Chernobyl, it cost billions of dollars to companies. The business impact of such incidents is quite huge and thus companies need to have the right kind of processes, leadership, and employees. Few a times people are concerned more about business and delay while setting up a new plant, forgetting the criticality of safety aspect. Culture of safety is like a garden that requires training, perseverance. We may have as many as ISO certificates but the actual test of the safety depends on the efforts at the ground level. The culture of short cut must be shelved.”

Preventive measures are high on our agenda than remedial measures, says Kanishk Kant Srivastava, Director (Chemical-I), Department of Chemicals & Petrochemicals who stresses the need for ensuring compliance of safety protocols. He assures that his department is working towards improving the system and is confident that the industry too will take steps to minimize such incidents.

**U.S. Chemical Manufacturing rose in January**

*The Times Hub | 02 March 2022*

Chemical manufacturing continued to increase in chlor-alkali, fertilizers, natural chemical compounds, artificial rubber, plastic resins, manufactured fibers, industrial gases, and artificial dyes and pigments, measured on a 3MMA foundation. Manufacturing eased for coatings, adhesives, crop safety, client merchandise, and different specialty chemical compounds.

As practically all manufactured items are produced utilizing chemistry in some kind, manufacturing exercise is a vital indicator for chemical demand. The manufacturing restoration continued for a sixth consecutive month in January, with total manufacturing facility exercise up by 1.0% (3MMA). The development in manufacturing elevated in lots of key chemistry end-use industries, with the strongest good points seen in meals and drinks, home equipment, motor automobiles, aerospace, development provides, fabricated metallic merchandise, iron and metal merchandise, petroleum refining, oil and fuel extraction, plastic merchandise, structural panels, textile merchandise, and furnishings.

In contrast with January 2020, U.S. chemical manufacturing remained off by 0.6% on a year-over-year (Y/Y) foundation, the 20th straight month of Y/Y declines, however confirmed continued enchancment in contrast with earlier within the yr. Chemical manufacturing remained decrease than a yr in the past in all areas besides within the Gulf Coast area, which was up 2.5% Y/Y.

The chemistry business is among the largest industries in the US, a $565 billion enterprise. The manufacturing sector is the biggest client of chemical merchandise, and 96% of manufactured items are touched by chemistry.
The U.S. CPRI was developed to trace chemical manufacturing exercise in seven areas of the US. The U.S. CPRI is predicated on info from the Federal Reserve, and as such, consists of month-to-month revisions as printed by the Federal Reserve. To clean month-to-month fluctuations, the U.S. CPRI is measured utilizing a three-month shifting common. Thus, the studying in January displays manufacturing throughout November, December, and January.

**MEMBERS NEWS**

**Tamilnadu Petroproducts to invest Rs 435 crore to expand production units**

*Financial Express | 24 March 2021*

Chennai-based Tamilnadu Petroproducts (TPL), the petrochemicals arm of AM International Group, is expanding its production divisions at an investment of Rs 435 crore. These include capacity augmentation of Linear Alkyl Benzene (LAB) division, revamp of caustic soda facilities and setting up a Propylene recovery unit (PRU). TPL has its plant at Manali in Tamil Nadu that houses different divisions.

The LAB capacity would be increased from 1.2 lakh TPA to 1.45 lakh TPA at an estimated cost of Rs 240 crore. The project would be commissioned in about 24 months. The company will invest Rs 165 crore to modernise the caustic soda and chlorine unit by replacing the mono-polar membrane technology with a more advanced bipolar membrane technology. On completion in about 18 months after required approvals, the production capacity for caustic soda unit will go up to 250 tonne per day from the current 150 tonne. At the present price levels, additional revenue of about 70% is expected from the project, with improved or higher value addition, the company said in a statement.

The PRU, first of its kind in India by a private sector player in the non-refining sector, would involve an outlay of about Rs 30 crore. This will be set up in the same PO manufacturing complex, saving significant trucking and energy costs. Propylene, a bulk chemical intermediate, is the raw material for Propylene Oxide and is derived from LPG.

TPL is in advanced talks with various domestic and international vendors for LPG for the project. The project, technology of which has been developed in-house by the company’s R&D team of engineers and environmental scientists, will be implemented in 12-18 months.

Ashwin Muthiah, vice-chairman, TPL & founding chairman, AM International, said, “TPL will be the first Indian non-refining company in the private sector to build a propylene recovery unit plant. It shows our commitment to bring manufacturing efficiencies by continuous upgrading and introducing state-of-art technology solutions. It is in line with our group philosophy to maximise margins by introducing process efficiency and value additions.”

In adherence to the group’s philosophy of optimum leverage, a significant part of the expansion will be funded via internal resources and the remaining through other sources. TPL is a three-decade old LAB manufacturer and has facilities for production of heavy chemicals and Propylene Oxide also.

Ravi, Group CEO- petrochemicals, AM International, said, “The projects would make the country self-reliant in this segment by meeting the domestic demand.”

**Rajju Shroff and CD Mayee gets Lifetime Achievement Award at FICCI Chemicals & Petrochemicals Awards 2021**

*Indian Chemical News | 18 March 2021*

Rajju Shroff, CMD, UPL Ltd. and CD Mayee, President, South Asia Biotechnology Centre have received Lifetime Achievement Award at FICCI Chemicals & Petrochemicals Awards 2021 during ‘India Chem 2021 - 11th Biennial International Exhibition and Conference’, organized by FICCI, jointly with the Department of Chemicals & Petrochemicals, Government of India.
Rajju Shroff was felicitated for his contributions in the agrochemicals industry and his efforts in making India amongst the Top 5 producers globally whereas CD Mayee was felicitated for his contributions to research & development in the field of agriculture technology.

**Chemicals major Sanmar plans to raise equity to repay restructure debt**

*Business Standard | 08 March 2021*

Fairfax-backed Sanmar Chemicals Group (Sanmar) is planning to raise equity to repay its restructure debt. The move would help the company to make investments in projects that exploit growth and cost-saving opportunities.

Founded in the early 60s, Sanmar’s business interests span across chemicals, engineering technology and shipping, with operations in India, the Middle East and the Americas.

India-born Canadian billionaire-owned Fairfax India’s equity ownership is around 43 per cent in the company. Fairfax India’s investment is in the chemicals business, which constitutes more than 70 per cent of the group’s operations and is housed within three operating companies, two in India – Chemplast Sanmar Limited (CSL) and Chemplast Cuddalore Vinyls Limited (CCVL) – and one in Egypt – TCI Sanmar (TCI).

Fairfax Chairman Prem Watsa said that in 2020 that TCI had a better year financially, but pandemic-related issues slowed its progress to the full and efficient operation of its plant. EBITDA was nearly at breakeven versus a loss of $74.1 million in 2019, and pre-tax loss improved from $215.2 million to $106.6 million. Curfews in Egypt has resulted in limited availability of workers, reduced demand in target markets, supply chain disruptions and travel restrictions preventing expert resources from visiting the plant to make planned adjustments to ramp up to 100 per cent capacity utilisation, all due to the pandemic, resulted in capacity utilisation reaching only 80 per cent.

“However, the biggest impact of the pandemic on all the Sanmar companies has been the squeeze on their liquidity position. In order to rectify this and to reduce the overall debt of the company, Sanmar is actively pursuing opportunities to raise additional equity capital to repay and restructure debt. Only after this is accomplished, Sanmar will make investments in projects that exploit excellent growth and cost-saving opportunities,” said Watsa.

Despite the pandemic disruptions, based on provisional IFRS estimates, for the year ended December 31, 2020, Sanmar’s revenue was flat at around $700 million, but EBITDA increased from a loss of $8.6 million in 2019 to a profit of $123.7 million in 2020. Net loss in 2020 was reduced to $143.2 million from a loss of $187.4 million in 2019.

N Sankar, the chairman of the Sanmar Group, and his son Vijay Sankar, the deputy chairman, have grown the group into a large private conglomerate with sales of around $1 billion and an asset base of around $2 billion, said Watsa, CSL is the largest manufacturer of paste polyvinyl chloride (PVC) in India. Sanmar’s flagship Indian chemical business, also manufactures chloromethanes, ethylene dichloride (EDC) and vinyl chloride monomer (VCM) in Tamil Nadu. Sanmar Speciality Chemicals, which manufactures custom made chemicals for customers in the agro-chemical, pharmaceutical and fine chemical industries, is also a part of this division. CCVL is the second largest suspension PVC player in India. TCI, Egypt, after its expansion was completed in 2018, became a balanced integrated manufacturing facility and is the MENA region’s largest manufacturer of suspension PVC and caustic soda.

In 2016, Fairfax India lent Sanmar the rupee equivalent of $300 million by way of non-convertible debentures (NCDs) for a period of seven years. The NCDs provided for 3 per cent payment-in-kind interest and a redemption premium such that the annual yield of the NCDs would be 13 per cent. In addition, for $1 million Fairfax India received a 30 per cent equity interest in Sanmar’s entire chemicals business.

In 2019 Sanmar settled Fairfax $300 million of 13 percent bonds for $433.9 million, of which we invested $198 million in additional common shares of Sanmar based on an effective equity valuation of approximately $1 billion for the whole company, thereby increasing Fairfax equity ownership interest from 30 per cent to 43 per cent. This transaction returned approximately 76 per cent of the capital Fairfax India originally invested while increasing our ownership of Sanmar.
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 2nd March, 2021

S.O. 980(E).—WHEREAS, by notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O.1533 (E), dated the 14th September, 2006 issued under sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986, read with clause (d) of the sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 (hereinafter referred to as the EIA Notification), the Central Government directed that on and from the date of its publication, the new projects or activities or the expansion or modernisation of existing projects or activities listed in the Schedule to the EIA notification entailing capacity addition with change in process or technology and/or product mix shall be undertaken in any part of India only after obtaining prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified therein;

Provided that such exemption shall be applicable only consequent to -

A. the project proponent furnishing information regarding such changes along with no increase in pollution load certificate, from the environmental auditor or reputed institutions empanelled by the State Pollution Control Board or Union Territory Pollution Control Committee or Central Pollution Control Board or Ministry of Environment, Forest and Climate Change, as per the procedure laid down in Appendix-XIII on PARIVESH portal as well as to the concerned State Pollution Control Board or Union Territory Pollution Control Committee.

Note: If on verification, the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, after giving the project proponent the opportunity of being heard, holds that such change or expansion or modernisation results in increase in pollution load, the exemption claimed under this clause shall not be valid and it shall be deemed that the project proponent was always liable to obtain prior environmental clearance, in respect of such change or expansion or modernisation, as per the clause (a) and the provisions of Environment (Protection) Act, 1986 shall apply accordingly;
B. installation and implementation of Online Continuous Monitoring System (OCMS) with at least 95% uptime, connected to the servers of the Central Pollution Control Board and State Pollution Control Board or Union Territory Pollution Control Committee concerned to report the quantity and quality of emission and discharges.

Provided further that the provisions of this clause shall not be applicable if such change or increase results in change in category of project or activity from Category- ‘B2’ to either Category- ‘A’ or Category- ‘B1’.

(c) Any change in configuration of the plant or activity from the environmental clearance conditions during execution of the project after detailed engineering, in respect of projects or activities, falling in any item of the Schedule to this notification, shall not require prior environmental clearance. If there is no change in production capacity and there is no increase in pollution load subject to furnishing particulars of such changes on PARIWESH portal in the format as may be provided by the Government from time to time, before implementing such changes whereupon a system generated acknowledgement will be issued by the concerned Regulatory Authority.

Explanation:- For the purpose of this sub-paragraph, “Pollution load” shall be determined on the basis of multiplication of quantity and concentration of different components and parameters (as provided or referred in the Prior Environment Clearance or the Environment Impact Assessment Report (EIA) and Environment Management Plan based on which such Prior Environment Clearance has been granted), in respect of emissions, effluents or discharge, solid, industrial hazardous waste and such other parameters notified under the Environment (Protection) Rules, 1986 as amended from time to time.’

3. in the Schedule, against item 5(g), after the entry in column (5), the following entry shall be inserted, namely:-

“Note: Expansion of sugar manufacturing units or distilleries, having Prior Environment Clearance and for production of ethanol, to be used as fuel for blending only as certified by the competent authority, shall be appraised as Category ‘B2’ projects.”;

4. for Appendix-XIII, the following Appendix shall be substituted, namely:-

“Appendix-XIII

Verification of No Increase in Pollution Load

The instant amendment in EIA Notification exempts the requirement of Prior Environmental Clearance for any increase in production capacity in respect of processing or production or manufacturing sectors (listed against item numbers 2, 3, 4 and 5 in the Schedule to this notification) with or without any change in (i) raw material-mix or (ii) product-mix or (iii) quantities within products or (iv) number of products including new products falling in the same category or (iv) configuration of the plant or process or operations in existing area or in areas contiguous to the existing area specified in the environmental clearance of the project. This facility is available to those units which have obtained prior environmental clearance under EIA Notification, 1994 and EIA Notification, 2006. To claim exemption from obtaining Prior Environment Clearance in respect of such cases, the project proponent shall follow the following process:-


52 | Alkali Bulletin March 2021
1. The project proponent is required to obtain a certificate of ‘no increase in the pollution load’ from the environmental auditors or reputed institutions, to be empanelled by the State Pollution Control Board or Central Pollution Control Board or Ministry of Environment, Forest and Climate Change (hereinafter referred to as the Ministry).

2. A copy of ‘no increase in pollution load’ certificate and intimation, as provided by the Ministry from time to time on PARIVESH portal, shall be uploaded by the unit for which system generated acknowledgement shall be issued online;

3. The unit shall inform the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, in specified format along with-
   i. ‘no increase in pollution load’ certificate from the Environmental Auditor or reputed institutions empanelled by the State Pollution Control Board or Pollution Control Committee or Central Pollution Control Board or Ministry;
   ii. last Consent to Operate certificate for the project or activity; and
   iii. online system generated acknowledgement of uploading of intimation and ‘no increase in pollution load’ certificate on PARIVESH Portal;

4. The information so received shall be examined by the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, who shall take decision on such information, received from the project proponent.

5. If on verification the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, holds that the change or expansion or modernisation will result or has resulted in increase in pollution load, the exemption claimed under this clause shall not be valid and it shall be deemed that the project proponent was liable to obtain Prior Environmental Clearance before under taking such changes or increase, as per the clause (a) of sub-paragraph (ii) of paragraph 7 of this notification and the provisions of Environment (Protection) Act, 1986 shall apply accordingly.

Note: For removal of doubts, it is clarified that it shall be the responsibility of the project proponent to satisfy itself about ‘no increase in pollution load’ as a result of changes, expansion or modernisation, as the case may be, before under taking such changes or increase, and the project proponent shall be liable for action under the provisions of the Environment (Protection) Act, 1986 if on verification of facts or claim it is found that such change or expansion or modernisation involves increase in pollution load.”

[F. No. 22-33/2019-IA.III]

GEETA MENON, Jt.Secy.

Note: The principal notification was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) vide number S.O. 1533 (E), dated the 14th September, 2006 and was last amended vide the notification number S.O.221(E), dated the 18th January, 2021.
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 11th March, 2021

G.S.R. 169(E)—The following draft notification which the Central Government proposes to issue, in exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), for making certain amendments in the Plastic Waste Management Rules, 2016, issued vide G.S.R. 320 (E), dated the 18th March, 2016, is hereby published as required under sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, for information of the public likely to be affected thereby and notice is hereby given that the said notification will be taken into consideration by the Central Government on or after the expiry of sixty days from the date on which copies of this notification as published in the Gazette of India are made available to the public;

Any person interested in making any objection or suggestion on the proposal contained in the draft notification may do so in writing within the period so specified through post to the Secretary, Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, Aiseng, New Delhi-110003 or electronically at email address: satyendra.kumar07@nic.in, amit.love@nic.in.

Draft Notification

Whereas, the Plastic Waste Management Rules, 2016 were notified by Ministry of Environment, Forest and Climate Change vide G.S.R. 320 (E), dated the 18th March, 2016 bringing new provisions for effective and improved collection, segregation, processing, treatment and disposal of the plastic waste in an environmentally sound manner thereby, reducing the plastic waste generation and its impact on the environment;

Whereas, the Rules, inter alia, prohibit the use of plastic bags, sheets or like with thickness less than 50 microns. Also sachets using plastic material, as per the Rules, shall not be used for storing, packing or selling gutkha, tobacco and pan masala.

Whereas, many State Governments through their own notifications have imposed partial or complete ban on the use of plastic carry bags/single-use plastic items in their respective States.
Whereas, a preliminary analysis of the State level action on restriction/prohibition of plastic carry bags and some single-use plastic items suggests that many challenges have been faced in the implementation of these regulatory provisions. However, some States have reportedly achieved considerable success.

Whereas, considering the high environmental costs associated with management of single-use plastics, particularly the adverse effect on marine environment, and the need for a definitive action supplementing the initiative undertaken by various States/UTs to combat plastic pollution, it is proposed that a prohibition on the manufacture, use, sale, import and handling of some of the single-use plastic items may be imposed on a pan India basis.

Now, therefore, in the exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), read with clause (d) of sub-rule (3) of rule 5 of the said Environment (Protection) Rules, 1986 the Central Government hereby publishes this draft notification as required under sub-rule 3 of rule 5 of the said Environment (Protection) Rules, 1986, which shall on and from the date of its final publication make the following amendments in the said notification, namely:—

1. (1) These rules may be called Plastic Waste Management (Amendment) Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the said rules, in Rule 2(1), after the word Importers, the word, “brand-owner”, “plastic waste processor (recycler, co-processor, etc.)” shall be inserted.

3. In the said rules, in rule 3,

i. after clause (n), the following clause shall be inserted namely :-

“(na) Non-woven plastic bag-Non-woven plastic bag is made up of sheet or web structured fabric of entangled fibers or filaments (and by perforating films) bonded together by mechanical or thermal or chemical means. The Non-woven fabric is a flat or tufted porous sheet that is made directly from fibres, molten plastic or plastic films.”

after clause (q), the following clause shall be inserted namely: -

“(qa) Plastic Waste Processing - means any process by which plastic waste is handled for the purpose of reuse, recycling, co-processing or transformation into new products.

iii. after clause (v), the following clause shall be inserted namely: -

“(va) Single-use plastic item

-is a plastic commodity intended to be used once for the same purpose before being dispose of or recycled.”

iv. after clause (v), the following clause shall be inserted namely: -

(vb) Thermoset plastic- is a plastic which becomes irreversibly rigid when heated, and hence cannot be remoulded into desired shape.

v. after clause (vb), the following clause shall be inserted namely: -

(vc) Thermoplastic – is a plastic which softens on heating and can be moulded into desired shape.

4. In the said rules, in rule 4, -

i. In sub-rule (1) clause (c), the word ‘fifty’ may be read as ‘one hundred and twenty (120) with effect from 30.9.2021’

ii. In sub-rule (1) clause (h), after the words, “carry bags”, the words, “and commodities” is inserted.

iii. In sub-rule (1) clause (h), after the words, “compostable plastic carry bags”, the word, “and/or commodities” is inserted.

iv. After sub-rule (1) clause (i), following clause shall be inserted:

j. Each sheet of non-woven plastic carry bag shall not be less than 60 (GSM per square meter) or 240 microns in thickness with effect from 30.9.2021.

5. In the said rules, in rule 4, following sub-rule shall be inserted:
(2) The manufacture, import, stocking, distribution, sale and use of following single-use plastic commodities shall be prohibited from 1st January, 2022:

Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration.

(3) The manufacture, import, stocking, distribution, sale and use of following single-use plastic commodities shall be prohibited from 1st July, 2022:

i. single-use plastic (including polystyrene and expanded polystyrene) items:
plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping/packing films around sweet boxes; invitation cards; and cigarette packets, plastic/PVC banners less than 100 micron, stirrers.

ii. the above provision shall not apply to commodities (including carry bags) made of compostable plastic material.

6. In the said rules, in rule 5, sub-rule (1), clause (d), the word “2000” may be read as “2016”.

7. In rule 6, sub-rule (2), after clause (a), following clause is inserted:

(a1) Ensuring that provisions pertaining to restrictions/prohibition on single-use plastics are adhered to.

8. In rule 7, sub-rule (1), after clause (a), following clause is inserted:

(a1) Ensuring that provisions pertaining to restrictions/prohibition on single-use plastics are adhered to.

9. In the said rules, in rule 9,-

i. under sub-rule (1) after the words, “local body concerned”, the words, “as per guidelines issued from time to time under these Rules” is inserted.

10. In rule 11, sub-rule (1),

a. after the words ‘plastic carry bag’ the words ‘, plastic packaging’ shall be inserted.

b. in clause (a), for the words ‘manufacturer’ the words ‘producer/brand-owner’ shall be inserted and after the word ‘carry bag’ the words ‘plastic packaging used by the brand owner’ shall be inserted.

c. in clause (b), after the words ‘multilayered packaging’ the words ‘(excluding multilayered packaging used for imported goods)’ shall be inserted.

d. in clause (c), after the words ‘name and certificate number’ the word ‘of producer’ shall be inserted.

10. In rule 12-

a. in sub-rule (2), after the words ‘waste generator’ the words ‘restriction/prohibition on’ shall be inserted.

b. in sub-rule (3), after the words ‘waste generator’ the words ‘restriction/prohibition on’ shall be inserted.

11. In rule 13,

a. in Sub-Rule (1) after the word Union Territory concerned the word ‘or the Central Pollution Control Board’ is inserted.

[F. No. 17-2-2001 (Pt)-Parl.-HSMD]
NARESH PAL GANGAWAR, Jr. Secy.

Note-

i. The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number GSR 320 (E), dated the 18th March, 2016.

OFFICE MEMORANDUM

Sub.: Streamlining the processes of granting Environmental Clearances with regard to Essential Details Sought (EDS) - reg.

During the review meetings held for streamlining the Environmental Clearances (EC) process it has come to notice that many project proponents do not reply/delay the reply to the Essential Details Sought (EDS) by the concerned Member Secretaries of the Impact Assessment Division.

2. As the project proponents/consultants are already aware of the Essential Details which would be required by the Ministry for appraising their proposals for the grant of EC, the need to seek Essential Details arises due to the lack of diligence on the part of the project proponents/consultants while submitting the proposal for grant of EC.

3. In this regard, it has now been decided that in case the reply to EDS is not received on PARIVESH within 30 days, the proposal will be excluded from the pendency list shown on PARIVESH.

4. However, the project proponent can relist the proposal through their respective login provisions, as and when they want to submit the EDS reply.

5. This is issued with the approval of the Competent Authority.

(Sharath Kumar Palleria)
Director- (CPC-Green)

To
1. Chairman/ Member Secretaries of all the Expert Appraisal Committees
2. Chairperson/Member Secretaries of all the SEIAAs/SEACs
3. All the Officers of IA Division

Copy for information to:
1. PS to Hon’ble Minister for Environment, Forest and Climate Change
2. Ps to Hon’ble MoS (EF&CC)
3. PPS to Secretary (EF&CC)
4. PPS to AS (RA)/ PPS to JS (GM)/ PPS to JS (SKB)
5. Website, MoEF&CC
6. Guard file

(Sharath Kumar Palleria)
Director- (CPC-Green)
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st March, 2021

G.S.R. 243(E).—In exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule – I, in serial number 25 for letters, brackets and words “*TPPs (units) shall meet the limits within two years from date of publication of this notification”, the following shall be substituted, namely: -

“* (i) A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely: -
### Table-I

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Location/area</th>
<th>Timelines for compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Non retiring units</td>
</tr>
<tr>
<td>(1)</td>
<td>Category A</td>
<td>Within 10 km radius of National Capital Region or cities having million plus population&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Upto 31&lt;sup&gt;st&lt;/sup&gt; December 2022</td>
</tr>
<tr>
<td>(2)</td>
<td>Category B</td>
<td>Within 10 km radius of Critically Polluted Areas&lt;sup&gt;2&lt;/sup&gt; or Non-attainment cities&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Upto 31&lt;sup&gt;st&lt;/sup&gt; December 2023</td>
</tr>
<tr>
<td>(3)</td>
<td>Category C</td>
<td>Other than those included in category A and B</td>
<td>Upto 31&lt;sup&gt;st&lt;/sup&gt; December 2024</td>
</tr>
</tbody>
</table>

<sup>1</sup> As per 2011 census of India.

<sup>2</sup> As defined by CPCB.

(ii) the thermal power plant declared to retire before the date as specified in column (5) of Table-I shall not be required to meet the specified norms in case such plants submit an undertaking to CPCB and CEA for exemption on ground of retirement of such plant:

Provided that such plants shall be levied environment compensation at the rate of rupees 0.20 per unit electricity generated in case their operation is continued beyond the date as specified in the Undertaking:

(iii) there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II, namely:-

### Table-II

<table>
<thead>
<tr>
<th>Non-Compliant operation beyond the Timeline</th>
<th>Environmental Compensation (Rs. per unit electricity generated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category A</td>
</tr>
<tr>
<td>0-180 days</td>
<td>0.10</td>
</tr>
<tr>
<td>181-365 days</td>
<td>0.15</td>
</tr>
<tr>
<td>366 days and beyond</td>
<td>0.20</td>
</tr>
</tbody>
</table>

[F. No. Q-15017/40/2007-CPW]
NARESH PAL GANGAWAR, Jt. Secy.

Note: The principle rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) vide number S.O. 844(E), dated the 19th November, 1986 and lastly amended vide notification G.S.R. 662(E), dated the 19th October, 2020.

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Alkali Bulletin March 2021 | 59
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Belgium Inovyn Bigan Project

Hunan Kori Convertors Co., Ltd.
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Tel: 86 731 28891155 ext. 8121  Fax: 86 731 22565733
Mob.: 0086 13574290222 (Mr. Frank Ding), 0086 18773335922(Mr. Zhang)
Email: frankding@kori.cn, zsy@kori.cn
Website: www.kori.cn
### 1 Alkali Imports (MT)

<table>
<thead>
<tr>
<th></th>
<th>Qty (Feb 2021)</th>
<th>Qty (Feb 2020)</th>
<th>% Difference (Y-o-Y)</th>
<th>Qty (Jan 2020)</th>
<th>% Difference (M-o-M)</th>
<th>FY 2020-21 (upto Feb)</th>
<th>FY 2019-20 (upto Feb)</th>
<th>% Difference (Total Imports 2019-20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caustic Soda</td>
<td>28,114</td>
<td>24,855</td>
<td>13.1%</td>
<td>41,425</td>
<td>-32.1%</td>
<td>295,560</td>
<td>337,478</td>
<td>-12.4%</td>
</tr>
<tr>
<td>Soda Ash</td>
<td>67,817</td>
<td>68,013</td>
<td>-0.3%</td>
<td>52,518</td>
<td>29.1%</td>
<td>666,729</td>
<td>885,569</td>
<td>-24.7%</td>
</tr>
</tbody>
</table>

Average Price in Jan 2021: Caustic Soda - 291 USD/MT (Lye) & 208 USD/MT

### 2 Foreign Trade - Merchandise (US$ billion)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
<th>FY 2020-21 (upto Feb)</th>
<th>FY 2019-20 (upto Feb)</th>
<th>% Difference</th>
<th>Total Imports 2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>40.5</td>
<td>37.9</td>
<td>7.0%</td>
<td>340.8</td>
<td>443.2</td>
<td>-23.1%</td>
<td>467.2</td>
</tr>
<tr>
<td>Exports</td>
<td>27.9</td>
<td>27.7</td>
<td>0.7%</td>
<td>256.2</td>
<td>291.9</td>
<td>-12.2%</td>
<td>314.3</td>
</tr>
<tr>
<td>Surplus/Deficit</td>
<td>-12.6</td>
<td>-10.2</td>
<td>-84.6</td>
<td>-151.4</td>
<td>-152.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3 Exchange Rate (Rs./USD)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Jan 2020</th>
<th>Dec 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>72.76</td>
<td>73.11</td>
<td>73.59</td>
</tr>
</tbody>
</table>

### 4 Index of Industrial Production (Base: 2011-12=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>129.4</td>
<td>134.2</td>
<td>-3.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>129.3</td>
<td>134.0</td>
<td>-4.8%</td>
</tr>
<tr>
<td>Electricity</td>
<td>153.9</td>
<td>153.7</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

### 5 Index of Core Industries (Base: 2011-12=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>127.8</td>
<td>134.0</td>
<td>-4.8%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>129.3</td>
<td>134.0</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Electricity</td>
<td>153.9</td>
<td>153.7</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

### 6 Index of Industrial Production - Broad Sectors (Base: 2011-12=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>116.5</td>
<td>123.3</td>
<td>-5.5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>129.3</td>
<td>134.2</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Electricity</td>
<td>153.9</td>
<td>153.7</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

### 7 Index of Industrial Production - Manufacturing Sub-groups (Base: 2011-12=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical &amp; Chemical Products</td>
<td>119.5</td>
<td>121.7</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Textiles</td>
<td>111.5</td>
<td>116.7</td>
<td>-4.5%</td>
</tr>
<tr>
<td>Paper &amp; Paper Products</td>
<td>79.8</td>
<td>89.0</td>
<td>-10.3%</td>
</tr>
<tr>
<td>Basic Metals</td>
<td>161.3</td>
<td>169.5</td>
<td>-4.8%</td>
</tr>
</tbody>
</table>

### 8 Index of Industrial Production Country-wise Comparisons (Base: 2015=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>NA</td>
<td>NA</td>
<td>-</td>
</tr>
<tr>
<td>Russia</td>
<td>NA</td>
<td>114.2</td>
<td>-</td>
</tr>
<tr>
<td>Brazil</td>
<td>100.0</td>
<td>97.2</td>
<td>2.9%</td>
</tr>
<tr>
<td>European Union (27)</td>
<td>103.8</td>
<td>104.8</td>
<td>-1.0%</td>
</tr>
<tr>
<td>USA</td>
<td>100.5</td>
<td>105.0</td>
<td>-4.3%</td>
</tr>
</tbody>
</table>

### 9 All India Inflation Rates (Base: 2012=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>156.6</td>
<td>149.1</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

### 10 Consumer Price Inflation - Industrial Workers (Base: 2016=100)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Feb 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>119.0</td>
<td>119.7</td>
<td>-0.6%</td>
</tr>
</tbody>
</table>

### 11 Foreign Investment Inflows (US$ Million)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Jan 2020</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Foreign Direct Investment</td>
<td>-2,881</td>
<td>3,464</td>
<td>-183.2%</td>
</tr>
<tr>
<td>Net Portfolio Investment</td>
<td>2,845</td>
<td>1,508</td>
<td>88.7%</td>
</tr>
<tr>
<td>Total</td>
<td>-36</td>
<td>4,972</td>
<td>-100.7%</td>
</tr>
</tbody>
</table>

### 12 Foreign Investment Promotion Board (FIPB) Approvals (US$ Million)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Jan 2020</th>
<th>Dec 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36</td>
<td>585</td>
<td>55</td>
</tr>
</tbody>
</table>

### 13 Foreign Exchange Reserves (US$ billion)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021 (as on 29 Jan 2021)</th>
<th>Jan 2021 (as on 25 Dec 2020)</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>585</td>
<td>590</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

### 14 Fiscal Deficit (Apr 2020-Jan 2021)

<table>
<thead>
<tr>
<th></th>
<th>% of Actuals to Budget Estimates FY 2020-21*</th>
<th>% of Actuals to Budget Estimates FY 2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>76.0%</td>
<td>135.2%</td>
</tr>
</tbody>
</table>

### 15 Purchasing Managers Index (PMI)

<table>
<thead>
<tr>
<th></th>
<th>Feb 2021</th>
<th>Jan 2021</th>
<th>Nov 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57.7</td>
<td>57.7</td>
<td>56.4</td>
</tr>
</tbody>
</table>

*Index over 50 shows expansion, while below 50 means contraction

Data Source: GOI, OECD, IHS & AMAI Research
We see chlor-alkali manufacturers tapping into actionable data to reduce energy consumption.

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Learn how to optimize your energy usage for more sustainable operations. You can email our experts at GoPlantweb.India@Emerson.com.
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EGYPT
Sulfuric Acid EPC Project

PARAGUAY
Chlor Alkali EPC Project

INDIA
Hydrogen Peroxide EPC Project

ABU DHABI
Calcium Chloride EPC Project

TURKEY
Sulfuric Acid EPC Project

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website: www.ama-india.org