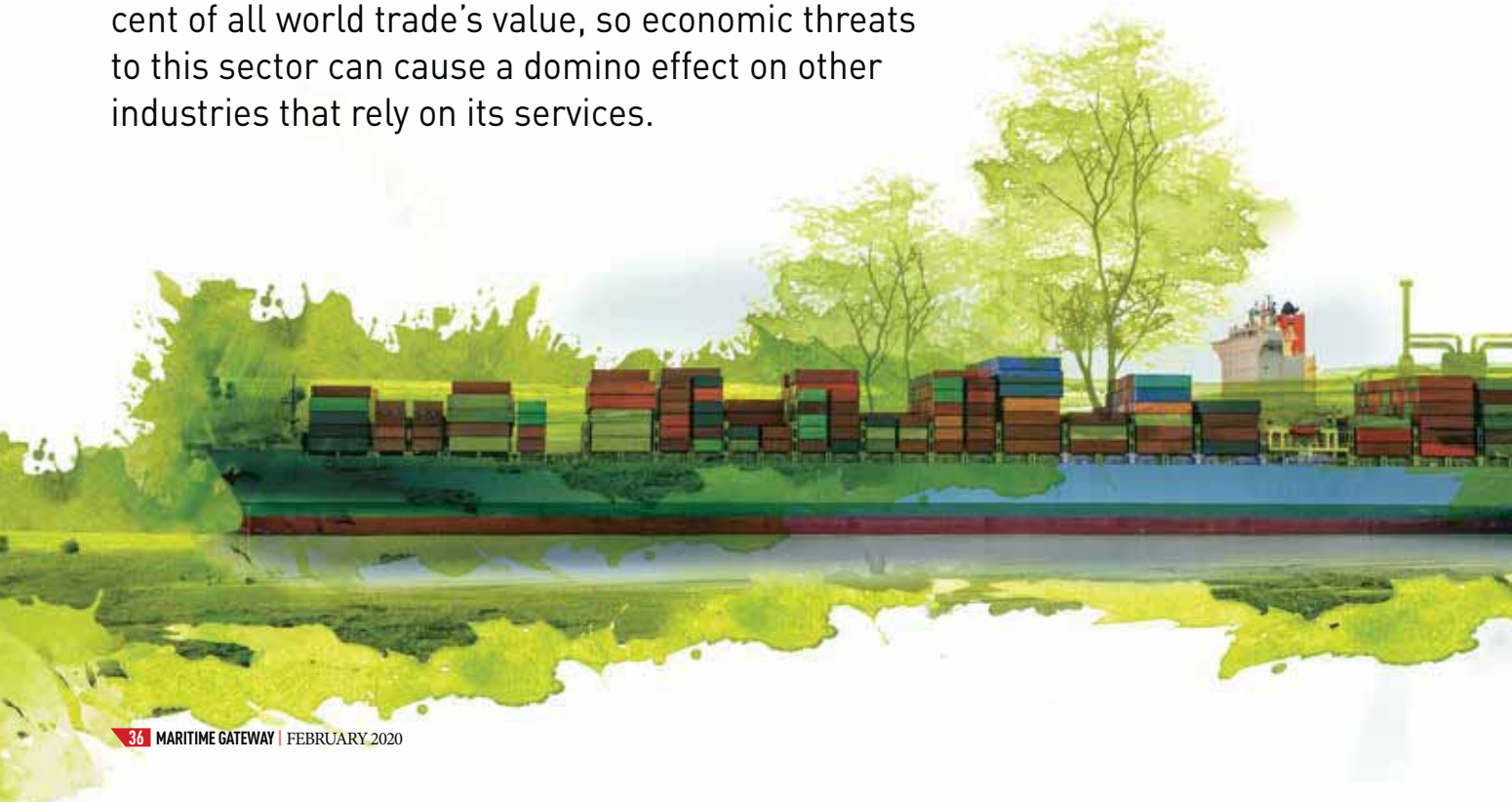
BALANCING ECONOMIC GROWTH AND SUSTAINABILITY

Indian Ports Association (IPA), acts as a Think Tank to the Ministry of Shipping, and also rightly hailed as the Centre of Excellence (CoE) helping major ports achieve eminence in their operations and management, thus contributing to the growth of the economy and the country at large. **Dr Abhijit Singh, Executive Director, IPA** explains how green sustainability and economic growth can coexist.

He emphasizes that it's high time for maritime transport agencies, both government and private, to be responsive to resolve climate change issues, design and implement measures to lessen repercussions. The shipping industry handles 70 per cent of all world trade's value, so economic threats to this sector can cause a domino effect on other industries that rely on its services.

The economic growth has come to be seen as a solution for all social and political problems, including poverty, social exclusion and environmental degradation. If India is asked to consider the cost of growth in environmental degradation and social exclusion, it is likely to respond that more growth and more technology are the solution. Thus, sustainable growth taking full advantage of technology and innovation is a way forward. Sustainable growth, for its part, requires the creation of productive assets that conserve nonrenewable resources such as land, water and atmosphere and minimize environmental damage. The response to climate change has to be through both adaptation and mitigation. We must adapt our societies to prepare for some climate change risks. Mitigation efforts



must be intensified given the early benefits they can deliver.

India has one of the lowest rates of energy intensity of GDP growth. India's historic and current levels of per capita GHG emissions remain the lowest amongst the G20 even though in volume terms it is now the third-largest GHG emitter in the world, after China and USA. India continues to face massive development challenges, to tackle this it requires a high level of sustained economic growth. India's per capita GHG emissions remain a fraction of that of all major emitters and it does not want to pursue the environmentally harmful development as followed by developed countries in their process of industrialization. With Government's focus on renewables and e-mobility, it is evident that our path to progress is more empathetic to climate vulnerability. India seeks to meet the climate change challenge by expanding the use of low carbon and renewable technologies and improving energy efficiency of buildings, factories, ports, appliances etc. It is India's inclusive growth path which is integral to an effective climate change policy for India and studies in India show that low carbon growth pathways are consistent with inclusive growth. India's Nationally Determined Contributions (NDC) has three numeric targets for 2030: reduce emissions intensity by 33 per cent to 35 per cent from 2005 levels, achieve an installed power capacity of 40 per cent from non-fossil fuel sources and create an additional carbon sink of 2.5–3.0 $GtCO_2e$ from forest and tree cover.

How Major Ports can contribute to green sustainability without compromising on efficiency?

Port being an interface between sea and hinterland, marine pollution by the shipping activities gets extended at the ports too. About 30,000 plus vessels of various sizes and types call Indian Ports annually and over 300,000 fishing vessels of various sizes and types are engaged in fishing operations in coastal waters of India that are highly congested and dangerous to safe navigation and a cause for the pollution. Safe and green governance over the maritime domain which accommodate plethora of maritime activities is a challenge. Evaluating pollution impacts on ports, approach channels and in around ports requires consideration of numerous sources of pollution such as marine vessels, trucks, locomotives, and off-road equipment used for moving cargo, dredging activities, port expansion, handling of hazardous cargo etc. International transport (aviation and shipping) representing around 2.5 per cent of GHG emissions. Shipping contributed with 2.8 per cent of global CO_2 emissions and 15 per cent and 13 per cent of global NOx and SOx emissions from anthropogenic sources. The emissions at ports represents 2 per cent of total shipping emission.

Weighing in the environmental perspective for sustained growth, the government has started focusing on making Major Ports across India cleaner and greener through two agenda - one is 'Green Port Initiatives' related to port ecosystem environmental issues and second is 'Swachh Bharat Abhiyaan' to promote cleanliness at the port premises. Some of these initiatives are:

- Preparation and monitoring plan for green sustainability
- Acquiring equipments required for monitoring and mitigating environmental pollution
- Acquiring dust suppression system, stockpile enclosures, wet fogging, surface wetting etc
- Setting up of sewage/waste water treatment plants/ garbage disposal plant
- Setting up projects for energy generation from renewable energy sources
- Prohibition of disposal of almost all kind of garbage at sea and setting up of shore reception facilities at ports
- Trees plantation in and around port premises, beautification and cleaning of public places
- Cleaning and repairing of all drainages and storm water systems

The Government has also taken many steps for a consistent and smooth implementation towards compliance with the Global Sulphur Cap {0.5% mass/mass max.} IMO regulation effective from 1st January 2020. Indian Oil Corporation Limited (IOCL) has already started supplying Global Sulphur cap compliant fuel oil and is at present available on west coast of India. Complete supply by Hindustan Petroleum Corporation Limited (HPCL) & IOCL is also expected this month.

Concept of smart-green port is being promoted which envisages a zero or negligible port emission with a very high level of efficiency in operations and energy savings. Smart in terms of operations and green in terms of energy usage and waste management would make ports sustainable without any compromise with productivity. In fact this strategy leads to not only reducing the carbon footprint of ports but also increase the efficiency and thus productivity of ports. Adoption of technologies and innovations in areas of digitization and energy systems has ability to transform ports completely.

Combining different digital technologies, such as IoT, AI, Blockchain, Bigdata, Automation etc., offer opportunities to create highly efficient port operations along with improving transparency and removing trust-deficit in information sharing among different stakeholders. Apart from making operations highly efficient though digitization and automation, we must also focus on the kind of energy we use in our operations. Also innovations in to waste management and environment conservation, ports can lead the sustainability endeavors. mg