



IN THE FAST LANE

India has emerged as a global automobile hub



CEO SPEAK



DEAR READERS,

India has come a long way, while retaining its ancient systems of healing, to being known as the holistic healthcare provider in the global industry. Being the largest producer of generic medicines globally and home to one of the largest pools of well-trained medical professionals, the country has emerged as a competitive alternative to its peers in Asia and the West. For instance, the cost of surgery in India is roughly about one-tenth of that in the US or Western Europe.

The various facets of the Indian healthcare industry were aptly showcased during Arab Health 2019 held in Dubai in January. Being the second largest healthcare exhibition and congress in the world and the largest in the Middle East, the India Pavilion hosted over 100 companies across various segments like medical devices, hospitals, and pharmaceuticals. 'India Heals', the tagline selected for the campaign, was projected across the venue, and in major print publications and digital platforms during the event. IBEF worked closely with EEPC India, Pharmaceuticals Export Promotion Council of India (Pharmexcil), and Services Export Promotion Council (SEPC) for designing an impactful branding campaign around India's participation at Arab Health 2019.

This was the third consecutive year of IBEF coordinating a comprehensive participation of India across various segments of the healthcare sector at Arab Health. Be it the booming medical tourism, strong production of generics, or moving up the value chain in medical devices, individual strengths in the various sub-segments combined project India as a force to reckon with in the global healthcare industry.

In another major global participation, IBEF and Carpet Export Promotion Council (CEPC) worked jointly to promote India at DOMOTEX Hannover 2019, the leading trade fair for carpets and floor coverings. India was the largest exhibitor in DOMOTEX Hannover 2019. IBEF and CEPC projected India's strengths in the area of carpets at the venue during the event. Indian handmade carpets and rugs are already very popular in international markets and India counts USA and Europe as its two major export destinations.

Going forward, IBEF plans to undertake campaigns that are sustained over a long period of time in target markets to increase the impact and result in better recall.

Bhupinder S Bhalla

Joint Secretary, Department of Commerce & Chief Executive Officer India Brand Equity Foundation

EDITORIAL

DEAR READERS.

Agriculture has always been an integral part of the India paradigm—as the primary source of livelihood for more than half its population, shaping and strengthening its economy, and boosting its global presence.

In the past decade, many changes have swept the country's farm sector. Agri startups have effected a revolution of sorts—reducing input costs, boosting the nutritional value of crops, improving supply chain efficiency, and creating market linkages. The private sector's contributions too have been phenomenal, especially in terms of R&D and improved productivity.

Indian agriculture has surely come of age—it is no more just a means of livelihood, but a well-established business, finding newer markets by the day. Total agricultural exports registered a CAGR of 16.45% over FY10-18 and touched US\$ 38.21 billion in FY18. The country has also best leveraged its innate strengths vis-a-vis organic cultivation, and its processed food industry is ranked fifth in terms of production, consumption, export, and expected growth.

The new agriculture export policy, recently drawn up by the Ministry of Industry & Commerce, is poised to add momentum to this pace of growth. Designed with the aim of easing trade restrictions, establishing clusters, encouraging startups and private sector participation, it is poised to shape a more stable regime.

Government policies, startups, and the private sector have together empowered the Indian farmer. And now the agri export policy has come as a perfect fit to the emerging patterns in the sector. It would not be long before India's agricultural products are fully integrated into the global value chain.





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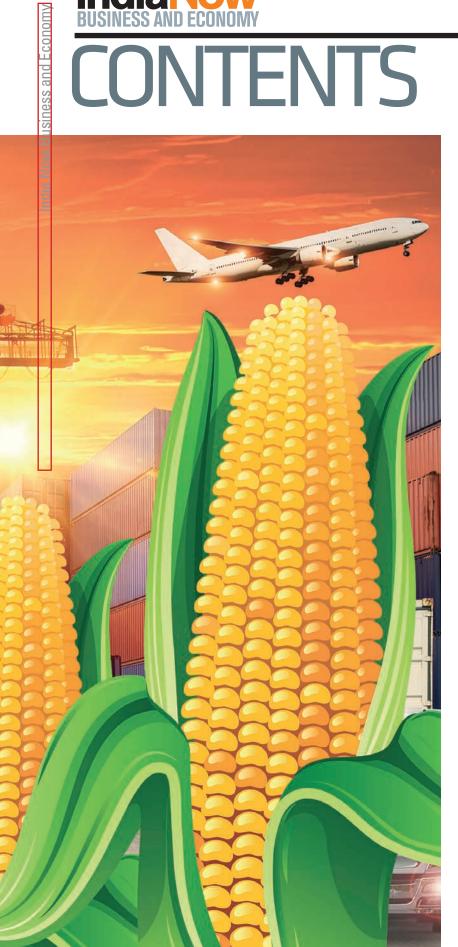
A SHADE BETTER

India grows its coffee under a two-tier mixed shade canopy of evergreen leguminous trees



India Now BUSINESS AND ECONOMY

CONTENTS



COVER STORY

16

Redrawing India's Farm

Journey

India's new agriculture export policy is aimed at easing curbs and building a stable regime.

20

'Private Participation must for Boosting Agri Exports'

Professor Ramesh Chand, Member, NITI Aayog, talks about the promises the new agri export policy holds; efficient but also more effective, as long as the right data is applied.



India Now Business and Economy

OTHER FEATURES

24

EXPORT GAIN

Carpeting the Way to Success

Indian handmade carpets are known for their craftsmanship and ecofriendliness. A favourable policy environment is helping the industry explore new markets.

28

STATE FOCUS

Organic Sikkim

Tracing Sikkim's journey to becoming a 100% organic state in India.

34

DFEP DIVE

Ports: Essential Trailblazers for Booming India

Ports are a source of strength for India as 95% of the country's trading by volume is done through maritime transport.

STARTUP

Redefining Education

BYJU's - The Learning App has fully leveraged the benefits of technology and is popularising the concept of online learning in India.



CULTURE

From Freedom to Fashion

The handspun fabric of khadi has become synonymous with India and its refined culture.

WANDERLUST

Sand Dunes Rock in Rajasthan

Nothing is more mesmerising than a desert cruise in Rajasthan.



INDIA IN NEWS

Presidents of India, South Africa meet for bilateral talks

President of India Shri Ram Nath Kovind hosted a banquet in honour of Mr Matamela Cyril Ramaphosa, President of the Republic of South Africa, at Rashtrapati Bhavan during the latter's first visit to the country. Shri Kovind said that trade between the two countries has been growing, adding that they should work together to create a mutually beneficial mobility partnership that will encourage investments and two-way tourism. He also expressed confidence that the visiting President would further enhance bilateral trade and investment relations. He further invited South African companies to partner with India in initiatives such as Make in India, Digital India, Clean India, and Smart Cities Mission.





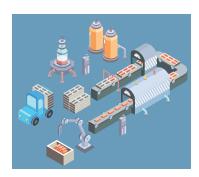
National Museum of Indian Cinema inaugurated by Prime Minister

Prime Minister Shri Narendra Modi inaugurated National Museum of Indian Cinema in Mumbai in the presence of Governor of Maharashtra Shri C Vidyasagar Rao, Chief Minister of Maharashtra Shri Devendra Fadnavis, Union Minister of State for Social Justice & Empowerment Shri Ramdas Athawale and Union Minister of State for Information and Broadcasting & Youth Affairs and Sports Col Rajyavardhan Rathore (Retd.) along with other dignitaries. Shri Modi said that Indian cinema played a big role in enhancing the country's soft power and in building Brand India. He also noted that Indian films were now focusing on social issues such as sanitation, women empowerment, and sports. He added that the museum will provide a wonderful opportunity for the younger generation to understand and learn about Indian cinema.



Forum for advancing global collaboration in homoeopathy inaugurated

Union Minister of State (Independent Charge) for AYUSH, Shri Sripad Naik inaugurated World Integrated Medicine Forum on the regulation of homoeopathic medicinal products. The theme for the three-day forum was 'Advancing Global Collaboration' and it saw participation from World Health Organisation (WHO) and drug regulatory authorities, as well as experts and industrialists from across the globe. The Forum is touted as the only truly global platform in which the public and private sector can meet and exchange ideas on how to ensure and increase the availability of safe and effective homeopathic medicines worldwide. Joint Secretary, Ministry of AYUSH Shri Roshan Jaggi said, "Ministry of AYUSH welcomed all efforts for collaborations with the governments and other institutes of the world at various levels," while complementing the theme of the forum for being multidimensional and one that needed joint efforts.



Memorandum of Cooperation between India and Japan in food processing sector

The Union Cabinet, chaired by Prime Minister Shri Narendra Modi, has granted approval to the Memorandum of Cooperation (MoC) between India and Japan in the field of food processing. This partnership is aimed at promoting understanding of best practices in food processing, which would help to improve the sector and facilitate better market access, leading to equity and inclusiveness. It is expected to benefit this industry in both countries by introducing innovative techniques and processes and getting better access to markets, thereby leading to equity and inclusiveness.



National workshop on agri export policy held by Commerce Ministry

The first national workshop on the agri export policy was recently inaugurated by Union Minister of Commerce and Industry and Civil Aviation, Shri Suresh Prabhu. An MoU to meet the objectives of the policy was signed between Agricultural and Processed Food Products Export Development Authority (APEDA) and National Cooperative Development Corporation (NCDC) during the workshop. Speaking on the occasion, Shri Prabhu urged all state governments to set up a nodal agency dedicated for the implementation of the policy. He also noted that such workshops will help to get feedback and suggestions for improvement and overcoming difficulties in implementation of the policy.



India to have its first lithium ion battery plant

Bharat Heavy Electricals Limited (BHEL) and Libcoin will come together to build a 1GWh lithium ion battery plant in India. In due time, the capacity of the plant will be increased up to 30GWh. This move is seen as India's step with respect to its energy security and clean energy commitment to the world. The project is expected to facilitate energy independence by replacing oil imports. It will have a 'Made by India, for India' approach, with focus on core-cost components manufactured domestically. It will also create an integrated manufacturing ecosystem, resulting in self-reliance and lower cost.

"Congratulations to the Indian government on the first 100 days of @AyushmanNHA. It's great to see how many people have been reached by the program so far."

BILL GATES, TECHNOLOGY ADVISOR, MICROSOFT AND CO-CHAIRMAN, BILL & MELINDA GATES FOUNDATION "We are only looking at strategic partnership given that we can also bring our own crude. India is not only an important market for us. India is a very strategic partner."

SULTAN AHMED AL JABER, MINISTER OF STATE, UNITED ARAB EMIRATES AND CEO, ADNOC

INDIA IN NEWS



eNAM commences inter-state trade

The Prime Minister's flagship programme eNAM has commenced trade between mandis of two states-Uttar Pradesh and Uttarakhand. Earlier, trade used to happen either within the APMC or between two APMCs situated in same state. This has been possible due to a series of meetings and coordination between Ministry of Agriculture and Farmers' Welfare and mandi board officials/secretaries of these states. For all transactions, epayments are being made through the eNAM portal; this offers farmers better opportunities to sell their produce through a competitive and transparent price discovery system. It also promotes prices commensurate with the quality of produce. The eNAM portal acts as a single window for all APMCrelated information and services.



Commerce Ministry meets export promotion councils to boost exports

Secretary, Department of Commerce Dr Anup Wadhawan chaired a meeting with export promotion councils and other key exporters to discuss the various issues being faced by them and come up with ways to increase India's merchandise exports. The country recorded a 13.31% growth in overall exports-merchandise and services combined-in 2017-18. India's exports came under immense pressure post 2013-14 but with the government's concerted effortsimproved logistics, trade facilitation, increased digitisation for transparency, implementation of GST, and capacity building through skilling-the overall merchandise exports have been growing since 2016-17 and are likely to reach a peak in 2018-19.



Coal Ministry collaborates with Republic of Poland

India's Ministry of Coal entered into a MoU with Ministry of Energy, Republic of Poland with the objective to foster relations in the field of coal mining and clean coal technologies. It was signed by Minister of State for Coal and Mines Shri Haribhai Parathibhai Chaudhary and Secretary of State, Ministry of Energy, Republic of Poland Mr Grzegorz Tobiszowski, in the presence of Additional Secretary, Ministry of Coal Shri Suresh Kumar and Ambassador of Poland HE Mr Adam Burakowski. The agreement will focus on trade and investment in this sector, enhance the understanding of coal-related energy issues, and promote exchange of information on policies, programmes, and technologies.

Science Communicators' Meet inaugurated

Union Minister for Law and Justice and Electronics and Information Technology Shri Ravi Shankar Prasad inaugurated Science Communicators' Meet at Indian Science Congress, 2019. He noted that India's rank in global innovation index has jumped from 81 in 2015 to 60 in 2017, and the country is now in 6th position in scientific publications and 10th in patent filing. He applauded the role of innovation in communication technology, and said that digital payments surged eight-fold in the last five years, Aadhar enabled payment system transactions grew 2048%, and UPI-based transactions grew 1500 times in the last 24 months. India is now the third most attractive investment destination for technology transactions and it is the best time to do science in India, he added.





RESPONSIBLE HEALTHCARE

India is the largest provider of generic drugs globally

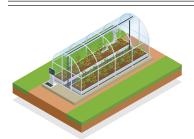


TECH CORNER

India launches Microsat-R and Kalamsat-V2

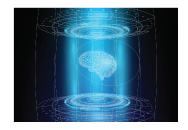
India successfully launched Microsat-R and Kalamsat-V2 satellites with the help of its Polar Satellite Launch Vehicle (PSLV-C44). The vehicle lifted off from Indian Space Research Organisation's (ISRO) Satish Dhawan Space Centre in Sriharikota, and deployed the satellites into their designated orbits. This flight marked the first mission of PSLV-DL, which is a new variant of PSLV with two strap-on motors. Dr K Sivan, Chairman, ISRO, in his post-launch address, said that the mission was unique as it was for the first time ISRO used the last stage of the rocket as a platform to perform experiments in space. He also expressed hope that this new, low-cost technology will help students to conduct several inspiring experiments in space by attaching their instruments to the last stage of the rocket.





ITC e-Choupal to help agri startups

ITC's farmer empowerment initiative e-Choupal-a rural-digital infrastructure network-will now get a mobile platform. The new digital interface called E-Choupal 4.0 is expected to be launched by mid-2019 and will serve as a plug-and-play platform for agri-startups in the country. Since launch, e-choupal has been providing internet kiosks in villages, where farmers can trade their produce at fair prices and also gain information on the latest technologies in farming, weather forecast, fertilisers, and pesticides. It comprises about 6,100 installations, in 35,000 villages, serving over four million farmers. S Sivakumar, Head, Agri and IT Business, ITC said, "We are refining the services of more than 20 startups at the moment. These startups will be able to use our platform for providing many services including location specific weather forecasts, crop advisory, quality testing of crops, etc to farmers."



Microsoft India to set up Al labs

Technology Microsoft, giant through its India arm, aims to skill over 10,000 developers in the country over the next three years. For this the company will set up artificial intelligence (AI) labs in 10 universities and train five lakh individuals across the country. The company has pledged commitment to enhance employability by bridging skill gaps through its Intelligent Cloud Hub programme. It plans to equip research and higher education institutes with AI infrastructure and help the faculty as well as students to build their skills in cloud computing, data sciences, AI, and Internet of Things (IoT). The company will also partner with NITI Aayog to combine cloud and AI across areas agriculture, healthcare, environment.

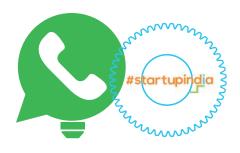


Coal India goes digital

privately-At a time when many owned companies are adopting digital technologies such as mobile internet, cloud, digital payments, digital identity, state-owned Coal India too has announced its digital transformation in partnership with Tech Mahindra. The primary objective of this `270 crore deal is setting up of an integrated Enterprise Resource Planning (ERP) system in Coal India and its subsidiaries in order to deploy a state-of-the-art information technology system. This would provide all necessary information based on real-time data, which will help the management take quick and timely decisions. Anil Kumar Jha, Chairman, Coal India, said, "Coal India is very passionate and committed to this project, and firmly believes that Tech Mahindra will be able to complete it well within the project timelines."

10,000

Number of developers Microsoft plans to develop in India over the next three years.



'Startup India – WhatsApp Grand Challenge' launched

Popular messenger application WhatsApp, in partnership with Start-up India and Invest India, launched Startup India – WhatsApp Grand Challenge' for entrepreneurs with highly innovative ideas and business models that solve a local problem, making a large-scale socio-economic impact. Some of the relevant industries for these startup ideas include artificial intelligence, augmented reality, virtual reality, analytics, food and beverages, waste management, transportation, marketing, fashion, and so on. The top five winners will be awarded US\$ 50,000 each.



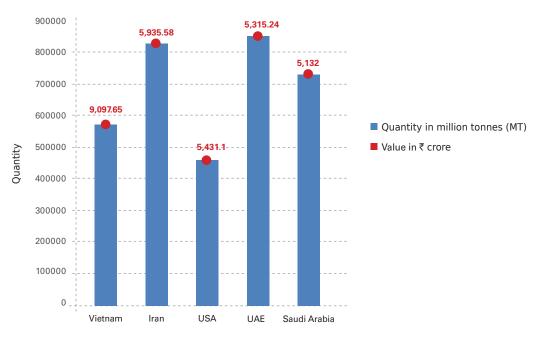
DRDO technology to meet civilian needs

Speaking at a workshop on 'Fire Safety Technologies and Services Workshop' at Defence Research and Development Organisation (DRDO) headquarters, Union Minister of State for Defence, Shri Subhash Bhamre said that technology developed by DRDO for defence purposes can also be used to meet civilian needs, citing the need to link safety and security to deal with instances of firefighting more effectively. He added that this technology would be developed under the Make in India initiative and could gradually be exported to other countries too. G Satheesh Reddy, Chairman, DRDO, requested representatives from the fire department in the meeting to come out with specific requirements that could be taken forward by the DRDO.

STATISTICS

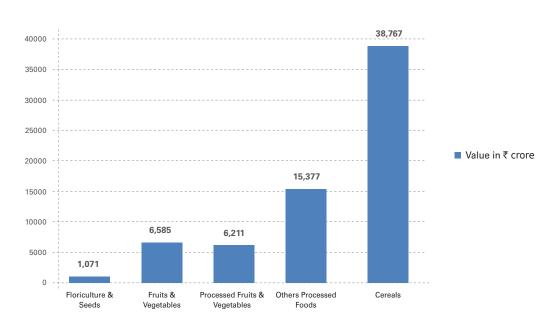
AGRICULTURE: ON A GROWTH TRAJECTORY

TOP FIVE COUNTRIES FOR INDIA'S AGRICULTURAL EXPORTS, 2018-19 (APR-NOV)



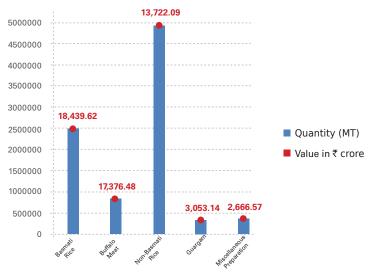
Source: http://agriexchange.apeda.gov.in/indexp/genReport_combined.aspx#content

EXPORT OF AGRICULTURAL AND PROCESSED FOOD PRODUCTS, 2018-19 (APR-DEC)



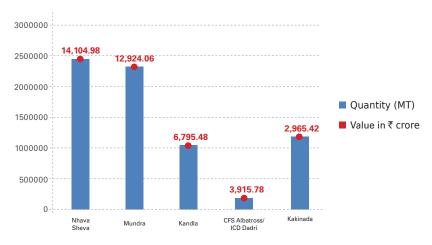
Source: http://apeda.gov.in/apedawebsite/Comparative_Statement_Dec_2018_19.pdf

TOP FIVE AGRICULTURAL AND RELATED COMMODITIES EXPORTED BY INDIA, 2018-19 (APR-NOV)



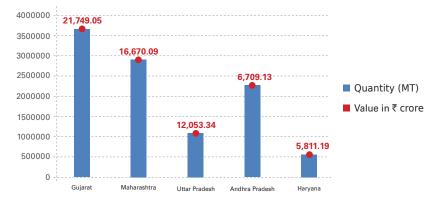
Source: http://agriexchange.apeda.gov.in/indexp/genReport_combined.aspx#content

TOP FIVE PORTS HANDLING AGRICULTURAL PRODUCTS AND RELATED TRAFFIC, 2018-19 (APR-NOV)



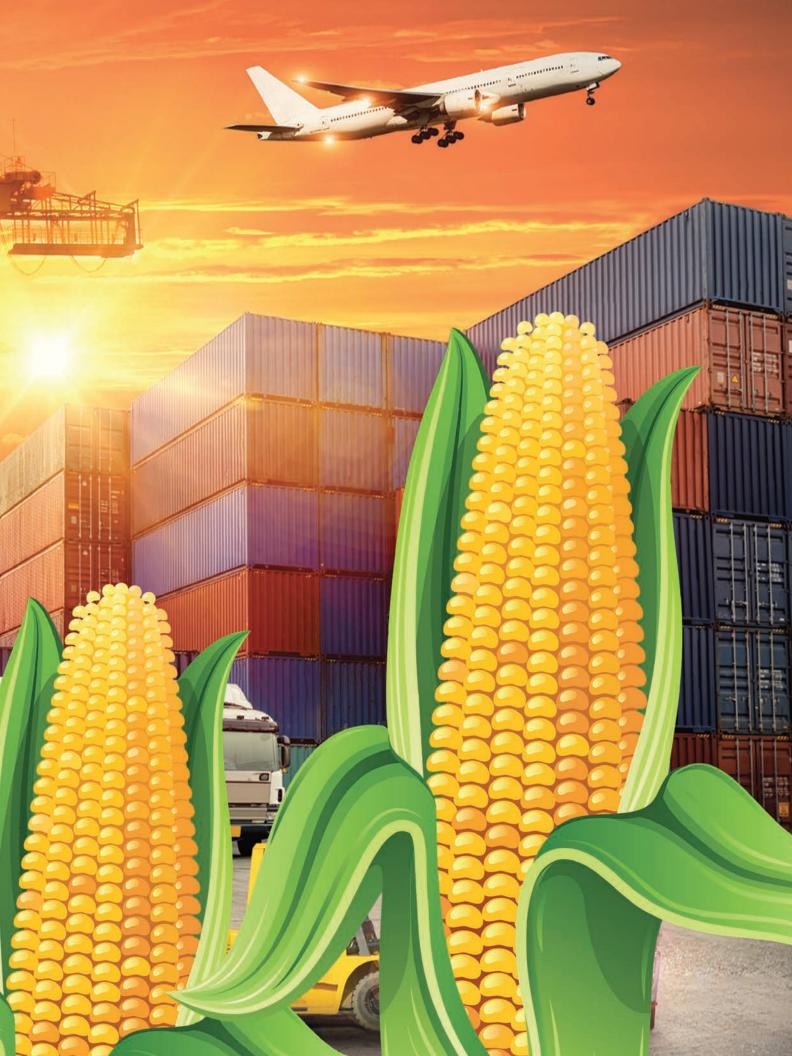
Source: http://agriexchange.apeda.gov.in/IndExp/PortNew.aspx

TOP FIVE STATES FOR AGRICULTURAL AND RELATED EXPORTS, 2018-19 (APR-NOV)



Source: http://agriexchange.apeda.gov.in/IndExp/PortNew.aspx

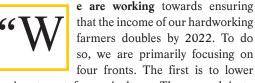






After years of augmenting production and ensuring food security, India is embarking on a different path with a pronounced focus on boosting exports. It has drawn up a dedicated agriculture export policy to cash in on the era of surpluses and to alleviate agrarian distress.

ANITHA MOOSATH



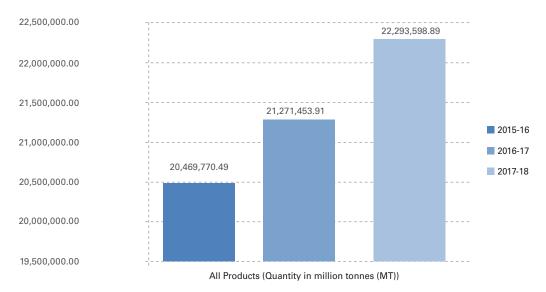
the input cost for agriculture. The second is to ensure that agrarian produce gets appropriately priced. The third is to reduce wastage and the fourth is to provide alternate means of income to farmers." Prime Minister Shri Narendra Modi's announcement in early 2018 came as a decisive boost to farmers across the country, promising them an era of good tidings and reduced distress. Adding a fifth dimension to this vision and bolstering it enormously is the agriculture export policy—recently unveiled by the Ministry of Commerce & Industry, slated to increase the level of agricultural exports from US\$ 30 billion to US\$ 60 billion by 2022.2

TOP PRIORITY

The agri export policy has come as a sequel to a series of measures taken over the years to

strengthen the predominantly agrarian economy that India is-agriculture is the primary source of livelihood for nearly 58% of the population.³ Post the food crisis in the mid-1960's, the country embraced the modalities of the Green Revolution. An era marked by cultivation of high-yielding crop varieties and increased use of fertilisers was unleashed, aimed at increasing output and thereby ensuring food security; and between 1965 and 2015, there was a 3.7-fold increase in food production.4 Several profarmer steps were taken in the years that followedtechnology adoption, remunerative prices for crops, subsidies on farm inputs, policy initiatives, and public investments. In recent years, an increasing need was being felt to lay more focus on the needs of the farming community; renaming of the Ministry of Agriculture as the Ministry of Agriculture and Farmers Welfare in 2015 was one of the major steps in this direction.5 Drawing up of a comprehensive agri export policy too is a step aimed at bolstering efforts to improve farmer welfare. The quest now is "to grow sustainably, trade abundantly and progress harmoniously."6

INDIA'S THREE YEARS EXPORT SUMMARY STATEMENT



Source: http://agriexchange.apeda.gov.in/indexp/exportstatement.aspx

INNATE STRENGTH

India has played an integral role in global agricultural trade in the past one decade. As per the World Trade Organisation data for 2015, it ranks ninth among the world's major exporters. The country produces nearly 600 million tonnes (MT) of agri products, including horticultural produce. Total agricultural exports registered a CAGR of 16.45% over FY10-18 to reach US\$ 38.21 billion in FY18; it stood at US\$ 15.67 billion in April-August 2018. Globally, India is the second largest producer of rice, wheat, and other cereals. Cereals export stood at US\$ 8 billion during 2017-18, with rice (including basmati and non-basmati varieties) contributing a major share.

During the same period, fruits and vegetables worth US\$ 1.4 billion¹¹ and spices worth US\$ 3.1 billion¹² were exported. Tea exports reached a 36-year high of 240.68 million kg in CY 2017 while coffee exports touched a record 395,000 tonnes.13 Vis-à-vis organic products, India enjoys a twin advantage-an agroclimactic zone suiting varied crop varieties and a rich and native tradition of organic farming-which it is leveraging to meet the growing demand in the domestic as well as international markets. During 2017-18, production of certified organic products (oilseeds, sugarcane, cereals and millets, cotton, pulses, medicinal plants, tea, fruits, spices, dry fruits, vegetables and coffee) touched nearly around 1.70 MT and total volume of organic exports stood at 4.58 lakh tonnes, bringing in US\$ 515.44 million.14 Food processing too is a wholly export-oriented industry in India, marked by joint ventures, foreign collaboration, and FDI inflows. India's exports of processed food

amounted to ₹27,257.69 crore (US\$ 3.81 billion) in 2017-18.¹⁵ Supportive policy measures have added strength to the geographic advantage the country enjoys, which lends it easy connectivity to Europe, the Middle East, Japan, Singapore, Thailand, Malaysia, and Korea.

A number of factors have contributed to India's rise as a consumer market as well as an export hub—a strong consumer base, evolving food choices, large expanses of farm lands, and a large population engaged in agricultural work. The Make in India drive has already brought in a renewed focus on value addition and on processed agricultural products. The agri export policy goes several steps ahead, adopting a more holistic approach with implications across the spectrum—production, processing, transportation, infrastructure, R&D, removal of trade barriers, and enabling market access—aimed at integration with the global value chain.

RICH DIVIDENDS

The agri export policy aims to expand India's export basket and double exports from the present nearly US\$ 30+ billion to nearly US\$ 60+ billion by 2022, and touch US\$ 100 billion in the next few years thereafter, under a stable trade policy regime. It is also slated to provide an institutional mechanism for facilitating market access, and dealing sanitary and phyto-sanitary issues. High value and value-added exports will receive a boost, and there will be a pronounced focus on perishables. These steps will go a long way towards facilitating integration with the global value chain and help farmers reap the benefits of opportunities in overseas markets.

ELEMENTS OF AGRICULTURE EXPORT POLICY FRAMEWORK

Strategic	Policy measures
	Infrastructure and logistics support
	Holistic approach to boost exports
	Greater involvement of State Governments
	in agri exports
	Focus on clusters
	Promoting value-added exports
	Marketing and promotion of Brand India
Operational	Attract private investments into production and
	processing
	Establishment of strong quality regimen
	R&D
	Miscellaneous

Source: http://commerce.gov.in/writereaddata/uploadedfile/MOC_636802088572767848_ AGRI_EXPORT_POLICY.pdf

> Another important aspect is that the policy strives to keep ad-hocism at bay and move towards a "stable and predictable policy with limited State interference to send a positive signal to the international market." In a move aimed at ensuring this, no agricultural product would be brought under any kind of export restrictions except for commodities identified as essential from a food security perspective. Also, there will not be any curbs (viz minimum export price, export duty, export ban, etc.) on processed agricultural products or organic products. However, the policy for primary agriculture products like onion would be reviewed periodically on a case-to-case basis depending on the price-supply situation, Minister of Commerce and Industry and Civil Aviation, Shri Suresh Prabhu said while speaking to reporters after the Cabinet meet that approved the maiden export policy.18

> The implementation of the agri export policy is estimated to have a financial implication of over ₹1,400 crore¹9 (US\$ 195.87 million) and its recommendations have been categorised under two heads: strategic and operational.

The strategic measures entail reforms in Agricultural Produce Marketing Committees (APMC) Acts and liberalising land leasing policy across States. Developing dedicated agri infrastructure at ports with 24x7 customs clearance for perishables will positively impact trade outcomes.

The export policy also envisages setting up of product-specific clusters in different agro climatic zones of the country. This echoes the Budget 2018-19 proposal for a cluster development approach to boost agricultural/horticultural production.²⁰ According to Arpita Mukherjee, Professor, ICRIER, some of the key issues in India are ensuring traceability to the farm, having good quality production that meets the

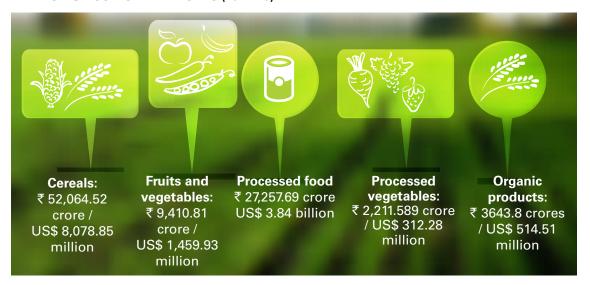
importing country's standards, and ensuring consistent supply of products as is demanded by the importers of the receiving country. "By developing clusters, farmers can be directly linked to importers through their farmer producer organisations. Digitalisation of land records and traceability to the farms can be developed. Buyers will know from where they can source the produce. However, for exports there is need for value addition which includes processing, sorting, grading, laboratory testing, certification. etc., and the success of the zones will depend on the extent to which such facilities can be created."

The policy envisages a higher degree of involvement of state governments too, making them more proactive in facilitating state-specific exports, and inclusion of agricultural exports in the State Export Policy.

India already enjoys an edge over others, with the highest number of organic producers in the world and being ninth in terms of organic farm land.²¹ Developing organic export zones and food park will further cement our position as a leader in the global market. Further, the rising incidence of lifestyle diseases and healthy food preferences are driving a demand for organic products the world over. The policy proposes that India could capitalise on this and emerge as a one-stop solution by offering a bouquet of ethnic products, ranging from healthy and organic to processed and convenient food. It also views this as a bright opportunity for entrepreneurs "to leverage the country's traditional food heritage and invest in innovation in taste, packaging, fusion food, and in improving shelf life."22 Manash Choudhury, Joint Adviser (Agriculture Vertical), NITI Aayog, says, "Earlier, value was getting more weightage than volume in the Indian agricultural sector. Over the years, India achieved sustenance in production and is now producing much more than its requirement. If you look at the global scenario, there is price fall across the spectrum and competition is increasing by the day. Against this backdrop, what the Indian government ought to do is to adopt a holistic approach towards exports. There has to be a paradigm shift from raw materials to processed and value-added products if India's exports are to gain momentum."

Marketing and branding will be a thrust area in recognition of the need to further integrate Indian farmers into the global value chain. The agri export policy also welcomes private participation, especially with respect to R&D, which will be supported by higher infrastructure spend by the government. A mechanism is on the anvil for linking all credible SHGs, FPOs, cooperatives, traders, and so on through a public-private partnership mechanism, including developing an e-commerce platform. To help exporters take informed decisions, an integrated portal is being

INDIA'S AGRICULTURAL EXPORTS (2017-18)



planned for real-time updates relating to tariff, nontariff, documentation, and pesticide and chemical MRL notifications. Barriers to productivity such as long gestation period for seed development will be solved through measures such as importing germplasm and seed varieties from breeders across the world. And setting up an agri startup fund is sure to bring in more innovation into the ecosystem.

The export policy also considers setting up of a quality regimen as centric to its paradigm-the Department of Commerce proposes to develop a common portal to monitor export rejections and provide nodal agencies a platform to undertake root cause analysis and take corrective action. This move seemingly keeps in line with the opinion of many an expert on the importance of abiding by high quality standards. During Biofach 2018, Paban K Borthakur, Chairman, APEDA, observed that "Apart from showing interest in Indian organic products, foreign customers are also interacting with Indian companies and farmers and exchanging information, resources and knowledge about agricultural practices. They have suggested that in order to trade globally, the three factors that Indian farmers needed to consider were quality, quantity and price point."23 Choudhury too opines that traceability is a matter of huge concern in the international market. "It will be very difficult to compete at the global level if we do not address the MRL (maximum residue level) aspect diligently," he adds.

BRIGHTER PROSPECTS

Buoyed by an expanding consumer base, proliferation of technology, and transformational policies, India is on a fast track of growth. A dedicated exports policy draws the contours of a new development paradigm based on the country's primary strength of agriculture. It perfectly aligns with the Make in India initiative too-building on our innate strengths and bridging gaps through the adoption of a holistic approach. As an Agrovet blog post observes, "food security and domestic price sensitivity as drivers of agricultural trade policies have become increasingly irrelevant. Restrictive trade policies do not insulate domestic prices from global price trends."24 India has understood this fully, and is redrawing its regulatory landscape accordingly-the agri export policy is another such step in this direction. ■

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'Private Sector Participation Must for Boosting Agri Exports'

The recently unveiled agriculture export policy is rooted in the vision to double farmer's income and increase the level of exports to \$60 billion by 2022. Professor Ramesh Chand, Member, NITI Aayog talks to Anitha Moosath about the era of surpluses on the agricultural front, the implications of easing restrictions, and what better visibility on the global front could yield.

he agri-export policy is marked by a pronounced focus on exports.
Could you give us a background of the scenario that necessitated

this renewed thrust?

India right now is in a situation wherein we have a surplus in most of the commodities. For example, in the early '70s, the country was producing 1 kg of food per person per day. Today, this stands at 1.65 kg of food per person per day. So, even after population growth, we are producing 65% more food per person at present compared to the early '70s. We are also facing the problem of surplus management in many commodities; of course, there could be a year of shortage, but that would not reverse the trend. We are now in a scenario wherein we should focus more on selling of produce in overseas markets. It is needed to maintain growth in agriculture, increase the income of our farmers, and boost foreign exchange earnings.

How feasible is the target of doubling agriexports by 2022?

We had already touched US\$ 40 billion in 2013-14, but exports declined during 2016-17. In 2017-18, it stood at nearly US\$ 38 billion. So, it is a matter of increasing it from \$US 38 billion to \$US 60 billion in the next five years, and that is doable. If you look at the growth rate of India's exports, it is evident that we have registered fairly impressive growth. After the founding of WTO, India's share in global trade of agricultural commodities has more than doubled, which means the rate of growth of our agriculture exports was twice that of global exports.



Professor Ramesh Chand, Member, NITI Aayog.

We have been doing very well and we can do much better if we provide our farmers the right policy environment.

How far will this policy support the vision to double the farmers' income by 2022?

Right now, the share of exports in the income of the agriculture sector is around 7%. But if you look at the share of exports in the actual marketed surplus, it is quite high. So, as far as income of the farmers is concerned, there is considerable impact. It pulls up the overall prices of commodities, upgrades the standard of the market, and even



increases awareness about grades. Exports help in increasing farmers' income in multiple ways, besides the direct impact of higher price realisation.

Restrictive trade policies have always stood in the way of farmers fully utilising opportunities in foreign markets. The export policy's aim to reduce this burden comes as a welcome relief to farmers. Your views...

India has always tried to balance the interests of the producers and the consumers. In a year of shortage, consumer interest becomes more important; in a year of bumper crop, the interests of farmers assume more importance. Like this year, we have an excess of onions; hence it is more important to address the interests of farmers than those of consumers. We are offering 10% export incentive, and we are not worried that onion price will become high for consumers if exports increase.

India has always followed a policy of strategic liberalisation rather than free trade. However, the existing trade restrictions have been causing concern among farmers. They want a stable environment without any arbitrary restrictions on exports. The new agriculture export policy proposes that restrictions be imposed only in extreme situations. Hence in future, the export environment will be more liberal with less number of regulations.

The agri-export policy envisages setting up of product-specific clusters in different agro climatic zones. How can a cluster development approach contribute to establishing a stable market and promote

exports?

We have so many examples, in India as well as at the global level, which prove that specialisations are very good for growth—like the milk belt in Gujarat. If there is a cluster, then all the necessary requirements—cold chain, processing, and so on—would be provided at one place, and that provides a big boost. It is a proven model that is more economical and helps achieve economies of scale. That is why most commercial crops are grown in clusters. Once there is an established cluster, there will be better infrastructure and trade facilitation, and also complementarity visavis certain aspects of infrastructure and logistics.

A particular agro-climatic zone would be an established cluster for one product, but it may have the potential for other commodities too. We should explore these kind of pockets that are unknown. For instance, there is a cluster in Jharkhand which is extremely good for tomatoes, but is not well-known.

Marketing and brand promotion are areas where India has perhaps lagged behind so far. What are the policy's recommendations in this regard?

We have so far focused on bulk products in which, generally, unit price realisation is less. But if you go for a branded or labelled product, then it pays in many ways. Whether we are selling in bulk or as a branded product depends on the kind of consumer we are catering to. Brand promotion pays well particularly while catering to those at the upper end of the consumer chain, be it in India or abroad. For example, one would prefer buying a particular brand of basmati rice—say Kohinoor—rather than buying

"THERE IS SPECIAL EMPHASIS on organic in the new export policy too because now the trend is shifting from chemical agriculture to organic agriculture."

just any basmati rice variety grown in India.

In order to take advantage of overseas markets with high income, we should focus more on brand promotion. The export basket should also diversify in various areas: in terms of commodities, branding, labelling, grades, and raw products versus processed /intermediate products. A holistic approach should be adopted towards exports rather than sticking to one particular aspect. As I mentioned earlier, India has to use all these options since we are entering an age of surpluses.

What degree of private participation does the policy envisage, especially with respect to R&D?

Private capital should be welcomed in agriculture. Private players should look at the sector not just for sale of inputs, but also to give technology and knowledge to farmers. If we have to export, we need to be competitive. And for competition, we require the best technology of the world, we need to reduce average cost, we need to have the best transportation, and so on. And in many cases, if a product of a particular quality is required, then contract farming may be required. Private sector participation is important in agriculture as a whole but it is all the more important in the area of exports. If an exporter has entered into a contract, it would provide the assurance of procuring a product of a particular quality at a particular time and thereby plan exports better.

Technology is the primary strength of the sector. And if we have to improve quality, then we should encourage the private sector too to enter into R&D. We have had wonderful results in this respect. For instance, Jain Irrigation's supply of disease-free banana seedlings has boosted productivity.

India has remained at the lower end of the global value chain due to lack of uniformity in quality and standardisation. How can we establish a robust quality regimen, which is

centric to the export paradigm?

India is capable of producing quality products and for this, we have to further organise the business of exports. This is also going to be more important because consumers are now more conscious of the impact of food on health—they want to know about traceability, the kind of chemicals used when food was produced, the amount of residue, and other such aspects. As we are entering an era of surpluses, people are becoming more conscious of food safety and health benefits. Hence we need to make sure that our produce does not get rejected, and that we stay ahead of competitors. All these aspects are addressed in the new export policy.

Globally, India ranks first in terms of total number of organic producers and ninth in terms of organic farm land. What are the policy suggestions to boost outcomes in this respect?

APEDA (Agricultural and Processed Food Products Export Development Authority) is already certifying and promoting organic products. There is special emphasis on organic in the new export policy too because now the trend is shifting from chemical agriculture to organic agriculture. This requires a different set of standard production practices. A more important aspect is to offer training to farmers on how to convert their land from inorganic to organic, which would require some time.

Ayurveda products and traditional medicines from India too hold high scope for exports. People are now turning towards India as Vedic culture, spirituality, and agriculture were all integrated here at one point. What we need to do is organise our Ayurveda products exports and put in place levels and brands combined with publicity and promotion.

How will the new policy help in integrating farmers into the global value chain?

One of the constraints has been the lack of organised private capital in the agriculture sector. We are now aware of this and have looked at statistics too—the share of private capital in total capital investment in agriculture is now less than one per cent. This has to be increased, and to this effect, we have introduced laws such as the Model Contract Farming Act and Model Marketing Act. These will attract investments from the private sector, which in turn would help gain access to overseas markets. We need to have an open mind towards foreign investments too. That can help Indian agriculture be a part of the global value chain—then the reach improves, the logistics improve, and the cost improves. This is the basic idea of introducing a new export policy.



THE GIFT OF WELL BEING

Yoga is India's gift to the world





The largest exporter of carpets in the world, India is well on its way to increasing its share of this market over the next few years. Government measures have helped pave the way for the country to maintain its competitive advantage.

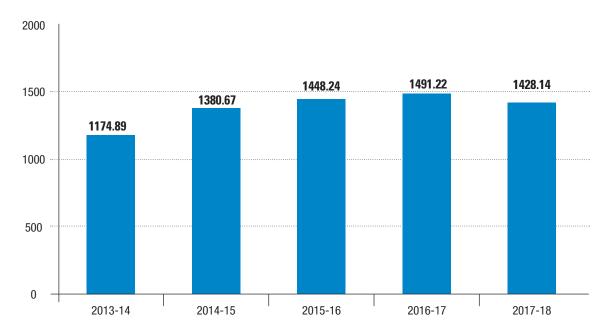
KANIKA PUNWANI SHARMA

ndian carpets have a rich and royal history, rising from the times of Emperor Akbar in the 16th century. While designs have evolved over time—embracing aesthetics as varied as Persian influences, intricate calligraphy, and naturalistic floral and animal prints—the quality of these handlooms has always remained impeccable. Whether it is a simple wool pile or more complex silk and pashmina yarns, India's carpets have maintained a stellar global reputation and continue to attract significant demand year on year. Today, India is

the world's largest exporter of handmade carpets, both in terms of value and volume, and holds a roughly 35% share of the world markets for handmade carpets and floor coverings (2015 estimate).¹

The story of India's carpet market is one spanning decades and embracing unparalleled growth—post Independence, exports have increased exponentially from around ₹3 crore (US\$ 422,231) in 1947-48 to ₹11 crore (US\$ 1.5 million) in 1970-71² and stood at an astounding ₹9205.90 crore (US\$ 1,295 million) in 2017-18.3

INDIA'S HANDMADE CARPETS & FLOOR COVERINGS EXPORTS (IN US\$ MILLION)



Source: http://www.cepc.co.in/industry-at-a-glance

These sustained figures are testament to the quality of product and the committed efforts of the government and bodies such as the Carpet Export Promotion Council (CEPC) of India who have unveiled several initiatives to maintain and grow the industry. However, before understanding these initiatives, it is important to gain an overview of present export figures and the importance of this industry to India.

UNDERSTANDING THE TAPESTRY

According to CEPC, from 2011-12 to 2017-18, Indian exports of handmade carpets and other floor coverings rose from US\$ 955.68 million to US\$ 1427.70 million, a CAGR of 6.92%. In 2017, tufted carpet exports from India stood at US\$ 554.6 million, woven carpets at US\$ 501.4 million, and knotted carpets at US\$ 384.4 million.⁴ Furthermore, silk carpets are showing promising growth—export of silk carpets was valued at US\$ 2.68 million in 2017-18, while between April-October 2018 alone, these exports rose to US\$ 2.76 million.⁵

India exports almost 90% of its total carpet production to more than 70 countries. Of these, as per 2017-18 figures, the US is the largest importer (US\$ 731.84 million), followed by Germany (US\$ 140.58 million), the UK (US\$ 78.52 million), Australia (US\$ 56.25 million), and the UAE (US\$ 51.15 million).

Indian carpet are produced in various regional

clusters around the country with the Bhadohi-Mirzapur belt in Uttar Pradesh producing the highest quantity. Other major carpet-producing regions are located in Agra, Jaipur, and the Kashmir valley, with each region specialising in a specific type of carpet—for example, hand-knotted, naturally-dyed Persian and Turkish carpets in Agra and hand-knotted silk and woollen carpets in Kashmir.⁷

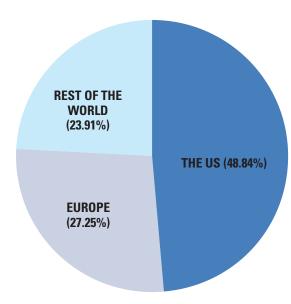
These exports are important not only for India's GDP, but also for employment. Since the industry is so dependent on handmade products, it is highly labour intensive and employs approximately 20 lakh workers.⁸ Significantly, many of these artisans are women, many are from rural areas, and many are from underemployed sections of society—carpet weaving provides the last of these workers an additional source of income and the flexibility of working from home. The industry also indirectly employs thousands of people from connected sectors such as raw materials and transport.⁹

Recognising these contributions of the handmade carpet sector to the country's economy, the government and CEPC have executed and planned several initiatives to help accelerate the industry's growth.

PROVIDING THE FABRIC FOR GROWTH

Government initiatives for the carpet industry are mainly focused on skill development through education, financial and marketing assistance, and quality control.

KEY MARKETS AND POTENTIAL



Source: http://www.cepc.co.in/industry-at-a-glance

For example, a 2017 *The Economic Times* report said that the government planned to cement India's position as the leading source of handmade carpets by setting up quality benchmarks for products. The government, through the Ministry of Textiles, plans to institute these benchmarks by setting up a brand and trademark for handmade carpets that will be in line with Australia's Woolmark—a trademark that guarantees the highest quality of wool. The report quotes Mahavir Pratap Sharma, Chairman, CEPC, as saying, "We will take two or three years to create parameters on turnover, employment and compliance with effluent treatment norms."

The quality trademark will be used in conjunction with existing geographic indications on handmade carpets from Kashmir, Bhadohi-Mirzapur, and Varanasi to showcase the regional carpets globally. Further, the Council plans to help weavers meet the quality norms by setting training standards. An impetus behind establishing this trademark is to help Indian handmade carpets compete with global machine-made rugs. "We want India's handmade carpets to become synchronous with the brand. We want to put it across that handmade carpets can be as per customers' choice, unlike machine-made rugs," said Sharma.

Furthermore, at the inauguration of the 35th edition of the Indian Carpet Expo in 2018, Minister of State for Textiles Shri Ajay Tamta, announced that in order to establish Indian carpets as a global brand,

the government was also planning to eliminate blocks in the production and export of carpets. He said that through this streamlining of processes, the country aims to target a 50% share of the global carpet market.¹⁰

The government also gave an 'export excellence' tag to Bhadohi in 2018. The tag comes with financial assistance to carpet makers, especially smaller artisans and weavers, to obtain modern machinery, improve export infrastructure, and organise fairs and exhibitions.¹¹ The government additionally set up the Indian Institute of Carpet Technology in Bhadohi in 2001—the first of its kind in Asia, it aims to expedite innovation and technology in the industry in addition to developing human resources.¹²

CEPC, too, has been concentrating on educational and skill-development initiatives, and to this end has: 15

- Opened 120 carpet weaving training centres in Jayaputa, Bhadohi, and Mirzapur
- Imparted training to around 1,956 artisans, especially women
- Run 12 handicrafts technical training programmes to train 240 artisans in Odisha, Panipat, Jharkhand, Chhattisgarh, and Agra
- Started one design and technical training centre in Rajasthan and plans to start seven more in Rajasthan, Chhattisgarh, Odisha, Jharkhand, Uttarakhand, and Panipat to train 320 artisans
- Started five technical training centres and plans to start six more in Sikkim, Manipur, Bihar, Andhra Pradesh, Jharkhand, and Maharashtra to train 220 artisans¹⁴
- Organised informational seminars on export potential, pollution prevention, and GST refunds and compliance in the textile industry

Finally, like the government, CEPC is also trying to popularise Indian carpets worldwide through organising vendor participation in international expos in Melbourne, Oslo, Shanghai, Dubai, and Hong Kong, among other places. These initiatives promise to strengthen the already vibrant industry and help it achieve its goals of future growth. In fact, IBEF is working closely with CEPC for the branding and promotion of Indian carpets under the brand campaign titled Indian Rugs.

WEAVING A DURABLE FUTURE

The outlook for the carpet industry over the next few years looks positive. CEPC has projected steady year-on-year growth and estimates total exports should reach US\$ 2,171.35 million by 2020-2021.¹⁴ Furthermore, the Council is focused on exploring untapped markets and has identified some thrust



countries for this. These include Scandinavian countries as well as Latin American countries such as Brazil, Chile, Argentina, and Colombia.¹⁶

Analysts are also projecting increased segmentation in the carpet market based on consumer preference. For example, demand has risen for modern designs and low-end carpets such as hand-tufted carpets along with washable cotton rugs¹⁷—a trend that is expected to stick for a few years. A 2017 report released by the Freedonia Group noted that area rugs are often more competition resistant than carpets, as rugs can be used to complement hard-surface flooring as well. Consequently, woven and other products have sustained higher demand growth than tufted products between 2011 and 2016, a trend expected to continue till 2021. However, tufted products will continue to do well in commercial settings, where carpet tile is often preferred to hard-surface floorings.¹⁸

Besides exports, demand is expected to grow domestically as well. The Freedonia Group report further claimed that carpet demand in India is expected to grow 5.9% per year to 120 million square metres in 2021, an expansion that will outpace any other nation. The report expects this growth to be powered by increased construction activity along with increased modernisation and urbanisation, which will reduce the number of buildings with unfinished flooring in the country.¹⁹

Overall, the next few years present a fairly rosy outlook for the carpet industry, with reams of success knitting the path to strong growth. ■

CEPC IS ALSO TRYING TO

popularise Indian carpets worldwide through organising vendor participation in international expos.

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MARCH-APRIL 2019

Organic Sikkim

The path to becoming a 100% organic state has been arduous, even unsteady at times, but the resolve of the people and the government of Sikkim in accomplishing this mission has been as sturdy as the Khangchendzonga mountain range that this land is known to hold.

NALINI RAMACHANDRAN

ikkim may be among the smallest states in India, but it had an ambitious dream: to become a green state. With the co-operation of its people (especially farmers), backed by the determined efforts of the state and national governments, Sikkim thus began this upward journey. And in 2016, it became the country's only fully organic state.

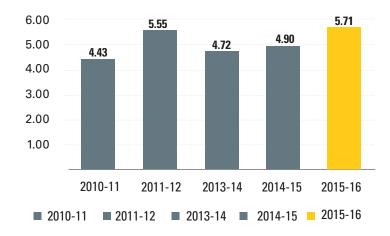
As a result, it earned a prestigious honour in October 2018: for its policies pertaining to agroecology and sustainable food systems, Sikkim won the Future Policy Award 2018, co-organised by Food and Agriculture Organization (FAO) of the United Nations, the World Future Council (WFC), and the International Federation of Organic Agriculture Movements (IFOAM – Organics International). IFOAM Executive Director Louise Luttikholt has said, "Sikkim became the first organic state in the world—100% Organic is no longer a pipe dream but a reality, serving as an outstanding role model for others to follow."

THE GREEN LANDSCAPE

India is among 178 countries² that have mindfully adopted organic methods. As of 2016, the country ranked 9th in terms of the total area under organic cultivation, with around 1.49 million hectares being involved in this practice.³ Moreover, out of the 2.7 million organic producers in the world in 2016, India topped the chart with 8,35,000 organic farmers.⁴ In 2017–18, the country produced 1.70 million tonnes (MT) of certified organic products.⁵

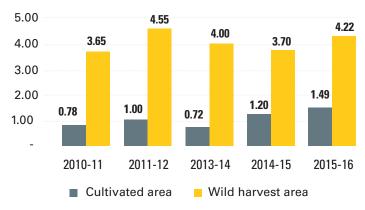
The world is now acknowledging and aiding the growth of the organic food sector, but Sikkim knew more than 15 years ago that switching to an organic way of life would not only save farm produce from the damage caused by chemical fertilisers and poisonous pesticides, but also improve the quality of the region's air, water, and soil. Sikkim's mission began with the

ORGANIC AREA IN INDIA (IN MILLION HA)



Source: https://www.ey.com/Publication/vwLUAssets/ey-the-indian-organic-market-report-online-version-21-march-2018/\$File/ey-the-indian-organic-market-report-online-version-21-march-2018.pdf

INDIA'S CULTIVATED AND WILD HARVEST AREA (IN MILLION HA)



Source: https://www.ey.com/Publication/vwLUAssets/ey-the-indian-organic-market-report-online-version-21-march-2018/\$File/ey-the-indian-organic-market-report-online-version-21-march-2018.pdf

state government's decision to do away with chemical fertilisers in 2003; by 2016, more than 76,000 hectares of the state was brought under organic farming,⁶ earning it the '100% organic state' tag.

THE PATH TO SUCCESS

In 2003, the Sikkim State Organic Board was constituted. The state then developed 396 bio villages and enrolled 14,000 farmers for this mission.⁷

By 2008-09, the state had built 24,536 rural-compost-cum-urine pits, along with 14,487 vermicompost pits,⁸ to make organic manure readily available to farmers. Continued research for improved technology, organic seed production, and soil testing were carried out, even as farmers were regularly trained in organic practices. Infrastructure in the form of a ginger processing unit, automated greenhouses, and cold storage facilities came up across the state.

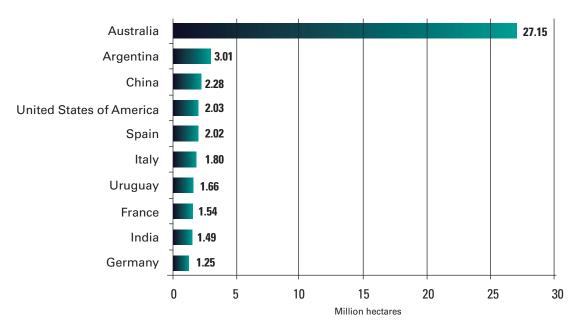
New retail outlets and organic markets enabled buyers of organic products to interact directly with farmers, thus helping them understand the importance of and need for this agricultural shift.



RISING TO NEW HEIGHTS

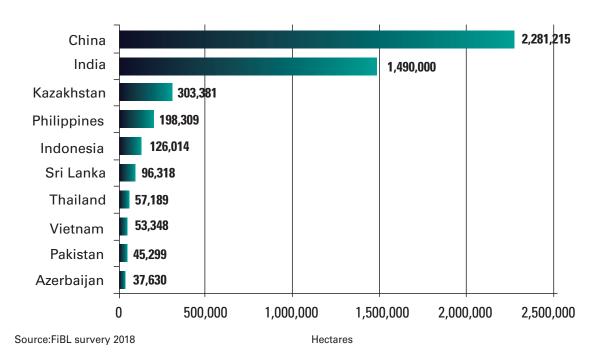
In *The Indian Organic Market: A New Paradigm in Agriculture*, a March 2018 report co-published by ASSOCHAM India and Ernst & Young, Amit Vatsyayan (Partner, Advisory Services - Ernst & Young LLP) notes, "In the 1990s, the sector was limited to the export of tea to European markets. Currently, India is emerging as a key player in the global arena, exporting over 300 products in 20 different categories to over 20 countries."

THE TEN COUNTRIES WITH THE LARGEST AREAS OF ORGANIC AGRICULTURAL LAND 2016



Source:FiBL survery 2018

ASIA: THE TEN COUNTRIES WITH THE LARGEST ORGANIC AREA 2016

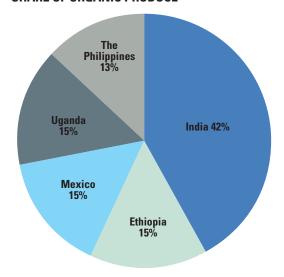


India's total organic food exports stood at 4.58 lakh MT, amounting to ₹3,453.48 crore (US\$ 483.18 million) in 2017-18. Major importers include Australia, Canada, the European Union, Israel, Japan, Korea, New Zealand, Switzerland, the US, and Vietnam. Agricultural and Processed Food Products Export Development Authority (APEDA) states, "In terms of export value realization, oilseeds (47.6%) lead among the products followed by cereals and millets (10.4%), plantation crop products such as tea and coffee (8.96%), dry fruits (8.88%), spices and condiments (7.76%) and others." 10

Meanwhile, Japan and South Korea have held talks with the Sikkim government to import food grains, vegetables, and medicinal plants grown organically in the state. While South Korea finds promise in Sikkim's organic cabbage, chilli, garlic, ginger, and buckwheat, Japan is interested in the sticky rice produced in the state. Khorlo Bhutia, Principal Director-cum-Secretary – Horticulture and Cash Crop Development Department (Government of Sikkim), has said, "Sticky rice is being grown in 0.2 hectares of land at Kameray village in East Sikkim on an experimental basis. Even though it is being done on a trial basis, we are confident of its success."

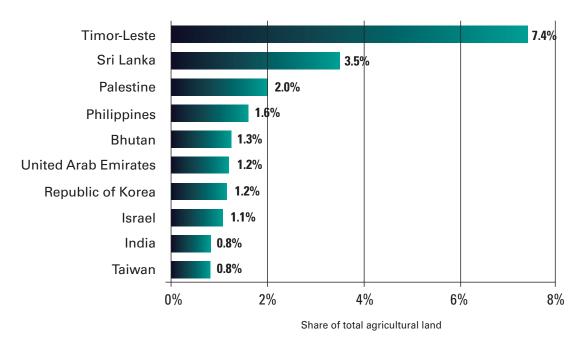
INDIA IS AMONG 178 COUNTRIES that have mindfully adopted organic methods. As of 2016, the country ranked 9th in terms of the total area under organic cultivation.

SHARE OF ORGANIC PRODUCE



Source: https://www.ey.com/Publication/vwLUAssets/ey-the-indianorganic-market-report-online-version-21-march-2018/\$File/ey-the-indianorganic-market-report-online-version-21-march-2018.pdf

ASIA: THE TEN COUNTRIES WITH THE LARGEST ORGANIC SHARE OF TOTAL AGRICULTURAL LAND 2016



Source:FiBL survery 2018

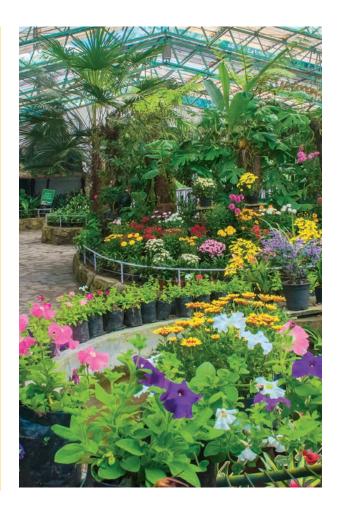
FLOWER OF THE FLOCK

Sikkim is known for its wild orchids, but would you imagine the state is home to over 530 species of this flower?¹² That is what Naresh Swami, the 'orchid hunter of India', found out as he went about documenting the species in the Sikkim Himalayas region. Information about several of these species will now be available on 'Orchids of Eastern Himalayas', an app launched by Assam's Balipara Foundation.¹³

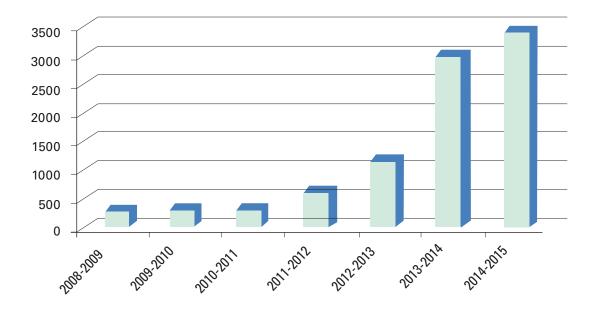
Sikkim Organic Mission, as the policy and mission are officially called, has for long known the potential that floriculture, especially orchid farming, holds for the state. Sikkim's Cymbidium Development Centre promotes the cultivation of Cymbidium Orchids, educates farmers about the species, and introduces them to suitable floriculture technologies.

The ICAR - National Research Centre for Orchids, situated at Pakyong in Sikkim, is also committed to this cause. Its Vision 2050 document estimates that by 2050, orchids worth ₹5,000 crore (US\$ 699.55 million) will constitute domestic demand,¹⁴ and the Centre hopes to significantly cater to this future market.

Moreover, the opening of the new airport at Pakyong will not only increase tourism traffic, but will also lift Sikkim's orchid exports. "In a bid to attract more foreign tourists, our government is laying special focus on orchid cultivation in the state and a lot of people in and around Pakyong area have started it. With air connectivity, the orchid growers will get a lot of benefits," CP Dhakal, Secretary – Tourism and Civil Aviation Department (Government of Sikkim), has said.¹⁵



IMPORT OF FRESH ORCHIDS



Source: https://www.nrcorchids.nic.in/images/vision-2050.pdf

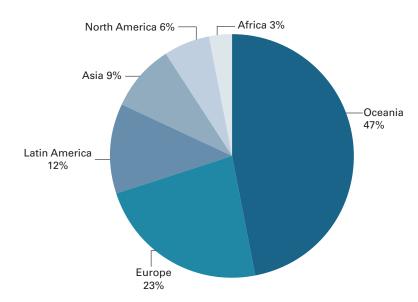
BROADENING THEIR HORIZONS

The story of Sikkim's organic success has inspired many. It was featured in an episode on toxic food in the television show Satyamev Jayate, hosted by actor Aamir Khan. The state's initiatives at the time-it was telecast in 2012-and a brief video call with Chief Minister Shri Pawan Kumar Chamling formed an integral part of the episode's segment on how safe food produced through organic farming can be the solution to food-induced health hazards faced by the country's people.¹⁶ So far, as DS Rawat, Secretary General, ASSOCHAM, has pointed out in the report The Indian Organic Market: A New Paradigm in Agriculture, "11 state governments (Kerala, Karnataka, Andhra Pradesh, Sikkim, Mizoram, Nagaland, Himachal Pradesh, Madhya Pradesh, Gujarat, Rajasthan, and Odisha) have come out with their own State Organic Farming Policies."17

Big food companies have been making note of Sikkim's progress and are now ready to source produce from the state. For example, the 300 booths of Safal Organic, the organic range of fruits and vegetables from Mother Dairy, will procure products from certified organic farms from Sikkim and other states.¹⁸

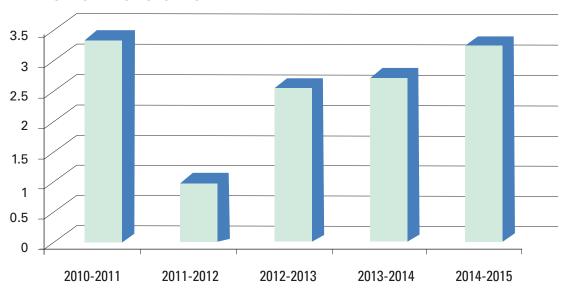
Another positive outcome of Sikkim's organic mission has been ecotourism. The state had topped 'Lonely Planet's Best in Travel 2014 - top 10 regions' in the world list for upholding sustainable tourism

DISTRIBUTION OF ORGANIC AGRICULTURAL LAND BY REGION 2016



Source:FiBL survery 2018

EXPORT OF FRESH ORCHIDS



Source: https://www.nrcorchids.nic.in/images/vision-2050.pdf

WITH MORE AND MORE ECO resorts and farms coming up, the state's tourism sector, which also has the potential to generate mass employment, seems to be booming.

through its eco-friendly policies.¹⁹ The number of tourists has seen a 50% increase from 2014 to 2017.²⁰ Travellers can now experience living in organic village homestays, cooking and eating organic food, and even learning more about organic farming. With more and more eco resorts and farms coming up, the state's tourism sector, which also has the potential to generate mass employment, seems to be booming.

Going organic has already enhanced the lives of 66,000 farmer families in Sikkim.²¹ And Chief Minister Chamling, who hopes to provide employment to around 17,000 youth in the state under the government's 'One Family One Job' scheme, further wants the state's youth to take an interest in this "super industry" that is agriculture.²²

Even as India aims for revenue equal to ₹500 crore (US\$ 69 million) in the organic products industry by 2020,²³ Sikkim enters the second phase of its ambitious programme: to sustain the accolades it has earned so far, the state now aims to become self-sufficient in the production of vegetables by 2020 and food grains by 2025.²⁴ With its winning policy in place and the support of the state's people, no mission is impossible for Sikkim. ■

- 1 https://www.ifoam.bio/en/news/2018/10/11/future-policy-award-2018-announces-winning-policies-agroecology-and-sustainable-food
- 2 https://www.ey.com/Publication/vwLUAssets/ey-the-indian-organic-market-report-online-version-21-march-2018/\$File/ey-the-indian-organic-market-report-online-version-21-march-2018.pdf
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- 4 https://shop.fibl.org/CHen/mwdownloads/download/link/id/1093/?ref=1
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- 10 http://apeda.gov.in/apedawebsite/organic/Organic_Products.htm
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- 17 https://www.ey.com/Publication/vwLUAssets/ey-the-indian-organic-market-report-online-version-21-march-2018/\$File/ey-the-indian-organic-market-report-online-version-21-march-2018.pdf
- 18 https://economictimes.indiatimes.com/news/economy/agriculture/mother-dairy-forays-into-the-organic-food-segment/articleshow/67178218.cms
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- $22\ https://www.business-standard.com/article/pti-stories/17-000-youths-to-get-govt-job-in-sikkim-this-year-chamling-118112300891_1.html$
- 23 https://www.ey.com/Publication/vwLUAssets/ey-the-indian-organic-market-report-online-version-21-march-2018/\$File/ey-the-indian-organic-market-report-online-version-21-march-2018.pdf
- 24 https://www.business-standard.com/article/pti-stories/17-000-youths-to-get-govt-job-in-sikkim-this-year-chamling-118112300891_1.html



Ports: Essential Trailblazers for Booming India

India has embarked upon well-laid-out plans to expand and modernise its ports. Smaller ports in the country will now play a key role in development, and upcoming ports are expected to rise to international levels.

TARA ASOK

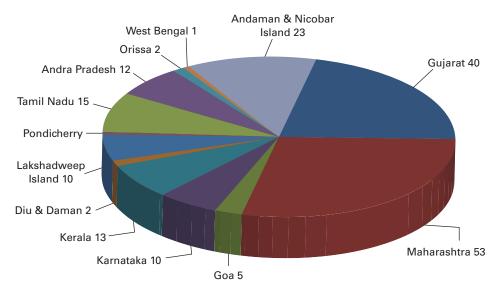
ndia created history on December 24, 2018 with a masterstroke by engaging in the strategic Chabahar port lying on the southern coast of Iran in the Sistan-Balochistan region. It is the first time that India will be operating a port outside the country, the ramifications of which will be felt far and wide, particularly in the Central Asian region. For one, it will open up robust trade opportunities for the country while strengthening trade ties in the region. This demonstrates in no small terms India's ability in handling major ports, and may also be an indication of the government's intention to significantly focus on and overhaul ports within the country too, along its 7,517 km coastline to increase trade volumes. India presently has 12 major and 200 minor and intermediate ports.

According to a World Economic Forum report

released on January 9, 2019, India is poised to be the third largest consumer market behind only the United States and China by 2030. Domestic private consumption, which accounts for 60% of the GDP and stands at US\$1.5 trillion presently, is expected to touch a staggering US\$6 trillion within this period. If this figure is indeed to be realised, then India will have to focus on inviting foreign investors to produce in India and export surplus after domestic consumption. It will also depend on the success of 'Make in India', which can in turn lead to the development of infrastructure facilities.

Critical to this growth will be the further development and enhancement of ports, particularly non-major ports along its coastline. Presently, 95% of trade volumes are handled by major ports with capacity touching 1,451 million tonnes (MT) as of

MINOR PORTS IN INDIA



Source: http://www.marinebuzz.com/2009/01/26/major-and-minor-ports-in-india/

March 2018 and non-major ports targeting 968 MT in 2019. As per figures presented by the Ministry of Shipping, non-major ports are evolving faster than major ones, accounting for 42.8% of the total traffic in FY17 as compared to 28.6% in FY07; and there is a greater demand for private participation in these ports under the present economic scenario.

In addition to this, if the new ports planned by the government under its ambitious Sagarmala project are developed with a well-rounded and holistic approach involving production, manufacturing, export, and infrastructure, then they can be optimally utilised to increase trade volumes. Monitoring and streamlining of supply chain logistics should also be an important aspect of port development in India to cut exorbitant costs once cargo is shipped from Indian ports, a situation which is presently costing India a fortune. Turnaround time for cargo shipped from Indian ports which stood at 3.44 days in FY17 from 4.01 days in 2015, could also be further improved as a result. This is one of the major bottlenecks faced by Indian ports as compared to those in countries like China, Singapore, Sri Lanka, and even the United Arab Emirates, which is a relatively young economy compared to India. Hence, definitive and immediate actions to remove loopholes are imperative.

An annual port sector meeting held in July 2018 came out with a multi-pronged action programme to not only boost port infrastructure but also venture into areas that spur economic activities in other sectors as well. Union Minister for Shipping Shri Nitin Gadkari, who chaired the meeting had then said that emphasis would be laid on the export of agriculture and aqua

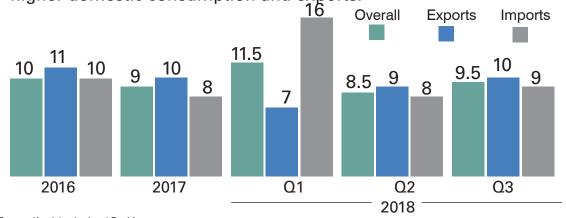
NON-MAJOR PORTS ARE EVOLVING faster than major ones, accounting for 42.8% of the total traffic in FY17 from 28.6% in FY07.

products. As a result, early this January, the Department of Commerce directed states to set up nodal agencies dedicated to implementation of the agriculture export policy. This move could prove to be highly beneficial for ports as it involves all related sectors such as R&D, clusters, logistics, and transportation. The primary objective of this policy is to double agricultural exports from US\$ 30 billion to US\$ 60 billion by 2022 and touch US\$ 100 billion in the next few years. More destinations and related agro-products are likely to be added to widen the scope of exports. This may be considered as another step towards the government's efforts to strengthen ports by widening the base of a host of economic activities related to them.

However, with major ports like the Jawaharlal Nehru Port (Nhava Sheva) in Navi Mumbai, Maharashtra and Paradip (Odisha) touching capacity saturation, it is necessary that government efforts to expand the existing non-major ports as well as optimally utilise new ports coming up under the Sagarmala plan, gain momentum. Indian ports will roughly handle around 2500 MTPA by 2025 and therefore capacity expansion will have to be handled by new ports. For example, the International Container Transhipment hub at Vizhinjam in Kerala—in the southern tip of the country—is strategically placed, falling under the

CHANGE IN EXIM CONTAINER VOLUMES (IN %)

Container volume growth has remained strong on the back of higher domestic consumption and exports.



Source: Kotak Institutional Equities; https://www.livemint.com/Money/Q9tlKfQmdWT5a1mDhGNOzH/Continuing-volume-momentum-puts-Indian-ports-in-a-good-posit.html

East-West trade route. Developed by the Adani Group, the first phase of the venture that is nearing completion will offer stiff competition to Colombo on which transhipment cargo from India is dependent presently. Despite hurdles, the port when completed is expected to transform economic activity in the region and create several employment opportunities in the state.

With the government relaxing transport rules for shipping recently, coastal shipping could get a major boost. For instance, early this year, car maker Maruti Suzuki India expressed interest in going south as part of its expansion plans. In an interview to BusinessLine, its chairman RC Bhargava said South India was becoming the new hub for car makers due to its proximity to ports and tax rebates. Andhra Pradesh and Tamil Nadu are already home to several international car makers for the same reason. Maruti Suzuki sold 12.20 lakh units during April-December 2017. Sales rose by 7.4% in 2018 with the company selling 13.08 lakh vehicles between April-December, as compared to the same period in 2017. This clearly indicates that with rapid increase in production and demand, manufacturers are eyeing newer ports that have greater potential and facilities for future domestic and export needs.

According to a study quoted by *India Briefing*, the estimated cost saving through mega ports falling under Sagarmala, namely Vizhinjam International Seaport in Kerala, Colachel Seaport in Tamil Nadu, Vadhavan Port in Maharashtra, Tadadi Port in Karnataka, Machilipatnam in Andhra Pradesh, and Sagar Island Port in West Bengal, could range from US\$ 5.2 billion to US\$ 5.9 billion per year by 2025.

Sharp depreciation of the rupee has also created a favourable climate by increasing demand for Indian products and as such, despite an imbalance in exports and imports, container volumes in Indian ports have risen by 8% between April-November, 2018 as per data compiled by JM Financial Institutional Securities Limited.

With India heading in the right direction economically, it is just a matter of time that loopholes get pegged as far as its ports are concerned. Getting on par with ports in countries like China and Singapore is no more a distant dream considering the pace at which the economy is advancing. At the moment, it is all about 'Make in India', for a government which has tried to stand by the adage that 'one who conquers the seas, conquers the world'.

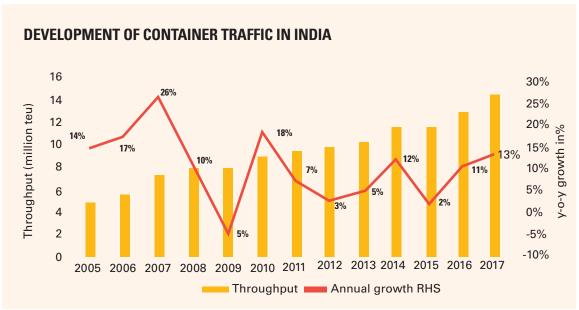
FY18 REGISTERS 4.77% INCREASE IN CARGO TRAFFIC AT MAJOR PORTS

India's 12 major ports Kandla, Mumbai, JNPT, Marmugao, New Mangalore, Cochin, Chennai, Ennore, V O Chidambarnar, Vishakhapatnam, Paradip, and Kolkata together with Haldia saw a rise of 4.77% to 679.35 million tonnes during FY18.

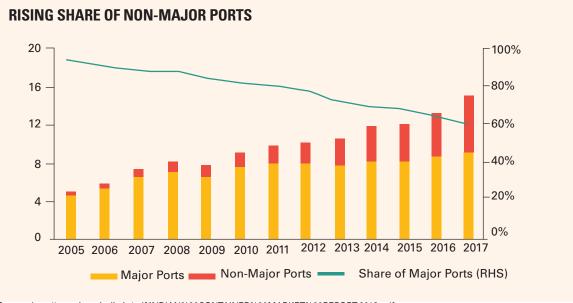
During 2016-17, cargo handled by these ports was 648.37 MT. Kandla port saw highest traffic volume at 110.09 MT in 2017-18, closely followed by Paradip port with 102.01 MT, JNPT 66 MT, Vishakhapatnam 63.53 MT, Mumbai port 62.82 MT, Chennai port 51.88MT, Kolkata port and Haldia handled 57.88 MT.

Coking coal volumes increased by 8.62% to 50.59% MT during the last fiscal year and container volumes rose 8.08%. Fertiliser volumes also increased by 7.22% during the fiscal year.

Reference: Indian Ports Authority, The Economic Times



Source: http://containersindia.in/pdf/INDIAN%20CONTAINER%20MARKET%20REPORT-2018.pdf



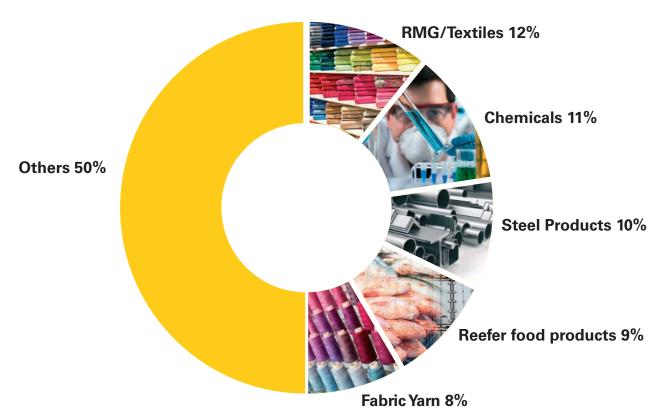
Source: http://containersindia.in/pdf/INDIAN%20CONTAINER%20MARKET%20REPORT-2018.pdf

FUTURE INITIATIVES

- *3,200 MT of port capacity is targeted by 2020 and the National Maritime Development Programme is being implemented with an outlay of US\$ 11.8 billion.
- *At least 189 projects for overhaul of ports with an investment of ₹1.42 trillion (US\$ 20.05 billion) have been envisaged by the government to get the Sagarmala project going.
- *Essar Port to invest in Hazira Port to the tune of US\$ 70 million by 2020.
- *The Government has announced huge investments in the roads and ports sector which will greatly benefit the country's economy. Ten coastal economic regions will be developed as part of Sagarmala.
- *Development of inland waterways to transport good to Indian ports as an alternative to road and rail transport. Where transporting by road would cost ₹1 (1.412 cents) per kilometre and rail ₹1.30 (1.836 cents) per kilometre, waterways would cost only 30 paise, making it more cost-efficient.
- *At least three M&A deals worth US\$ 39 million were struck in 2017.

(Source: IBEF Research)

MAJOR COMMODITIES EXPORTED FROM INDIA IN 2017



Source: http://containersindia.in/pdf/INDIAN%20CONTAINER%20MARKET%20REPORT-2018.pdf

VO CHIDAMBARANAR PORT

The VO Chidambaranar Port based in Thoothukudi district, Tamil Nadu will undergo capacity expansion, with investments to the tune of ₹5,720 crore (US\$ 807.683 million). The decision was taken after an expert appraisal committee (EAC), attached to the Ministry of Environment, Forests and Climate Change (MoEF&CC,) gave environment and coastal regulation clearances to the Port.

This expansion will include deepening of the approach channel enabling the port to dock large container ships having a capacity of 14,000 twenty foot units, making it a direct competitor to Colombo as a transhipment port. Presently, VOCPT has a water depth of 14 metres and ships with a draft of 12.8 metres, with a capacity of 60,000 tonnes can dock at the port. The expansion will increase depth to 16.5 metres and approach to 17.2 metres. This will enable docking of ships with a draft of 15.2 metres.

This expansion will cut logistic costs by 30%, but more capacity expansion needs to be planned to allow bigger ships, say industry experts. The port presently runs six general cargo berths, two container terminals, two coal jetties, one oil jetty and one shallow draft with a capacity to handle 46.78 MT of cargo.

Sources: ProjectsToday; Hindu BusinessLine

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IN GREAT DEMAND

India is the world's largest producer and consumer of black tea



Reinventing Education

Online education is growing fast in India as many students have access to smartphones and consume content through digital mediums. According to a joint report by Google and KPMG, India's online education industry is expected to grow almost eight times to hit US\$ 1.96 billion by 2021, with the number of paid users rising six-fold from 1.6 million now to 9.6 million.¹ While this space is expected to see an uptrend in the next few years, BYJU's – The Learning App founded by Byju Raveendran, has carved a niche for itself. Known for his unconventional and practical methods of teaching that grew popular over the years, his app now has more than 1.5 crore users with around 10 to 11 lakh students being added each month.² India Now Business and Economy speaks to Mrinal Mohit, Chief Operating Officer, BYJU'S – The Learning App, for more insights.

What was the genesis of the idea that is BYJU'S today?

The main idea behind starting BYJU'S was to make learning accessible, effective, engaging, and personalised for everyone. We addressed the existing gap in the way students learn and how concepts could actually be learnt.

While we started as a test prep coach, we realised that if we want to make a real impact on the way students learn, if we want to make them fall in love with learning, we need to start early—when the students start feeling the subject—as those crucial years lay the strong foundation for lifelong learning. So, Think & Learn Pvt Ltd (parent company of BYJU'S), with a focus on the K-12 (school-going students in classes 4-12) segment, was launched in 2011 in Bengaluru. Consequently, we launched our flagship product (BYJU'S- The Learning App) in August 2015.

In a conventional classroom learning system, access to high-quality education and personalisation of learning have always been an issue. Students are still getting trained to solve questions and not ask questions. Learning happens because of the fear of exams, and not for the love for learning. We need to bring back the child-like curiosity by creating products in a format that they will like, and hence, making them lifelong learners.

At BYJU'S, we have developed learning programmes that address these pressing needs along with making students enjoy learning. The unique combination of media, technology, and content has helped us create a holistic learning experience. Use of real-life teachers with technology as an enabler



makes the delivery of concepts effective and engaging. In fact, teachers are crucial to keep students engaged through the programme/video lesson and give them the 'someone who they can relate to', and 'someone who can explain the concepts' in a fun, simple, and engaging way. This also solves the problem of access to quality teachers in a one-on-one format.

Overall, BYJU'S learning programme creates personalised learning journeys for individual students based on their proficiency levels and capabilities, which help them learn at their own pace and style. As a brand, we are solving core problems—like access to quality teachers across geography—with technology.

Why did you choose online as your primary medium as against traditional forms?

Integrating technology in education not only increases engagement but also simplifies the way students learn. Technology today offers a combination of teachers, video lessons, and interactive games to be delivered through a personalised learning platform. Use of technology can help make complex concepts visual and contextual, which will help students understand not just the 'what' of learning it, but the 'why' and the 'how' as well. Children are primarily visual learners and explaining concepts with visual representations makes learning exciting and easier. For example, explaining concepts by relating it to real-life experiences improves understanding and retention of concepts for life.

What were the infrastructural challenges you faced?

As the country gets more tech-savvy, technologyenabled education will change the way learning is approached by students. Online learning is not just offline learning taken online, by simply digitising content. The advantage of integrating technology in education is that it not only enables you to take classes from the best teachers to every part of the country with the exact same high quality, but it also personalises the way students learn.

India, today, has the largest K-12 education system in the world, with over 260 million enrolments; 70% of the segment has access to a smartphone, and this percentage is fast increasing. This gives us an opportunity to use the smartphone as a learning device, and the app as a medium to reach millions of students and has the potential to solve the problem of access. A recent KPMG report suggested that by 2021, India will have over 735 million internet users. Further, India's mobile data consumption is expected to grow five-fold in the next three years. Semi-urban and rural areas are seeing significant uptake in internet usage and therefore, we see tremendous growth for online learning and education in these regions. Such an infrastructure enables an extended reach to remote parts of India and will go a long way towards transforming education in every nook and corner of the country.

In India, a majority of the parents—who are the decision-makers—are still sceptical about the online medium. How did you overcome this mindset?

If you are addressing a need and making an impact by helping someone learn better, retention will happen on its own. For most parents, especially in India, education is still the best way to make it big, so if we can help millions of students learn better, it will create a huge impact. Parents play a very important role in the educational journey of a student. Many working parents are unable to get a daily look into their child's education. So, one does not get to understand the strengths and weaknesses of their child. Our 'parent connect' app allows parents to stay up-to-date with their child's progress, be more involved in their child's learning journey and appreciate them on work well done.

While parents still make the decision of paying for the app, the key differentiator here is that we are targeting the end users and helping them become better learners. Parents have been seeing a real impact on their child's learning through the app—making it a valuable investment for them. In fact, a recent survey showed that 79% of parents said using BYJU'S app improved their children's learning dramatically, and another 17% said it improved their learning significantly

According to a recent report by Gray Matters Capital (GMC), Indians are now becoming more and more inclined towards education apps. Out of 2,000 users surveyed, a whopping 89% were in favour of paid learning apps. Today, parents are opening up to learning backed by technology. They genuinely see the value that a product like ours can bring in the lives of their children. At BYJU'S, the learning programmes are created for everyone, not just for the motivated.

The edutech sector is fast-growing and transforming the way learning is visualised and presented. This has also encouraged several startups in this area.

- a) Given this context, what has been your strategy to capture and sustain market share?
- b) What is your differential strategy that makes you the market leader?

One of the key differentiators is that we always speak to the end users, ie students, and help them become better learners. We are their learning companion and are there to help them fall in love with learning all over again. We believe we are our own competition and strive to run faster every day than the day before. We are constantly working on creating systems and learning experiences, which will make learning even simpler and much more fun. Here are the key points that explain how we are different from others in this space:

 Personalised learning based on the size and style of learning for every student. The app merges videos, interactives, and teachers to bring concepts to life. An average of 40 minutes is being spent by a student on the app every day.





- Creating a new segment of self-paced learners and active learners where students are enabled to take up the initiative and learn on their own, which is made possible by the combination of content, media and technology.
- Using original content, engaging video lessons and interactives that have been designed to adapt to the unique learning style of every student.
- Creating high-quality learning modules, videos and interactives across grades.
- Accessibility for students across grades irrespective of their geographical locations and proficiency levels.

Briefly describe the business model of BYJU'S and how it complements traditional education.

We presently follow a freemium business model whereby students get access to the content for free for about 15 days, post which they can subscribe for advanced levels. We encourage students to download and try the app first and then decide if they would like to subscribe to the lessons for an annual subscription fee. Our app is a student's learning companion and not a replacement for any of their existing channels of education. Students use the app to either strengthen concepts after it has been taught in their school or as a form of preparation before exams. Learning concepts visually help them strengthen their foundation and eliminate the need for rote learning.

While there is a rise in the availability of lowcost smartphones and cheap internet access, many remote, rural areas in India still do not have an internet connection. Is there scope for BYJU'S to expand and build potential in the rural market?

As stated previously, India is home to the largest K-12 education system in the world and 70% of this

segment has access to a smartphone. This gives us an opportunity to use the smartphone as a learning device and app as a medium to reach millions of students. The Government of India has launched several initiatives like SWAYAM, eBasta, and Rashtriya Madhyamik Shiksha Abhiyan (RMSA) that have been driving the adoption of online education across the country. The internet is quickly penetrating every nook and corner of the country. Semi-urban and rural areas are seeing significant uptake in internet usage and therefore we see tremend 'growth for online learning and education in these regions.

We have been at the forefront of addressing issues like access to quality education and teachers for students in smaller cities and towns in India. Students from remote locations like Keshod (Gujarat) to Berhampur (Odisha) are increasingly adopting learning from the app. Today, almost 75% of our users come from outside the top 10 cities. It is encouraging to see increased adoption and high engagement from 1,700+ towns and cities in the country. But, there is still a long way to go before we call this a learning revolution. Presently, we have reached out to less than 2% of the total student population in India alone. By launching our programme in Hindi, we want to accelerate our growth and reach and create awareness about tech-driven learning in remote parts of India. We are also working on creating learning programmes in other regional languages like Marathi, Gujarati, and Malayalam among others, and we plan to roll them out within 2019. The availability of BYJU'S learning programmes in multiple vernacular languages will make quality learning accessible for children in every nook and corner of the country and fulfil their aspirations of building better lives.

How should the new Indian workforce embrace global standards and innovation—

something only achievable through quality education?

With India being demographically one of the youngest countries in the world, there is a huge population of students who need to be made future ready. Children today are essentially in the AI economy. Jobs are transforming at a pace never seen before. Research by the World Economic Forum shows that 65% of the children entering primary school will find themselves in jobs that do not exist today. Early conceptual understanding is essential for students to be in a position to re-skill and up-skill themselves at any given point in the future. Only when a person has great mathematical and scientific foundation will they be open to embracing new tech developments in their sectors. After all, a 21st century illiterate is not someone who cannot read and write, it is someone who cannot learn, unlearn, and relearn. Strong conceptual learning during formative years has never been more important.

Could you share a few numbers—y-o-y growth, funding, investments made, revenue, etc?

To date BYJU'S has raised funds from Naspers, CPPIB, General Atlantic, Chan-Zuckerberg Initiative, Tencent, Sequoia Capital, Sofina, Verlinvest, IFC, Aarin Capital, Times Internet, and Lightspeed Venture Partners. The company has been growing at 100% year on year for the last three years. Its revenue in the last financial year was ₹520 crore (US\$ 72,996,500), and is on target to triple its revenue to ₹1400 (US\$ 196,529,000) crore this year.

What are your expansion plans?

We are in the process of building a product for international markets. At present, our core focus is on getting the K-3 (1st, 2nd and 3rd grades) product ready for launch in 2019. Our recent acquisition of Osmo, the US-based award-winning playful learning system, is also aimed at bolstering our international plans to innovate, explore, and set new benchmarks for tech-enabled personalised learning solutions. With the integration of Osmo, we are looking to offer a unique, customised, engaging, and fun learning solution for younger kids.

For the international product, we are working with some of the most popular YouTube teachers who are experts in their respective domains. We are getting them to India to record and help us with product development too. To start with, our target markets are English-speaking.

What trends do you foresee in the future of online education?

- Greater acceptance of the idea of blended learning
 We are already experiencing a shift in the way
 parents and students traditionally viewed education
 and learning. While there is a long way to go, we
 expect this transformation to touch deeper parts
 of the world and become a movement in the
 coming year. Increasing smartphone penetration
 and high aspirations for quality education are the
 key triggers influencing this trend. Products and
 solutions that demonstrate quality and results will
 be able to quickly gain consumer trust.
- Gamification will play a key role in transforming learning

For truly effective learning outcomes, the child needs to be motivated to want to learn. Technology makes that engagement possible, by delivering content in various formats (videos, interactives, games, etc) and styles, which are delightful and make students want to learn more. Using game design principles for motivation, providing actionable insights, and being a friendly learning companion—all of these get a lot easier with technology coming into play. Gamification has been steadily gaining acceptance and will continue to be an essential part of the learning ecosystem of the future.

Artificial intelligence (AI) and machine learning (ML) will further disrupt and personalise learning: Personalisation ensures that students initiate learning on their own. This increased inclination to study results in better overall results. Ed-tech companies can take this one step further and leverage analytics to trace the learning footprint of students individually to create personalised learning journeys, accurately based on their proficiency levels and capabilities. The right blend of AI and ML into systems will help organisations create personalised learning paths for students, offer highly relevant recommendations, and predict and solve their 'real' learning challenges based on their strengths and weaknesses, and their specific learning gaps, pace, and needs.■

(As told to Melissa Fernandes)

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From Freedom to Fashion

Khadi, India's signature fabric, has evolved over the years and achieved a contemporary texture that appeals to one and all.

f we have the 'khadi spirit' in us, we

BRINDA GILL

would surround ourselves with simplicity in every walk of life. The 'khadi spirit' means illimitable patience. For those who know anything about the production of khadi know how patiently the spinners and the weavers have to toil at their trade, and even so must we have patience while we are spinning 'the thread of Swaraj'. The 'khadi spirit' means also an equally illimitable faith", wrote Mahatma Gandhi in Young India in 1927.

Combining idealism and practicality, Mahatma Gandhi advocated the weaving and use of khadi that is fabric handwoven from handspun yarns. During the freedom movement, the spinning wheel, by means of which yarns were handspun, was regarded as a symbol of liberation and khadi as the fabric of freedom and non-violent revolution. On August 15, 1947, India's Independence Day, a khadi National Flag was unfurled at Red Fort in New Delhi.



Khadi is perhaps the most eco-friendly, wearer-friendly, and versatile fabric.

After Independence, Khadi & Village Industries Commission (KVIC), a statutory body functioning under the Ministry of Micro, Small & Medium Enterprises, was created by an act of Parliament to promote khadi. At the state level, Khadi and Village Industries Boards were established to promote the production, sale, and use of khadi as well as other handcrafted products. And into the 21st century, the fabric that stood for self-reliance during colonial rule is now worn by choice for its all-weather comfort and also chosen by designers to create fashion garments for its inherent texture, organic feel, and Gandhian ideology.

ANCIENT TRADITION

Historical narratives speak of Indian textiles having been exported to regions in Southeast Asia and the West from ancient times. In times past, cotton was hand-picked, hand-ginned (to separate the seeds from the fibres) and fine yarns were spun with hand spindles and later spinning wheels. These were woven into fabric, on simple looms, at home, by the village weaver or at workshops creating weaves that were either plain or patterned. Yarns for weaving were hand-dyed for creating patterned textiles; woven fabrics would be embellished by hand painting, printing, or embroidery. Thus, the entire creation of beautiful textiles was

THE INHERENT NATURE OF khadi—being handwoven from handspun yarns—allows room for weavers and designers to create fabrics of varying fabric construction.

carried out without recourse to machines.

Weavers practising a hereditary craft were likened to magicians for the fine fabrics they created. The texture, delicacy, and beauty of it had long been eulogised by poets who likened them to the moonlight or a dewdrop on a flower. There were fabrics referred to as 'evening dew' for they melted away when laid on grass; 'running water' for they were imperceptible when dipped in water; 'woven air' as metres could pass through a finger ring! In fact, Indian exports, including muslins, cost Rome 50 million sesterces annually, way back in the first century AD. Pliny, the Elder is often remembered for his despairing remark—"so dearly do we pay for our luxury and our women!—way back in 77 AD.

A PERFECT FABRIC

"If produced in its true ethos, by hand-spinning cotton yarn and hand-weaving these yarns, then khadi is the most eco-friendly, wearer-friendly and versatile fabric", The fourth edition of Walking Hand-In-Hand fashion show, titled Indigo Exchanges, held in February 2019 showcased contemporary khadi garments by nine designers.

says Mumbai-based textile designer Bela Shanghvi. "As the production of cotton khadi involves highly skilled craftspersons, it continues to be as relevant today as it was in Gandhiji's time in terms of being a people's fabric. As khadi breathes and absorbs perspiration, it is well suited for the Indian climate and is also suitable for people with skin allergies".

"Khadi's inherent surface texture makes it suitable for working embellishments of different techniques. This is because of the technology of hand-spinning and hand-weaving with which it is produced. Its acceptance and absorption of dyes is very good. Textile techniques such as block- printing or resist-dyeing work well on khadi. Embroidery also looks very good on khadi as do woven motifs and textures. Depending on the weight of khadi, it can be used for different apparel from saris to suits. So, it is a fabric that is perfect in so many ways," explains Shanghvi.

OPTIONS FOR INNOVATION

The inherent nature of khadi—being handwoven from handspun yarns—allows room for weavers and designers to create fabrics of varying fabric construction. "Khadi is a language more than a textile. By its very nature of being hand-woven with hand-spun yarn, khadi spells freedom for the craftspersons. They are free to create yarn and/or fabric as per their skill and sensibility," feel Rumi and Bappaditya Biswas, Kolkata-based husband-wife team of textile designers, who find khadi truly evocative of freedom.

Bappaditya explains that a whole range of texturesfrom very fine fabrics to thick, coarse fabrics-can be obtained in khadi. "By using very fine yarns - of 200, 250 and 300 counts- we have designed very fine fabrics for saris. This range is called Basanti as they have lightness like the spring season and are perfect for summer. This is only possible because the yarns are hand-spun. Only handspun yarns can have such a low twist. The yarn is light like a cotton ball stretched ever so gently and lightly. This lightness would not have been possible with mill spun yarns as their twist gives them a bit of stiffness". Another innovation in their studio is the 'disco khadi' sari, which Bappaditya says is a bit of a paradoxical name. These saris are woven with a technique that creates small pockets within a fine woven textile and small metal sequins are placed in each pocket, resulting in a sari with a slightly shimmery, decorative look.

WOVEN INTO THE FUTURE

For some time, in the post-independence period, khadi came to be associated with a thick, inexpensive fabric and there were reservations about its future. However, the textile has been enjoying a resurgence in recent times. From being handwoven with handspun cotton, the fabric now spans cloth that has been handwoven with other natural fibres such as wool, silk, and jute; blends of different fibres; and in a variety of counts (that result in a variety of fabrics from thick and coarse to fine and diaphanous, the latter being expensive and





Prime Minister of India Shri Narendra Modi and President of China Mr Xi Jingping sported khadi jackets during their visit to Sabarmati Ashram, in 2014.

At a quiet spot, by the banks of the Sabarmati river, is Sabarmati Ashram where a century ago Gandhiji propounded the handspinning of yarn and hand weaving of cloth. Even today, people from all walks of life visit the ashram to relive his philosophy. Prime Minister of India Shri Narendra Modi has visited the ashram with Heads of State of different countries and explained to them the technique of handspinning yarn on the *charkha*.

luxurious) along with combining yarns of two different counts to enhance the tactile quality of the fabric and create distinct fabrics for designers.

In a world that regards natural as being sustainable and eco-friendly and considers handcrafted as endearing and luxurious, khadi draws much appreciation and value for it has all these attributes and more. The fourth edition of Walking Hand-In-Hand fashion show titled Indigo Exchanges held at Sardar Vallabhbhai Patel National Memorial, at the 17th century Moti Shahi Mahal, Shahibaug, Ahmedabad, in February 2019, showcased contemporary khadi garments by nine designers to commemorate the 150th birth

anniversary year of Mahatma Gandhi and the close association of the city with him. Designers Anupama Bose, Rupa Trivedi, Soham Dave, Paromita Banerjee, Padmaja Krishnan, Santanu Das, Mayur Bhatt, Rajvi Parekh, and Asif Shaikh created simple and stylish garments with minimal embellishments and yardage keeping in mind the Gandhian philosophy of simplicity and minimalism. Even as the fabric drew from deep ancient Indian roots and Gandhian ideology, the expression was contemporary highlighting the beauty of the textile, its potential for customisation of fabric construction, and possibilities for crafting designer garments.

"Khadi has immense potential for being marketed internationally. For this, it needs to be promoted in the right way by conveying how it is produced and its association with Gandhian ideology", says master embroiderer and fashion designer Asif Shaikh who organised the Indigo Exchanges show. "While weaving fine khadi and embellishing it with different textile techniques is certainly possible, in keeping with the ideology of the fabric it is best to produce khadi that is affordable and design garments that allow the fabric to show and shine through rather than cover it with motifs and patterns. For, while khadi is surely a fabric, it goes beyond that. It is a way of life and wearing khadi is an experience that anchors us in Gandhian thought, Indian tradition, and sustainability".



Life flows slowly on Thar Desert, seemingly keeping in tune with the quietness of the sand dunes.

TEXT AND PHOTOS: GUSTASP & JEROO IRANI e could feel a surge of power as the 4WD gunned up to the crest of a dune that rippled golden-brown in the desert landscape. And then...Panic! The vehicle started to slip and slide as it careened drunkenly down the sandy slope. Our bodies tugged at restraining seatbelts and we clung on desperately to the backrest of the seat in front of us. Churning wheels kicked up a dust storm outside our window. However, we must confess: even as we gave voice to our terror, it was laced with licks of laughter.



Facing page and top left: Dune bashing—a giddy ride on the desert's dusty roller coaster—is becoming popular in Rajasthan.

Below: The rippling sands of an everchanging desertscape. Sundowners to cap an eventful desert safari.

Just as we had started to entertain a nagging hint of doubt that, maybe, something was really amiss with our vehicle on the dune bashing adventure across the ocean of sand outside Jaisalmer, Rajasthan, our driver skillfuly pulled it out of the skid. We exhaled. A sigh of relief. But the respite was brief as the vehicle raced up the next dune only to come surfing down the sandy hillock whipping up a cloud of dust in its wake.

Dune bashing, Dubai style, has invaded Rajasthan's Thar Desert like a storm. Sam Dunes, 42 km from Jaisalmer, is where SUVs, fitted with cutting-edge technology, give tourists the ride of their life as they zip across a sandy wasteland like tormented beasts. Three kilometres long and one kilometre wide, Sam Dunes are nature's roller coaster and the drivers who ride them like daredevils are skilled professionals who know the limits to which they can push their vehicles without losing control of them. On the outside chance that they do get stuck, they carry tow chains, shovels and the necessary equipment to pry them out of the situation.

A feature of the Sam Dunes, as also of most deserts, is that the dunes are in a constant state of flux. Dunes are created by the wind, picking up grains of sand, as it sweeps across the desert. These grains are then deposited on sandbanks that slowly grow to become dunes. However, once they reach a critical height, they stop growing as the wind starts poaching more sand from it than it deposits. As a result, the desert terrain is not static but forever shifting. Hence the term 'shifting sands'.

Geological details did not really matter to us as we enjoyed our rock-and-roll ride in a vehicle that felt like a boat tossed around in a stormy sea of rippling sand. However, we were quite relieved when the heady cocktail of an adventure was done with, and we got to stand on firm terrain. A few members of our group set off a short camel back ride. After the dizzy high-octane drive, we, however, deferred that option for another day.



Strains of music greeted us when we returned to our tented camp resort. Dancers in swirling ghaghras and eyes lined with kohl, musicians belting out folk songs, prancing puppets... We had waded into a Rajasthani cultural programme. The rich aroma of local cuisine—laal maas, dal bati churma... spiked our appetite as we sat down to dine at a candle-lit table. A crescent moon smiled down at us from a velvet-black sky, studded with stars.

We set off on the second leg of our desert safari the following evening. The previous day's rush of adrenaline on the dune-bashing adventure had left us too shaken and stirred to really appreciate the gentler charms of the desert. So this time around, we planned to take things easy and engage with Thar Desert in a more meaningful way.

We drove past camel carts, a peacock perched on the compound wall of a village hut; women in bright ghaghra-cholis, red, orange, yellow, that stood out



Clockwise from top left: Folklore comes alive in a puppet show; A colourful and musical guest reception committee; Cranes stop for a breather on their migratory path; Turbans and camel carts add a splash of colour to a monochromatic landscape; Musicians serenade resort guests with songs of love, won and lost.

in sharp contrast to the stark monochrome of the surrounding landscape... In the distance, a camel caravan ferried tourists across scrub lands that shimmered in the desert haze.

Did we just see a mirage or was that a waterhole? Illusions may be an integral part of a desert but this was the real thing: a glistening pool of liquid-blue that was alive with activity. Seeing our safari vehicle approach, a flock of migratory storks took wing and circled around in the deep blue sky. Since we kept our distance and meant them no harm, they descended in a flutter to resume whatever migratory storks do best before being rudely interrupted!

A white-breasted bird of prey on a grassy bank looked up to give us a cursory glance and proceeded to ignore us. For all practical purposes, we did not exist for a pair of sunbirds as they flitted about feeding on the nectar of desert blooms.

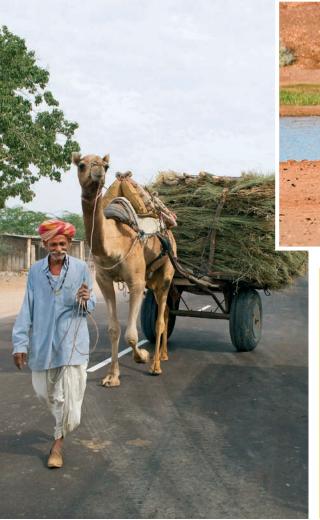
We left our feathered friends to their own devices and drove on. A few minutes later, we pulled up at the edge of a private sand dune where two men sporting colourful turbans helped us climb onto the humped backs of their camels. No sandstorm-churning, dune-bashing vehicle here to disturb the peace. The silence of the desert was punctuated by the occasional grunt of a camel and the whisper of the wind, stealing grains of sand from the dunes.



A portable refreshment bar comprising collapsible chairs and a folding table had been set up for us when we returned from the rocking camel ride. We watched as the sun slid off a flaming orange sky and kissed the lip of a softly spiralling sand dune. The cameleers and their animals receded into a landscape washed in post-sunset colours. The silver crescent moon turned to gold as the first stars started to speckle the darkening sky.

We reigned in the wannabe poet within us as it struggled to define the moment. That magical night was way too vast and eternal to contain in words. ■





FACT FILE

The nearest airport to Jaisalmer is at Jodhpur (300 km). Jaisalmer has its own railway station.

Roads to and around Jaisalmer are in excellent condition, thanks in part to the fact that it is a border town and the roads are maintained by the army. By way of accommodation, there are a number of options including old havelis converted into modern hotels, state tourism lodges, small hotels within the fort, and tented camps near the dunes outside the city. Most hotels and resorts will arrange jeep and camel safari tours for their guests.

For more information on Jaisalmer visit Rajasthan Tourism at: www.tourism.rajasthan.gov.in

WHAT'S NEW @IBEF

India Heals at Arab Health 2019

IBEF led the branding and promotion of India at Arab Health 2019, which was held from January 28 to 31, 2019 in Dubai, UAE. It is the largest and most comprehensive gathering for healthcare industry in the MENA (Middle East and North Africa) region. The 'India Heals' campaign was promoted extensively during the exhibition. The branding plan included strategic advertising at the venue, as well as print and digital promotion. India was well-represented across the various facets of the healthcare sector, namely, medical devices, hospitals and pharmaceuticals.



Indian Rugs at Domotex 2019

The 31st edition of Domotex International Trade Fair, the world's leading Trade Fair for Carpets and other Floor coverings, was scheduled from January 11 to 14, 2019 in Hannover, Germany. With Germany being the second largest importer of Indian carpets and floor coverings, IBEF worked closely with Carpets Export Promotion Council to promote Indian handmade carpets and rugs at Domotex 2019. With participation of over 250 companies, India was the major highlight and the largest country pavilion at the exhibition.



Sector Reports

IBEF continued to provide updated and comprehensive information regarding various sectors of India on its website www.ibef.org. The IBEF website has information on various facets of 35 sectors related to the Indian economy. From traditional sectors like agriculture and textiles, the IBEF website also covers modern entrants like renewable energy and e-commerce. In fact, the IBEF website is one of the most visited platforms by visitors seeking information on Indian economy and business.





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