QUALITY INDIA

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DRONE

INDIA IS SET TO BECOME A GLOBAL DRONE HUB BY 2030

AatmaNirbhar Bharat, the clarion call given by the Hon'ble Prime Minister, envisages India to become a Drone Hub by working towards achieving self-sufficiency in Drone manufacturing.

CELEBRATING **25**TH ANNIVERSARY

QCI **QUALITY COUNCIL OF INDIA**
Creating an Ecosystem for Quality

EDITOR'S NOTE

Dr. Ravi P. Singh
Secretary General
Quality Council of India

Dear Friends,

QCI has been relentlessly and tirelessly working towards itsmission of creating an eco-system of Quality in India and we have achieved significant milestones in the last quarter. Our initiatives, which span across domains, have positively affected citizens' lives in a variety of ways by bringing in a Quality paradigm in healthcare, education, food, housing, and electricity, among others. The overall objective has been to focus on quality of life with sustained and continual impact on quality of goods and services being delivered to India's citizens.

During this quarter, we have made great strides in existing projects, as well as taken on some new, challenging assignments.The National Health Authority (NHA) and QCI have partnered to change healthcare certifications through the innovative digital certification program known as AB-PMJAY Quality Certification in order to increase patient satisfaction and improve quality standards across all hospitals in the nation. AB-PMJAY scheme aims to build a network of healthcare providers through quality certifications to offer high-quality care to patients. As of September 2022, 280 hospitals have been certified.

We are also happy to share that one of our boards NABET conducted the 1st Regional School Quality Conclave in partnership with Education Promotion for India (EPSI) in Chennai. The theme of the conclave was "Quality Assurance & Accreditation in School Education" and it was designed for Principals, Educationists, Management Committee Members, Teachers, Curriculum Developers, Education Consultants, Education Department officials, etc. In addition, NABET has been engaged by Capacity Building Commission as an agency to conduct assessment and accreditation of Central Training Institutes on a pilot basis. Under this exercise, National Standards for Civil Service Training Institution (NSCSTI) for Assessment & Accreditation was launched by Dr. Jitendra Singh, Minister of State, Ministry of Personnel, Public Grievances and Pension.

During this quarter, we also successfully conducted 2 Virtual Quality Conclaves; 'Decarbonisation, Climate Change, and Sustainability' and 'E-waste Management Quality Strategies for driving towards Circular Economy' jointly with PHD Chamber of Commerce and Industry. GIZ, SDMC, and Horticulture Department supported the conclaves. QCI, as the conclave's knowledge partner, powered a session on 'The Education Summit of PHDCCI on NEP 2020- The Story Ahead'. The Summit was addressed by Chief Guest, Dr. Jitendra Singh, Hon'ble Minister of State (IC), Science and Technology & Earth Sciences, Govt. of India; Dr. Sudhanshu Trivedi, Hon'ble Member of Parliament, Rajya Sabha and Dr. Manish Jindal, CEO - NABET, QCI. The objective of this Education Summit was to bring all the stakeholders together to discuss the National Education Policy 2020.

As QCI is moving towards celebrating its 25th anniversary on October 6, 2022, I thank all those who have supported us over the past two and a half decades in our journey.

While this is an occasion of celebration, it is also one to build and develop the strategy for the next 25 years and how QCI can bring Quality Consciousness and play its part in achieving the vision of a developed India in 2047.

QCI is also on the cusp of a change in its leadership. The details are awaited and we wait with anxiousness. Please watch this space for new beginnings.

Thanks!

06

QCI had signed an MoU with the Directorate General of Civil Aviation (DGCA), to develop and manage the Certification Scheme for Unmanned Aircraft System (UAS), this would further augment Prime Minister Shri Narendra Modi's vision to transform India into a drone hub by 2030.

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Ushering **QUALITY** in Drone Ecosystem:
Certification Scheme for Unmanned Aircraft Systems (CSUAS)

India is home to many drone companies, so it is need of the hour to bring drone revolution to make India self-reliant. As India is celebrating Azadi Ka Amrit Mahotsav, it is imperative to promote drone production.

DRONE

Industry Ecosystem

Drone technology is emerging as one of the promising sectors poised for an exponential boom worldwide. It has emerged as a force multiplier in global economy over the last two decades. Usage of Drones has skyrocketed, and the global Drone market is projected to become a US$ 54 Billion market by 2025.

Drone technology alters the strategic choices of its users, governments, and non-state actors by mitigating the risk involved in operations of national importance. Perhaps the fact about Drones is that they enable their end users to get into the sky without exposing human life. Given their popularity and comparatively low cost, drones will become significantly more ubiquitous in the coming decade.

AatmaNirbhar Bharat, the clarion call given by the Hon'ble Prime Minister Shri Narendra Modi, envisages India to become a Drone Hub by working towards achieving self-sufficiency in Drone manufacturing. With the internet and GPS technologies taking over, the introduction of Drones in the Indian skies has reinvigorated the Indian marketplace. Further, introduction of 5G will fuel the future of Drone innovation in India.

The Drone value-chain spans across drones manufacturing and its components, impacting a large spectrum of industries and end-users, thereby having a significant manufacturing potential.

C.S Sharma,
Jt. Director, PAD Division, QCI

QUALITY COUNCIL OF INDIA

Potential use cases where India can leverage Drone technology are:

Domains	Potential use cases
Agriculture	• Spraying pesticides • Crop health monitoring • Improved water usage
Surveillance	• Law and order • Forest and wildlife monitoring • Mining
Healthcare	• Vaccines/test samples/blood/medicines delivery
Security	• Counter drone • Communication in far-flung areas
Disaster Management	• Search and rescue • Delivery of essentials
Oil and gas	• Pipeline inspection
Mapping	• Mapping and surveying • Visual inspections and maintenance

The Drone industry has been growing organically from a turnover of INR 88 crores in 2021 to now pegged at INR 319 crores in one year. Drone industry has contributed over INR 300 crores to the GDP of India and is also exceedingly contributing towards employment of the rural youth.

India is set to become a Global Drone Hub by 2030 for which various policy decisions have been taken by the Indian Government. To strengthen the Drone ecosystem, following areas would need thrust:

1. Efforts need to be taken to offer incentives to small Drone startups. A separate incentive to encourage Drone component manufacturers, in line with the PLI scheme, will encourage the industry.

2. Insurance mechanism to be streamlined by:

   • Setting benchmark guidelines on cost

   • Ensuring that constituents of any insurance package involving Drone operations should be as per use case

   • Mandatorily insuring all commercial drones

3. Risk management processes need to be an integral part of all drone-related operations to enhance safety.

4. Like international protocols for manned aviation, operational guide for Rules in Air below 400 Feet for Drone flight operations could be laid out to reduce risk during flight.

While India's drone manufacturing capability is on the rise, disruptions caused by pandemic-induced lockdowns and import dependence have led domestic manufacturers to seek self-reliance.

Initiatives by the Government

Economies across the world are being transformed by technology and one such technological innovation is drones which is poised to play a crucial role in the government space. Several countries have started using drones to enhance transparency, build accountability and catalyze positive transformation in governance.

In India too, the Union Government and State governments have taken up pilot projects to demonstrate use cases and evaluate use of drones for their requirements in specific sectors.

In the year 2014, experimental delivery of pizzas using a remote-controlled drone to a customer in Mumbai raised security concerns due to which a blanket ban was imposed on civilian drone operations for commercial purposes. Drones became legal again in December 2018 when the National Drone Policy of Directorate General of Civil Aviation (DGCA) came into effect.

Since then, government has initiated the journey towards making India the global drone hub with initiatives like setting up Digital Sky Platform, setting up Drone Directorate under DGCA, Drone Rules 2021, introduction of Airspace map, implementing the PLI scheme for the drone sector, declaring an SOP for drone application in spraying for soil and crop nutrients etc.

The Drone Rules 2021, released on 25th August 2021, ushered as a landmark moment for the drone ecosystem. Approvals, compliance requirements and entry barriers were significantly reduced to enhance the Ease of Doing Business (EoDB) for civilian drones. Following this, the government released the airspace map for drones for India, the sector specific PLI scheme in September 2021 and the National Unmanned Aircraft System Traffic Management (UTM) Policy Framework in October 2021.

On 26th January 2022, the Ministry of Civil Aviation (MoCA) notified the Certification Scheme for Unmanned Aircraft Systems (CSUAS), designed, and developed by QCI, to streamline and speed up the process of certification. Subsequently, the Digital Sky Platform (DSP) registers drones for certification across the country and provides single window service to its service providers.

The MoCA abolished drone pilot licenses for operating drones in India in February 2022. A Remote Pilot Certificate (RPC) issued by a DGCA-approved drone school stood sufficient.

There were no dedicated training institutes for drone pilots till recently; however, now there are total of 31 DGCA authorized remote pilot training organizations.[1]

The Union Budget 2022-23 reiterated the government's push to liberalize the regulatory framework and promote incentives in this sunrise sector to promote the indigenization of drone technology in India, whose applications/use cases are expected to cater to diverse industry sectors.

The multisectoral intervention by the Government of India is evident through a plethora of efforts undertaken by various ministries:

• The Union Ministry of Agriculture and Farmers Welfare has issued guidelines to make drone technology affordable to the stakeholders of this sector. The guidelines of Sub-Mission on Agricultural Mechanization have been amended that "envisages granting upto 100 percent of the cost of agriculture drone or Rs 10 lakhs, whichever is less, as grant for purchase of drones by the Farm Machinery Training & Testing Institutes, ICAR institutes, Krishi Vigyan Kendras and State Agriculture Universities. Specific allocation for drone procurement under the Police Modernization budget will act as a force multiplier to the law enforcement agencies

• The Ministry of Housing and Urban Affairs recommended drone-enabled solutions within the illustrative smart city solutions under the AMRUT mission[2]

• PM SVAMITVA, a Central Sector Scheme of Ministry of Panchayati Raj, is a reformative step towards establishment of clear ownership of property in rural inhabited (Abadi) areas, by mapping of land parcels using drone technology and providing 'Record of Rights' to village household owners with issuance of legal ownership cards (Property cards/Title deeds) to the property owners[3]

Bharat Drone Mahotsav 2022, biggest Drone Festival of India, was inaugurated by Hon'ble Prime Minister Sh. Narendra Modi to promote Drone technology and included events like virtual award of drone pilot certificates, panel discussions, product launches, display of a 'Made in India' Drone Taxi prototype, flying demonstrations etc.

1 https://digitalsky.dgca.gov.in/training-organizations.

2 https://mohua.gov.in/upload/uploadfiles/files/AM-RUT-Operational-Guidelines.pdf

3 https://svamitva.nic.in/svamitva/index.html
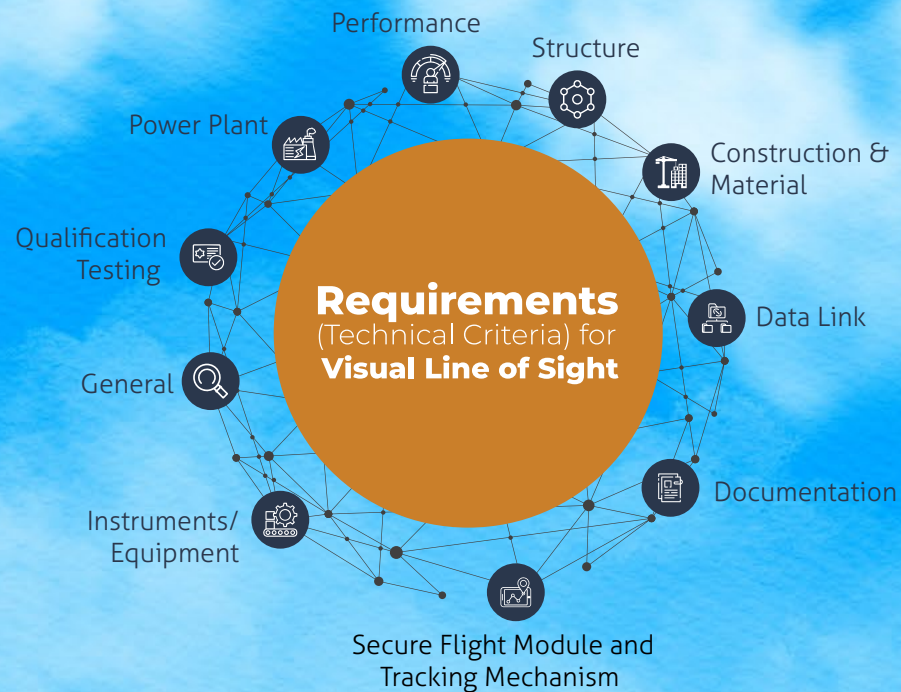
QCI Intervention – An overview of CSUAS

Global economies are aligning themselves to the requirements of globalization. Only those, who have adopted quality standards, leveraging their intellectual capital, have managed this feat.

India is home to many drone companies, so it is need of the hour to bring drone revolution to make India self-reliant. As India is celebrating Azadi Ka Amrit Mahotsav, it is imperative to promote drone production.

Guided by this fact, QCI envisaged design and development of Certification Scheme for Unmanned Aircraft Systems (CSUAS) to enhance competitiveness of Indian industry by underlining the need for conformity assessment framework built on parameters like quality, reliability, safety of UAS.

The DGCA had signed a Memorandum of Understanding to establish a mechanism for cooperation with Quality Council of India (QCI), to develop and operate CSUAS as per the applicable rules, regulation, and procedures from time to time. The process ensures that the UAS meet applicable regulatory requirements and secure international equivalence.

CSUAS is an effort to establish an impartial, independent third-party conformity assessment framework to

Requirements (Technical Criteria) for **Visual Line of Sight**

- Performance
- Structure
- Construction & Material
- Data Link
- Documentation
- Secure Flight Module and Tracking Mechanism
- Instruments/ Equipment
- General
- Qualification Testing
- Power Plant

scale and support safe and efficient access to the Indian airspace by Unmanned Aircraft Systems.

The scheme was developed through a democratized and inclusive multi-stakeholder engagement process considering the views of the industry, academia, regulators, and experts through an extensive deliberation process who are part of the multi-stakeholder steering committee.
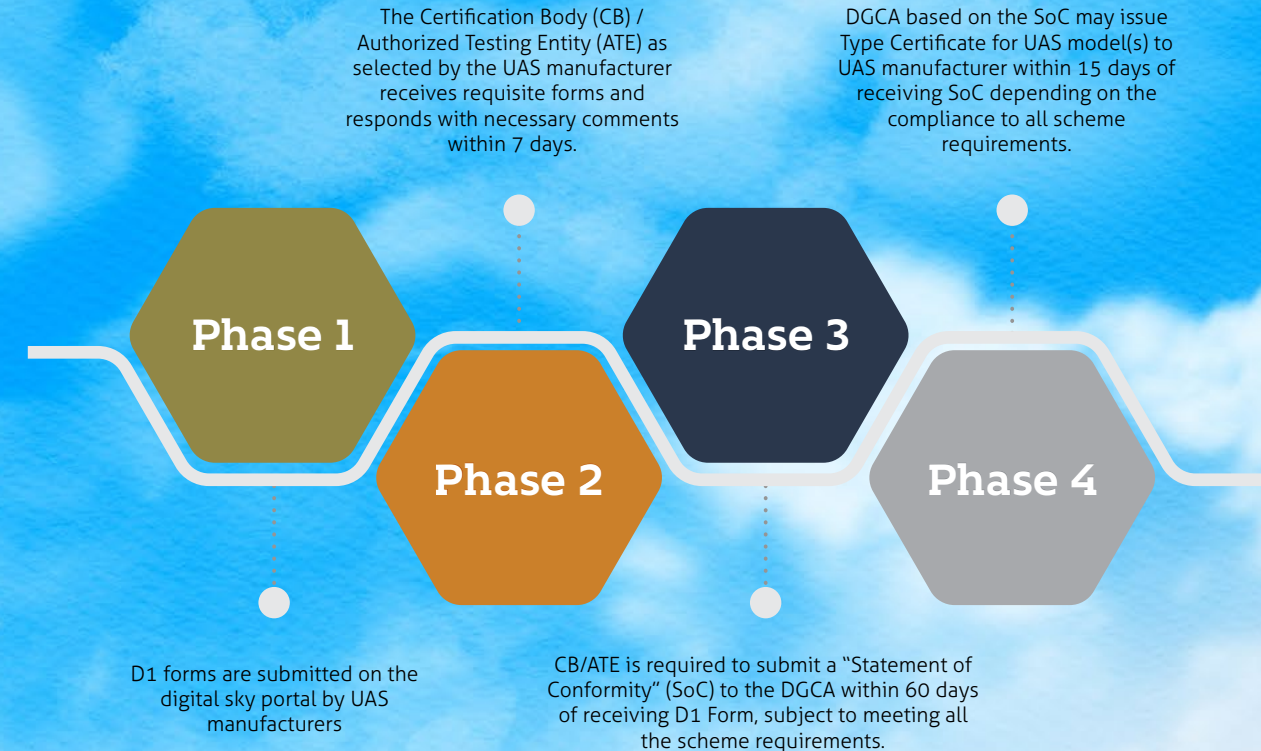
The current Drone Rules 2021 cover all scenarios of drone operations including flying in a visual line of sight, flying beyond the visual line of sight, day operations, night operations, flying below and above 400 feet, flying in segregated airspace, and flying alongside manned aircraft. CSUAS however, currently covers flight in the Visual Line of Sight (VLOS) and up to 400 feet in height.

Certification is a process which involves issuance of a written assurance (statement of conformity) by a certification body that the product meets specific requirements as per the

Scheme. This process culminates with issuance of a type certificate by DGCA (as given under Drone Rules 2021) based on the statement of conformity issued by QCI approved Authorized Testing Entities (ATEs).

UAS needs to adhere to CSUAS owing to regulatory compliance as per the Drone Rules, 2021. The CSUAS conformity assessment framework is based on ISO 17065 product certification requirement, that would provide India's drone industry acceptance in the global markets. Further, the type certification has been made mandatory as an eligibility requirement in the procurement process of Government e-Marketplace.

CSUAS ensures safety and reliability of drones by issuance of Type Certificate after which it is legal to fly a drone in Indian airspace in green zone[4] by applying for Unique Identification Number (UIN) for their drone from Digital Sky Platform (DSP). For operating drones in the yellow and red zone, prior permission is needed from various central and state agencies.

Phase 1 — D1 forms are submitted on the digital sky portal by UAS manufacturers

Phase 2 — The Certification Body (CB) / Authorized Testing Entity (ATE) as selected by the UAS manufacturer receives requisite forms and responds with necessary comments within 7 days.

Phase 3 — CB/ATE is required to submit a "Statement of Conformity" (SoC) to the DGCA within 60 days of receiving D1 Form, subject to meeting all the scheme requirements.

Phase 4 — DGCA based on the SoC may issue Type Certificate for UAS model(s) to UAS manufacturer within 15 days of receiving SoC depending on the compliance to all scheme requirements.

With multiple efforts undertaken for sensitization and capacity building of manufacturers, significant reduction in rejection of D1 forms has been witnessed over a period of time. As part of promoting CSUAS and sensitizing the industry about the requirements under CSUAS, QCI conducts periodic sensitization workshops, technical sessions, and programs like:

- During the launch of NITI Aayog's Experience Studio on Drones, Sh. Adil Zainulbhai, Chairman, QCI, elucidated QCI's Certification Scheme for Unmanned Aircraft Systems (CSUAS)

- Undertook capacity building activity for over 350+ participants during the 22nd Virtual Quality Conclave Program on 'Drone Sector: A way to Quality'

- Participated in the Fireside chat in Drone festival 2022, organised by the Ministry of Civil Aviation, inaugurated by Hon'ble Prime Minister of India Sh. Narendra Modi

- Sensitized participants during the International Aerospace Conference AeroCON 2022, Bangalore and during 'Making India a Global Drone Hub' event organised by FICCI

- Participated in the conference on 'Promotion of Kisan Drones: Issues, challenges and way forward'

- Specific technical trainings being organized by QCI for the ATE's/CB's evaluators

Focused on industry-driven deliverables, QCI also engages directly with national and international organizations working proactively on drones in varied sectors.

India's first Type Certificate under Drone Rules, 2021 was awarded by the Union Civil Aviation Minister, Sh. Jyotiraditya Scindia to Gurugram-based IoTechWorld Avigation.

Propelling the Growth Story

The aspirational areas to take forward the drone story in terms of expanding

its utility and coverage while ensuring the safety requirements are met adequately that necessitates widening the technical scope of the regulatory ecosystem.

Among various such initiatives is to leverage functionality such as BVLoS i.e., Beyond Visual Line of Sight operations, as one of the key aspects being explored in the scope of the Scheme.

BVLOS stands for Beyond Visual Line of Sight. In this mode, the drone operator does not maintain visual contact with a Drone at all times, and the Drone is able to carry out a mission without assistance of observers. The Drone operator uses a remote pilot station or ground control station to monitor and control the mission.

Medicine From The Sky (MFTS) is the first of its kind of BVLoS trials in India provisionally approved by MoCA. Telangana became the first State in the country to embark on BVLoS flights to

units of blood to remote, rural areas by means of drones.

BVLoS operators may be the only type of operator willing to pay for UTM services and therefore an equitable use of airspace implies inequitable cost considerations.

Another capability which is being explored is autonomous Drone that can make decisions without user input. This is possible through AI systems that gather data from sensors, satellites, cameras, and videos and then use that data to make decisions. The Drone's decision-making process is not confined to an algorithm. Instead, an autonomous Drone can learn from its environment and adapt to changing situations.

The number of unmanned aircraft operating in Indian airspace is expected to increase manifold and it is crucial to ensure integration with the current Air Traffic Management (ATM) system. The UAS Traffic Management

Source: https://www.thalesgroup.com/en/soarizon-0

deliver a payload comprising vaccines, with the launch of Medicine from the Sky project in Vikarabad which seeks to deliver medicines, vaccination, and

(UTM) system, as a collaborative extension of the current ATM, is envisioned to enable safe and complex operations in the UTM airspace.
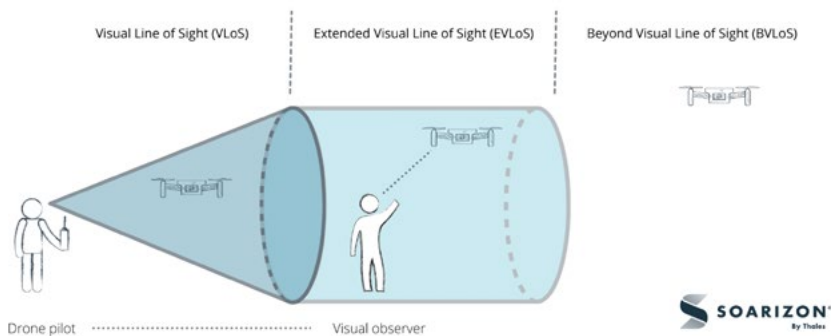
Way Forward

India's drone journey is meant to have a trickle-down effect across multiple sectors thereby strengthening the Indian industries and revolutionizing the Indian drone ecosystem. Synergies with allied sectors is opportune for India to realize domestic manufacturing of drones thereby giving fillip to the drone industry.

UAS is set to significantly impact our society, especially with the integration of Artificial Intelligence (AI), machine learning, navigation systems and autonomous systems.

Overtime, Drones will become increasingly available to the public at large and can eventually be utilized for an increasing range of purposes. Drones will further become increasingly autonomous and gain higher capability of operating in swarms.

QCI is actively involved in strategic collaborations with national and international organisations to help in furthering the vision of making India a Drone Hub by 2030. QCI plans to develop Standard Operating Procedures for UAS to ensure safe operations.

The journey of creating an enabling environment for drones has just begun with a long way to go. The key elements to achieve the same can be through ensuring speed, scale, quality, and digitalization by way of robust conformity assessment framework.

MARK OF EXCELLENCE

National Accreditation Board for Hospitals and Healthcare Providers (NABH) is a constituent board of Quality Council of India (QCI), set up to establish and operate accreditation programme for healthcare organizations.

NABH has been established with the objective of enhancing health system & promoting continuous quality improvement and patient safety. The board while being supported by all stakeholders, including industry, consumers, government, has full functional autonomy in its operation.

NABH provides accreditation to hospitals in a non-discriminatory manner regardless of their ownership, size and degree of independence.

International Society for Quality in Healthcare (ISQua) has accredited NABH. The approval of ISQua authenticates that NABH standards are in consonance with the global benchmarks set by ISQua.

Vision
To be apex national healthcare accreditation and quality improvement body, functioning at par with global benchmarks
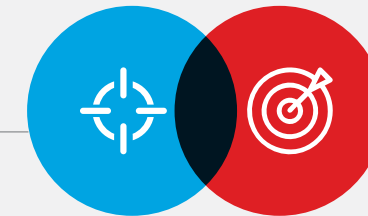
Mission
To operate accreditation and allied programs in collaboration with stakeholders focusing on patient safety and quality of healthcare based upon national/ international standards, through process of self and external evaluation

NABH **Activities**

NABH Accreditation Programs

NABH offers accreditation to Hospitals, Blood Banks, Eye Care, SHCOs/ Nursing Homes, OST Centers, CHCs/PHCs, AYUSH Hospitals, Wellness Centers, Medical Imaging Services, Dental Centers, Allopathic Clinics, Ethics Committees and Panchkarma Clinics

NABH Certification Programs

NABH offers certification to Medical Laboratories, Nursing Excellence, Emergency Departments, Medical Value Travel Facilitator (MVTF), Pre-Accreditation Entry Level for Hospitals, Pre-Accreditation Entry Level for SHCOs

NABH International

NABH has started its operations overseas under NABH International (NABH I). It offers all accreditation programs as being offered in India. The program is unique as in addition to the accreditation standards it requires compliance with local regulatory requirements

Training & Education

NABH conducts Education/Interactive Workshops, Awareness Programmes and Programmes on Implementation (POI)

For further details please contact:
**National Accreditation Board of Hospital and Healthcare Providers
Quality Council of India**

5ᵀᴴ Floor, ITPI Building, 4A, Ring Road, IP Estate, New Delhi-110002, India
Ph.: 011-42600600; **Fax:** 23323415; **Email:** helpdesk@nabh.co; **Website:** www.nabh.co
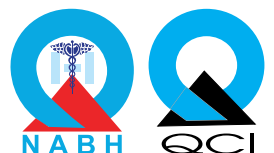
National Accreditation Board for **Testing and Calibration Laboratories**

Strives to strengthen the accreditation system accepted across the globe by providing high quality, value driven services, fostering APAC/ILAC MRA, empanelling competent assessors, creating awareness among the stakeholders, initiating new programs supporting accreditation activities and pursuing organisational excellence.

nabl-india.org

BOARD UPDATES

ARTICLES
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Training program as per ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers", Gurugram

NABL conducted a training program as per ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" from 6th to 8th July 2022 at Gurugram. More than 20 participants from potential and accredited Reference Material Producers benefitted from the program.

An overview of the requirements of RMP accreditation and its related documents were explained during the program. The participants were sensitized about the need to develop RMs in our country. Potential RMPs were encouraged to come forward for accreditation as per ISO 17034.

5-day NABL Assessor Training Course on ISO/IEC 17025: 2017, Gurugram

5-day residential NABL Assessor Training Course on ISO/IEC 17025: 2017 was conducted in Gurugram from 04th to 08th July 2022. 21 participants attended the program.

Awareness program conducted jointly by NABL and FSSAI, Chennai

NABL and FSSAI jointly conducted an awareness program on NABL accreditation and FSSAI recognition on 29th July 2022 in Chennai. Around 100 participants attended the program from food industry, aspirant food testing laboratories, accredited food testing laboratories and educational institutions.

Awareness program for Reference Material Producers (RMP), Jamshedpur

NABL conducted an awareness program for Reference Material Producers (RMPs) on 28th July 2022 at Jamshedpur, Jharkhand. Around 20 participants attended the program. The main objective of the program was to encourage Potential RMPs to come forward for accreditation as per ISO 17034.

Awareness program– NABL Accreditation and its benefits, Raipur

NABL conducted an awareness program on NABL Accreditation and its benefits on 29th July 2022 at Raipur, Chhattisgarh. Around 80 participants attended the program from industries, educational institutions, laboratories, agriculture universities and Krishi Vigyan Kendra from Raipur and nearby districts. In the program, participants were made aware about NABL Accreditation, benefits of Accreditation, Accreditation Process, NABL documents, how to apply online through NABL web portal.

Awareness program for Proficiency Testing Providers (PTP), Kolkata

NABL conducted an awareness program for Proficiency Testing Providers (PTPs) on 29th July 2022 at Kolkata. Around 20 participants attended the program. The main objective of the program was to encourage Potential PTPs to come forward for accreditation as per ISO/IEC 17043. The participants were briefed on the need of Proficiency Testing schemes in the country.

An overview of the requirements of PTP accreditation and its related documents were also explained during the program. Requirements related to the Proficiency Testing scheme were elaborated during the program.

6th PTP/ RMP Conclave was successfully conducted, Bengaluru

The 6th Proficiency Testing Provider / Reference Material Producer (PTP / RMP) conclave was successfully conducted on 25th and 26th August 2022 at Bengaluru. More than 150 participants from PTPs, RMPs, Laboratories and Regulatory bodies participated in the conclave. The conclave served as a platform for Proficiency Testing Providers (PTPs), Reference Material Producers (RMPs), regulatory bodies, laboratories, and experts to discuss their views and ideas. The two-day PTP / RMP conclave covered presentations from accredited Proficiency Testing Providers and Reference Material Producers on their PT schemes and RM produced.

Awareness program for Soil Testing Labs, Jind, Haryana

A one-day awareness program on NABL accreditation was conducted for Soil Testing Laboratories of Department of Agriculture and Farmer Welfare (DoAFW), Haryana on 9th August 2022 at Haryana Agricultural Management and Extension Training Institute (HAMETI), Jind, Haryana. This awareness program was aimed to support the vision of the Hon'ble Prime Minister "Swasth Dhara, Khet Hara" wherein farmers will get to know the health of soil and hence the use of appropriate fertilizers to improve Soil Health which will ultimately improve the agricultural productivity.

Awareness program on NABL Accreditation and its benefits, Kanpur

NABL conducted an awareness program on NABL Accreditation and its Benefits on 22nd August 2022 in Kanpur. Around 45 participants attended the program from the Krishi Vigyan Kendras (KVKs), Agricultural Universities, laboratories including Soil Testing laboratories, Industries, and Educational Institutions from Kanpur district.

Awareness program for Soil Testing Labs, Meerut

NABL conducted an awareness program on NABL accreditation for Soil Testing Laboratories on 26th August 2022 in Meerut. More than 50 participants from aspirant soil testing labs of Krishi Vigyan Kendra of Meerut district and Agricultural University, Meerut, benefited from the program.

Awareness program on NABL Accreditation and its benefits for Drug Testing Laboratories under Ministry of AYUSH, Ghaziabad

All Drug Testing Laboratories (DTLs) recognized under Rule 160B of Drug and Cosmetics Rule, 1945, are to be accredited by NABL. For spreading the awareness about NABL Accreditation and its benefits, NABL conducted an awareness program at PCIM&H, Ghaziabad on 29th August 2022 in hybrid mode. The program was attended by approx. 80 participants from 25 ASU&H drug testing laboratories under the ambit of Ministry of AYUSH.

Awareness program for Automobile Industry

NABL conducted an awareness program for Automotive Industry through a Webinar on "NABL accreditation for Automotive Testing & Calibration Laboratories" organised by Automotive Solutions Portal for Industry Research & Education (ASPIRE) on 29th August 2022. There were more than 100 participants from the industry, laboratories & students in the automotive sector.

Awareness program on NABL Accreditation and its benefits, Surat

NABL conducted an awareness program on 'NABL Accreditation and Its Benefits' on 3rd September 2022 in Surat, Gujarat at Indian Diamond Institute (IDI). Around 100 participants belonging to the industry, educational institutions, laboratories, Agriculture Universities and Krishi Vigyan Kendra from Surat and nearby districts like Navsari, Anand, Junagarh and Ahmedabad attended the program. Participants were made aware about NABL Accreditation and benefits of accreditation, Accreditation Process, NABL documents, Online process of application on NABL web portal and various stages in accreditation cycle. A special session on accreditation of Soil Testing Laboratories,

conducting the testing for the parameters under Soil Health Card Scheme was also convened to encourage participants from soil testing laboratories and agricultural universities.

BTSF (Better Training for Safer Food) program on Food Safety Risk Analysis

European Commission conducted a four-day training program on Food Safety Risk Analysis from 05th to 08th September 2022 under European Commission training initiative Better Training for Safer Food (BTSF) to improve the knowledge and implementation of EU regulations & law for native & animal health welfare in International Training Centre Food Safety and applied Nutrition (ITCFSAN), Mumbai.

Awareness program for Engineering Industry

NABL conducted an awareness program for Engineering industry through a Webinar on "NABL Accreditation and its benefits to the Engineering sector" organised by Engineering Export Promotion Council (EEPC) on 14th September 2022. There were about 30 participants from the industry, laboratories & MSME in the engineering sector.

Awareness program for Reference Material Producers (RMPs), Ahmedabad

NABL conducted an awareness program for Reference Material Producers (RMPs) on 16th September 2022 at Ahmedabad. 20 participants have attended the program. The main objective of the program was to encourage Potential RMPs to come forward for accreditation as per ISO 17034.

Awareness program for Soil Testing Labs, Bengaluru

NABL conducted an awareness program on accreditation and its benefits for Soil testing laboratories on 13th September 2022 at University of Agricultural Sciences, GKVK Campus, Bengaluru. Around 70 participants from Soil testing laboratories of Agriculture University and Krishi Vigyan Kendra from Bengaluru including other districts from Karnataka were benefited by the program.

Awareness program for Soil Testing Labs, Hyderabad

A 1-day awareness program on NABL accreditation was conducted for soil testing laboratories on 16th September 2022 at Professor Jayashankar Telangana State Agricultural University, Hyderabad.

Awareness program conducted jointly by NABL and FSSAI, New Delhi

NABL and FSSAI jointly conducted second awareness program on NABL accreditation and FSSAI recognition on 17th September 2022 at Food Safety and Standards Authority of India, FDA Bhawan, New Delhi. Around 35 participants

attended the program from the aspirant and accredited, state & commercial food testing laboratories.

Awareness program for Soil Testing Labs, Bhubaneshwar

NABL conducted an awareness program on NABL accreditation for soil testing laboratories on 26th September, 2022 at Odisha University of Agriculture & Technology, Bhubaneswar. More than 30 participants from aspirant soil testing labs under soil health card scheme benefited from the program.

Awareness program for Soil Testing Labs, Dehradun

NABL conducted an awareness program on NABL accreditation for Soil Testing laboratories on 27th September 2022 in Dehradun. 34 people attended this program from the District Soil Testing laboratories working in different districts all across the Uttarakhand State.

National Accreditation Board for **Hospitals and Healthcare Providers**

Strives to operate accreditation and allied programs in collaboration with stakeholders focusing on patient safety and quality of healthcare based upon national/ international standards, through process of self and external evaluation.

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BOARD UPDATES

Assessments Conducted

NABH team has initiated remote and hybrid assessments of HCOs using virtual platforms. To start with, virtual assessments of HCOs were conducted on pilot basis and the outcome was found to be favourable. It is expected that this will reduce the pendency in accreditation or certification cycle tremendously.

Total number of assessment 1499 conducted for Accreditation, Certification and Empanelment during July 2022 to September 2022.

S.No.	Program	Assessment Conducted
1.	Assessment for Accreditation/ Certification / Empanelment Program	1557
2.	Desktop Surveillance Assessments for Accreditation Programs	183
	Total	**1740**

Assessment Conducted
from July to September 2022


1740   1557

183
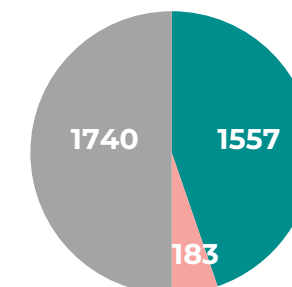
- Assessment for Accreditation/ Certification / Empanelment Program
- Desktop Surveillance Assessment for Accreditation Program
- Total

Accreditation/Certification/ Recommendations for Empanelment Granted

S.No.	Program	Accreditation/ Certification Granted
1.	Accreditation Program	163
2.	Certification Program	443
3.	Empanelment Program	110
	Total	**716**

Accreditation, Certification & Empanelment Status
from July 2022 to September 2022
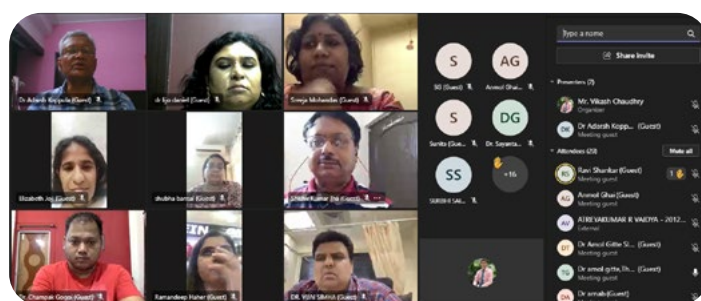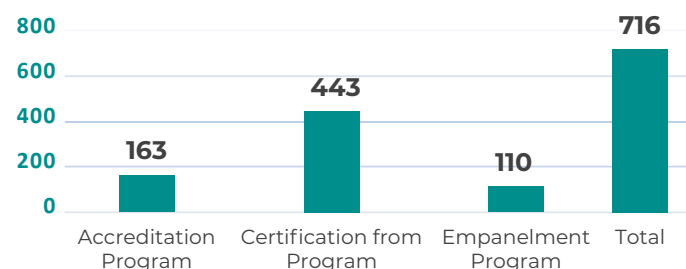
NABH Interactive Workshop on Clinical Audit on 3rd July 2022

NABH Program on Implementation (PoI) on 5th Edition Hospital Standards from 8th -10th July 2022

Quality Connect– Learning with NABH

NABH announced the enriched continuation of "NABH Quality Connect-Learning with NABH" initiative under which free monthly training classes, webinars and seminars will be conducted. The training topics will cover all aspects of patient safety, including: Key Performance Indicators, Hospital Infection Control, Management of Medication, Document Control etc.

NABH Training Programs on Implementation (PoI) & Educational Workshops on Virtual Platform

Programs on implementation are conducted on NABH Accreditation Standards of Hospitals, AYUSH, Blood Banks and Nursing Excellence, Entry-Level Hospitals & SHCO Certification Standards, Clinical Audit Workshops and Continual Quality: Tools and Techniques Workshops.

The objective of PoI is to provide guidance to healthcare providers on implementation of NABH standards. These programs are instrumental in developing internal capability within the hospitals to work towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same.

During the period from July 2022 to September 2022, 31 educational workshops were conducted on virtual mode wherein more than 2100 healthcare professionals participated.

BACK TO ROOTS

SPECIAL NABH POI COURSE FOR UNIVERSITY/ COLLEGE STUDENTS

Program on Implementation (POI) of NABH 5th Edition Accreditation Standards for Hospitals

We are pleased to inform that NABH is initiating a series of 3 days training workshop "Programme on Implementation of NABH 5th Edition Accreditation Standards for Hospitals" specially for University / College Students

The program will be specifically conducted only for closed group of Colleges / Universities offering Bachelors / Masters in Healthcare / Hospital Management. The students pursuing these courses shall be the intended participants for this program

Objective of the Programme

The objective of this programme is to train the young professionals on healthcare quality and implementation of NABH standards in healthcare organisation. The aim of the programme is to sensitise there bright students to the world of quality in healthcare and help them to work towards implementation of best patient safety practices, achieving accreditation and maintaining the same.

Course material and certificate for participants

Each training participant will receive a specially curated students course kit including the 5th Edition Standard Guidebook (worth Rs. 6000), official NABH merchandise, learning and reference material. The training will be a combination of theory, demo and panel discussions and will involve active participation.

Upon successful completion of workshop, candidates will be provided with a verifiable certificate of participation For more details of the program, please connect to Mr. Vikash Chaudhary, Administrative Officer - NABH
Phone: 011-42600622, 9873380280 | E-mail: vikash@nabh.co

Program on Implementation (PoI) on 5th Edition Standards for staff of RL Jalappa Hospital, Kollar (Karnataka) from 22nd to 24th August 2022

SHCO Standards 3rd Edition

SHCO 3rd edition standards were launched on 31st August, 2022. The transition plan has been made and is available on the NABH website for the SHCOs for compliance.

NABH Strategic Meet

NABH conducted its Strategic Meet for 2 days on (6th and 7th August) at New Delhi with the theme "Introspect, Transform, Deliver" under the chairmanship of Prof. (Dr.) Mahesh Verma. The Meet gave an insight to NABH on the action plan for the next four years.

NABH Associate Partner in SEPC, FICCI Sanjeevani Expo

NABH is an associate partner and will have prominent presence during the SEPC FICCI Sanjeevani: Heal in India Expo which will be conducted from 3rd to 5th November, 2022 at Greater Noida.

NABH participated in the curtain raiser event of Sanjeevani 2022 Heal in India on 25th August, 2022.

MoU with FOGSI

Objective: To conduct third-party assessments of the partner hospitals as per Manyata Standards. To start with, a pilot of 100 facilities will be undertaken.

Impact: To improve the quality of maternity services for reducing maternal mortality & meeting sustainable development goals.

Meeting with CEO, National Health Authority

NABH meeting with Dr. R S Sharma, CEO of the National Health Authority (NHA), and they had an extremely fruitful discussion on the synergy between NABH and NHA. He shared his vision of driving Digital Health in India.

NABH Associate Partner in FICCI Heal Conference

NABH is an associate partner and will have prominent presence during the FICCI Heal Conference 2022 (10th to 12th October, 2022).

NABH also participated in the Launch of Advantage Healthcare India 2023 (AHCI) on 26th August, 2022.

New Programme and Standards under drafting stage

Care Home standards (accreditation programme): Framework of standards is ready and the same will be shared with the key stakeholders by CII for comments.

Standards for Stroke Management (Excellence Standards)

CEO NABH and DD, NABH attended the World Stroke Alliance Conference held from 10th to 13th August, 2020 at Sau Paulo, Brazil. Proposal has been submitted to WSO for assessment of stroke clinics based on predefined criteria.


Chatbot for Entry-Level Programme (HOPE Portal)

With the objective of providing complete guidance to the hospitals starting from information about the programme till certification under HOPE portal, a Chatbot is being designed. NABH worked with COGNO-AI for the same.

Through this bot, the content present on the website is presented in a very structured way to the users on WhatsApp and only specific information can be passed on to the users as and when asked for or enquired about such as specific fee structure, information about any specific module, eligibility criteria for any specific certifications, etc.

It has been named as ASHA which means Hope and was launched on 26th August, 2022.
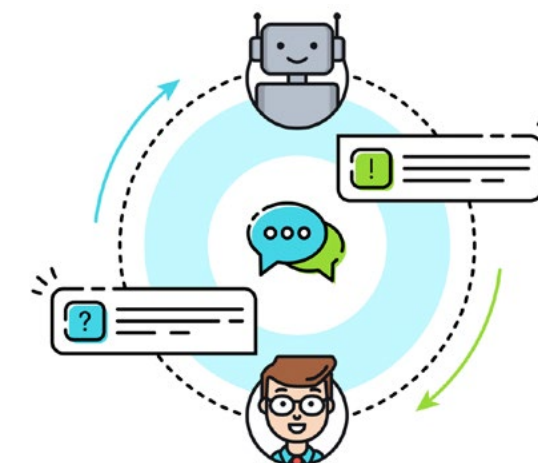
NABH Meeting with Dr. Devi Shetty
Chairman & Executive Director, Narayana Health

NABH Meeting with Director NCDIR

Other Activities:

1. Launch of revised NABH standards and guidebooks for all the programs- MIS, SHCO, Entry level certification standards, Blood Centers, Allopathic Clinics, Nursing Excellence, Dental Healthcare Service Providers, MLP

2. Initiating work on Physiotherapy / Homecare / Dermatology & aesthetics standards

3. Granting accreditation according to revised timelines thereby decreasing the turnaround time for applications

4. Publishing NABH Text book of Patient Safety & Quality etc.

5. Initiating formulation of NABH excellence standards for various specialties of Modern Medicine

6. Launch of new portal for Hospitals

7. Addition of new areas for trainings and workshops under Quality connect initiative of NABH

8. Conducting Gap analysis for three Government hospitals associated with Medical colleges in Delhi under DGHS, MOHFW

9. Strengthening NABH-International program

ONLINE WORKSHOP ON CLINICAL AUDIT

WHY SHOULD ATTEND ?

The course prepares faculty, quality managers & hospital staff to support clinical audit activities in their organizations. The course is aimed at healthcare providers who want to achieve and gain evidence of improvements in patient care and safety measures through clinical audit.

COURSE MATERIAL AND CERTIFICATE FOR PARTICIPANTS:

Each course participant receives a hand out (NICE guidelines) and other learning and reference materials. The course covers both theory and practice. Case Studies in ICUs, ORs and wards will be discussed. Present benchmark quality initiatives will be discussed. The course participants spend at least half the course time practicing the how to's.

At the successful completion of workshop candidates will be provided certificate of participation

### KEY LEARNING OBJECTIVES

This course is designed to help to develop competence and confidence to carry out Clinical Audits. At the end of course, participants should be able to achieve following course objectives:

- To understand clinical audit process. To help clinicians decide exactly why they are doing a particular audit and what they want to achieve through carrying out the audit.
- To determine, how clinical audit relates to other activities related to accountability for the quality and safety of patient care.
- To select the right subject for audit.
- To use evidence of good practice in designing clinical audits.
- To help clinicians formulate measures of quality based on evidence of good practice, as the basis for data collection and also to develop data collection protocols and tools and advise on data collection for clinical audits.
- To help in understanding how to handle data protection issues related to clinical audit.
- To understand use of statistics for analyzing and presenting findings of data collection and thus help clinicians to analyze causes of problems that are affecting the quality of care. This helps in applying principles and strategies for taking action to achieve changes in clinical practice.
- To help clinicians manage review of clinical audit findings with their colleagues.
- To be able to prepare clinical audit reports.
- To recognize and handle ethics issues related to clinical audit.

Contact Us:

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011-42600622, 09873380280

![NABET logo]

National Accreditation Board for **Education and Training**

Strives to provide services to its customers in accordance with the national and international standard norms & guidelines and is committed to provide fair and equal opportunity to all the applicants with highest regard to impartiality, transparency, integrity and confidentiality.
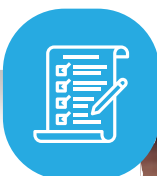
nabet.qci.org.in

ARTICLES

NBQP

NABCB

NABET

NABH

NABL

BOARD UPDATES

Formal Education Excellence Division (FEED)

Assessment, Evaluation & Training Projects:

Child Labour rescue operations with NCPCR on World Day Against Child Labour:

National Commission for Protection of Child Rights (NCPCR) issued a work order to FEED-NABET in the month of June 2022 to record observations of Child rescue operations at 75 locations. FEED-NABET completed observation assessment at all the locations and report has been submitted in the month of August 2022.

Child Rescue operation at Delhi

दुकानों से पांच बाल मजदूरों को छुड़ाया

Media coverage of child rescue operation at Bihar

Delhi, Delhi, India
C/17, Ghazipur Rd No 56, Block C, Ghazipur Dairy Farm, Ghazipur, Delhi, 110096, India
Lat 28.624514°
Long 77.3193°
15/06/22 11:50 AM

Social Welfare Department Assam – Baseline Survey of Street Children

The work order was issued by Department of Social Welfare Assam on 29th April 2022. The aim of the study is to:

a) Map the size of street children in the state of Assam and identify the areas of concentration/hotspots/vulnerable pockets. b) Assess the overall situation of street children in the state of Assam, their activities, needs, priorities and also to capture the gender and age disaggregated data of street children. c) Understand their problems owing to street presence, the magnitude and patterns of abuse (such as drug, substance and sexual), violence & exploitation, labour among street children and their health, and educational status. Till now, 14 out of 35 districts have been covered under the baseline survey.

Training of 560 teachers under Central Tibetan Administration (CTA)

An MoU has been signed with Central Tibetan Administration to conduct online & offline workshops for 560 teachers

primarily focusing on Competency-Based Education (CBE) in alignment with NEP-2020. An offline workshop was organized for teachers of CTA in the month of August 2022.

Offline Workshop in Mysore, Byllakuppe for school teachers under CTA

Capacity Building Commission (CBC) – Assessment of Central Training Institutes (CTIs)

NABET -QCI has been engaged by Capacity Building Commission as an agency to conduct assessment and accreditation of Central Training Institutes on pilot basis. National Standards for Civil Service Training Institution (NSCSTI) for Assessment & Accreditation was launched on 18th July 2022 by Dr. Jitendra Singh, Minister of State, Ministry of Personnel, Public Grievances and Pension at the Capacity Building Commission office.

Outreach Activities

1st Regional School Quality Conclave

FEED conducted 1st Regional School Quality Conclave in partnership with Education Promotion for India (EPSI) for larger outreach on 30th July 2022 in Chennai. The theme of the conclave was "Quality Assurance & Accreditation in School Education". The Program was designed for Principals, Educationists, Management Committee Members, Teachers, Curriculum Developers, Education Consultants, Education Department officials, etc.

The inaugural session was graced by Dr. Jayanthi, I.F.S. Hon'ble Chairperson, Tamil Nadu Pollution Control Board. **The**

plenary sessions highlighted following topics: **Session I:** National & International Practices in Schools Accreditation; **Session II:** Expectations of stakeholders from school including parents, teachers and administrators; and **Session III:** Quality Standards & Metrics for Strengthening Quality Assurance in School Education. The valedictory session was graced by Her Excellency Dr. Tamilisai Soundararaja, Hon'ble Governor of Telangana and Lt. Governor of Puducherry. In the conclave, Her excellency Dr. Tamilisai Soundararaja, launched Grading School Quality Index and highlighted that Grading & Accreditation are need of the hour. In the program, 230 participants from 118 schools approximately attended the event wherein majority of the individuals were from Tamil Nadu & Puducherry region.

2nd Regional School Quality Conclave

FEED conducted 2nd Regional School Quality Conclave in partnership with Edu Quality India for larger outreach on 23rd September 2022 in Coimbatore. The Program was designed for Principals, Educationists, Management Committee Members, Teachers, Curriculum Developers, Education Consultants, Education Department Officials, etc. The inaugural session was graced by Dr. V. Geethalakhsmi, Vice Chancellor, Tamil Nadu Agricultural University. 60+ participants attended the event.

Inaugural session of 2nd Regional School Quality Conclave

Ms. Madhu Ahluwalia addressing the audience on Grading & Accreditation of Schools

Universal Mentors Association (UMA):

FEED-NABET has signed an MoU with UMA dated 16th September 2022 for organizing series of Summit/ Conclaves and awarding schools on set framework. The idea is to involve NABET as a knowledge partner and UMA as implementation partner for the Summit.

MoU signing between NABET & UMA

PHDCCI Education Summit:

NABET in collaboration with NBQP powered the session on Building Leadership & Innovation in K12 Education for Quality Improvement at the Education Summit of PHDCCI on NEP-2020. During the inaugural session, Dr. Manish Jindal, CEO-NABET highlighted that NEP must be transformed into an action plan with time bound deliverables. In QCI-NABET powered session, Ms. Madhu Ahluwalia moderated the session. She highlighted that the vision of NEP-2020 is to improve the quality of the education system by giving equal space to innovation & transform India into a vibrant knowledge society.

Highlights of session from PHDCCI Education Summit

Awareness Workshops

Monitoring & Tracking of Learning Outcomes

NABET has designed training programs to provide opportunities to school staff for the development of skills to facilitate, create and manage a learner-based environment. The training program aims to achieve following learning outcomes:

- Develop and enhance facilitation and learning practices
- Prepare to facilitate learning sessions, reflect and improve on practices through appropriate evaluation
- Facilitate learning sessions using appropriate methods, learning enabling techniques and use of ICT

The program was designed for: Principals, Teachers, Examination Coordinators, Educationists / Curriculum Developers and Education Consultants.

Speakers:

- Dr. Patanjali (Vardhman Mahaveer Open University)
- Dr. Bhaskar (IASE, Kumaun University)
- Dr. Gaurang Tiwari (Accreditation officer, NABET)

Offline workshop in Chennai, Tamil Nadu

Awareness workshops on Accreditation Standard for Quality School Governance

FEED-NABET conducted Awareness workshops (both virtually & offline mode) on Accreditation Standard for Quality School Governance to spread awareness about the Standard.

The program was designed for: Management Committee Members, Education System Coordinators, Teachers / School Administrators (Core Team Members), Principals, Educationists / Curriculum Developers and Education Consultants, who wish to implement Accreditation Standard for Quality School Governance in the schools.

Following were the takeaways of the programme:

- Understanding the requirements of accreditation standard
- Implementation of the requirements of accreditation standard
- Understanding best practices: Benchmarking and innovation
- Facilitation to prepare a road map for accreditation

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Senthil D. Kumar
- Dr. Sheela Ragavan
- Dr. Leena Pimpley
- Ms. Geetika Sharma

Offline Workshop held in Delhi for Apeejay Group of Schools

Offline workshop in Himachal Pradesh

Training School Assessors (TSA) Workshop

FEED-NABET conducted TSA workshop in Delhi for individuals willing to develop capability for examining/ assessing schools with respect to requirements of Accreditation Standard.

The program was designed for: Management Committee Members, Education System Coordinators, Teachers / School Administrators (Core Team Members), Principals, Educationists / Curriculum Developers and Education Consultants who wish to assess schools on Accreditation Standard for Quality School Governance.

Following were the takeaways of the programme:

- Enable the participants to facilitate schools to establish self-assessment process periodically
- Understanding effective assessment mechanism and its compliance to the accreditation standard

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Leena Pimpley

Ms. Madhu Ahluwalia, Senior Advisor addressing TSA participants

Environment Division

Meeting with Accredited Environment Impact Assessment (EIA) Consultant Organizations -29th July 2022

'Meeting with Accredited EIA Consultant Organisations' held in Hyderabad (Southern Region) on 29th July 2022. Representatives of regulatory authorities (MoEFCC, Expert Appraisal Committee, State Expert Appraisal Committee, State

Environmental Impact Assessment Authority) and Accredited EIA consultant organisations participated in this event.

EIA Assessor Meet – 2022 (22nd to 24th August 2022)

12th EIA Assessor Meet'-2022 held at Bhimtal, Uttarakhand, from 22nd to 24th August 2022. The meet was attended by EIA Technical Committee, Accreditation Committee Members and Assessors.

Meeting with GIZ on 3-Tier Monitoring Mechanism for Enviornmental Compliance (3TMM) – (September 07, 2022)

A Meeting (virtual) with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on '3-Tier Monitoring Mechanism for Environmental Compliance (3TMM) - Draft Guidelines & SOPs for Auditing & Inspections' was held on September 07, 2022.

Meeting with Accredited Consultant Organizations on Issues in PARIVESH (19th September 2022)

A meeting (virtual) with Accredited EIA Consultant Organisations on 'Issues in PARIVESH Meeting with Accredited EIA Consultant Organizations' under the chairmanship of Dr. S.K. Bajpayee, Joint Secretary, MoEFCC was held on September 19, 2022.

2nd Ground Water Consultant Organization (GWCO), Accredited

Prospecting/Exploration Agencies (APA) & Mining Plan Preparing Agencies (MPPA) and 1st Exploration Agencies for Mineral Sector (AEA) Assessor Meet –2022 (24th to 26th August 2022)

'2nd GWCO , APA & MPPA and 1st AEA Assessor Meet'-2022 held at Bhimtal, Uttarakhand, from 24th to 26th August 2022. The meet was attended by GWCO, APA & MPPA and AEA Technical Committee, Accreditation Committee Members and Assessors.

Skill Training and Service Division – Ranking of Polytechnics (Odisha) –102 Polytechnics

State Council for Technical Education & Vocational Training (SCTE&VT) has awarded the work related to Ranking of Polytechnics. A total of 102 Polytechnics participated in Ranking process of Polytechnics. There are seven broad parameters which are being considered for the purpose of ranking of polytechnics viz. – Admission, Attendance & Discipline; Teaching, Learning & Resources (TLR); Financial, Administrative & Examination Record Maintenance Infrastructure; Result, Placement and Outcome; Other Activities; Innovative Activities and Recognition/Achievements.

Ranking Report of 102 Polytechnics was released by Hon'ble Minister Skill Development & Technical Education Department, Shri Pritiranjan Gharai on 2nd August 2022 in presence of Dr. R.P. Singh, SG, QCI; Dr. Manish Kumar Jindal, CEO, NABET and other senior officers from Skill Development and Technical Education Department. Hon'ble Minister suggested to include Points related to Environment, Social and Governance aspect in next cycle of ranking framework.

ACCREDITATION STANDARD FOR QUALITY SCHOOL GOVERNANCE

National Accreditation Board for Education & Training (NABET) is one of the statutory board of Quality Council of India mandated for accreditation in the field of Education, Training & Services. Four distinct verticals have been formulated to provide focussed strategic direction to the activities of the Board. One of the verticals of NABET, **Formal Education Excellence Division (FEED),** fosters quality in school education through spreading awareness, conducting assessments and accreditation. FEED - NABET accredits schools on **Accreditation Standard for Quality School Governance (ASQG)** in the country with a view to provide framework for the effective management & delivery of holistic education program aimed at overall development of school. The standard has three interwoven domains.

School Governance

Education & Support Processes

Performance Measurement & Improvement

BENEFITS OF ACCREDITATION

OVERALL
→ Standardisation of schools practices in alignment with National & International Benchmarks
→ Better collaboration between stakeholders leading to improved effectiveness
→ A sound basis for school improvement, strategic planning, restructuring, and staff development.
→ A way to manage change through regular assessment, planning, implementation, and reassessment

STUDENTS & PARENTS
→ Improved quality of education
→ Holistic education helping students for personality development
→ Organized and transparent school system for better day to day experience for students and parents
→ Feedback system to get student and parent's issues addressed

SCHOOLS
→ Capability development for delivering quality education
→ Quality improvement in existing school system/ process
→ System/ process driven activities
→ International standards applied for local and national school needs

MANAGEMENT
→ Benchmarking school against best in education field
→ Establishing centre of excellence and continuous improvement
→ Regular feedback on performance through internal and external assessments

FEED-NABET has accredited and assessed 5,500+ schools till now in India and abroad.

www.nabet.qci.org.in/   geetika.nabet@qcin.org   +91 98103 06844   6th Floor, ITPI Building 4 - A, Ring Road, I P Estate, New Delhi - 110002

National Accreditation Board for **Certification Bodies**

Strives to be equally accessible to all the certification body applicants who wish to be accredited to the criteria of the Board within its scope and capability, within the geographical limitations decided by the Board. Upgrades criteria of accreditation in line with international improvements and fosters improvement in the quality of certification process with the support of certification bodies.

nabcbqci.org.in

NABCB Recognition by FAMI-QS Regarding Indian Certification Bodies

FAMI-QS recognize NABCB as the sole Accreditation Body for India. FAMI-QS is an international certification scheme owner based in Brussels, Belgium which ensures safety and quality of Speciality Animal Feed Ingredients. FAMI-QS in its latest Certification Instructions has mandated that all the Certification Bodies based in India shall seek Accreditation for FAMI-QS scheme exclusively from NABCB. All FAMI-QS certificates from India shall be henceforth issued under NABCB Accreditation. These changes are effective from 01-01-2023.

SAARC Expert Group on Accreditation (SEGA) Meeting

NABCB participated in the 8th virtual SEGA meeting which was organized under SAARC-PTB MoU in cooperation with PNAC on 30th June & 1st July 2022. During the meeting country updates by National Accreditation Body members were presented.The event was attended by 20+ participants from SAARC NBA like BSB-Bhutan, Govt. of Maldives, NBSM-Nepal, PNAC-Pakistan and SLAB- SriLanka.

NABCB officials participated in the Extended Council Meeting of the Indian Aerospace Quality Group (InAQG)

NABCB participated in the Extended Council Meeting of the Indian Aerospace Quality Group. Both NABCB and InAQG are working together to establish the Industry Controlled Other Party Scheme in India which will facilitate certifications for AS 9100 series of standard under NABCB accreditation for the aero, space and defence industry. The meeting was attended by leading aerospace organizations such as HAL,TASL, Airbus, Boeing, and others.

Indo-German Forum on Technical Regulation and Conformity Assessment

NABCB participated in Indo-German QI-Days Driving innovation, trade and sustainable economic development on 7th -8th July 2022. Mr. Rajesh Maheshwari, CEO, NABCB delivered a presentation at the 1st Indo-German Forum on Technical Regulation and Conformity Assessment organized by Indo-German Working Group on Quality Infrastructure. He focused on "Exploring opportunities between India & Germany in the areas of Accreditation & Certifications". The event was attended by participants from both the economies.

NABCB delivered presentation in State-Level Conference of District Chambers of Commerce & Industry

FKCCI (Federation of the Karnataka Chamber of Commerce & Industry Conference) along with KCCI jointly organized a 2-day State Level Conference of District Chambers of Commerce & Industry which was inaugurated by Shri Basavaraj S. Bommai, Hon'ble CM of Karnataka. Mr. Ajay Sharma, Jt. Director, NABCB in QCI Powered Session delivered presentation on relevance of National Accreditation in Trade & Economy held on 16th & 17th July 2022 at Hubli, Karnataka.


NABCB participated in QCI Powered Session at Annapoorna - ANUFOOD India Conference

Ms. Varsha Misra, Deputy Director, NABCB, highlighted the "Role of Conformity Assessment & Accreditation in Food Safety and Nutrition" in QCI powered session at Annapoorna- ANUFOOD India Conference, Mumbai. Dr. Manish Pande, Director & Head, PADD (QCI) also spoke on "Leveraging Conformity Assessment Frameworks for ensuring food safety from Farm to Fork".

NABCB delivered a session on Good Aquaculture Practices organized by Central Institute of Fisheries Technology (CIFT)

Ms. Varsha Misra, Deputy Director, NABCB delivered a session on Good Aquaculture Practices as a resource person from NABCB in a programme on Quality Assurance of Fish and Fishery products organized by Central Institute of Fisheries Technology (CIFT) from 19th September to 01st October, 2022. During her session she focused on the techniques & processes for Good Aquaculture Practices. The event was attended by 28 participants from 12+ members of ITEC.
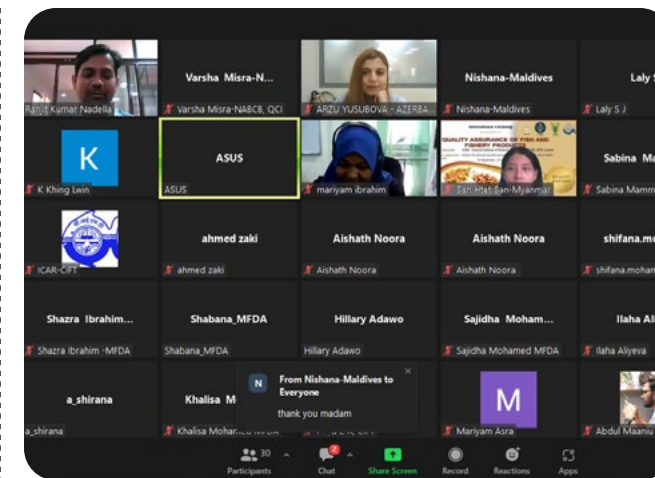
NABCB officials participated in Lead Auditor Training on R2V3 Standard

Sustainable Electronics Recycling International (SERI) organized Lead Auditor Training on R2V3 Standard virtually from 28th June - 01st July 2022. NABCB official Mr. Anand Deep Gupta, Joint Director along with few NABCB assessors attended the training. Faculty of the Training was Ms. Sarah Smart from SERI, USA.

NABCB participated in Standards & Trade Workshop organized by BIS

NABCB officials Mr. Rajesh Maheshwari, CEO, NABCB & Ms. Varsha Misra, DD, NABCB participated in the workshop on Standards & Trade organized by BIS. Event was focused on understanding the standards and conformity assessment regime in the UK & role of Standards in Technical regulations in India & UK.

## Webinar on R2V3 Certification Standard

NABCB in partnership with the Sustainable Electronics Recycling International (SERI) organized a virtual webinar on R2V3 Certification Standard on 27th July 2022 for NABCB accredited CABs. The key speakers were Mr. Corey Dehmey, Executive Director, SERI; Ms. Patty McKenzie, Outreach Director, SERI and Ms. Sharada Rao, Director of Global Certification Programs, SERI. The webinar provided insights on various aspects of R2V3 Standard which includes Overview of SERI, Requirements of R2V3 Standard, R2V3 Certification process, Benefits of R2V3 Certifications etc.
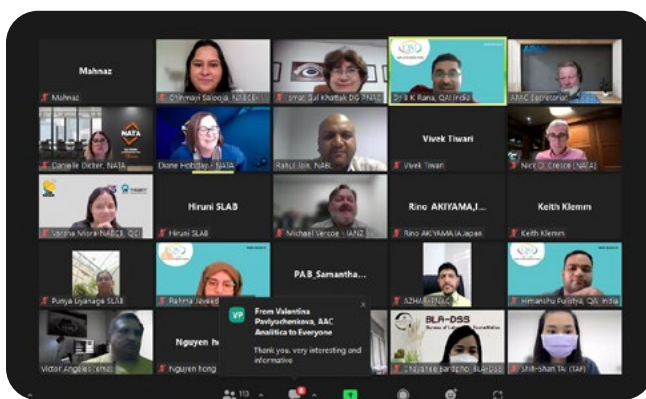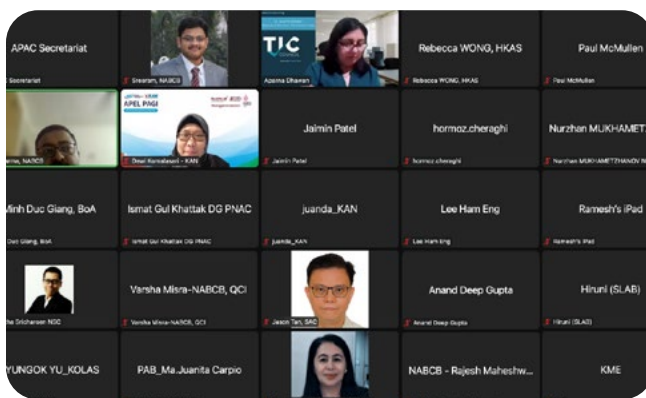
FAMI-QS Auditors Calibration Training

NABCB officials, Mr. Anand Deep Gupta, Joint Director; Ms. Varsha Misra Dy. Director and NABCB assessors attended FAMI-QS Auditors Calibration Training from 12-13 July 2202. The trainers were Emmanouil Geneiatakis, Wendy Yap from FAMI-QS & Mr. S Pasricha, Vice President, INFAH. The training focused on FAMI-QS Certification System Version 6, Case Studies, Feed Fraud Prevention & the role of INFAH. The training was attended by more than 15 participants from different Certification Bodies.

NABCB officials participated in APAC Trainings

Asia Pacific Accreditation Cooperation (APAC) organized various training programmes as a part of capacity building exercises for the Accreditation Bodies of Asia-Pacific Economy. NABCB officials participated in various Virtual Training Programs. The training session had participation from personnel of all accreditation bodies in APAC economy and effective knowledge sharing discussion were held during the training.
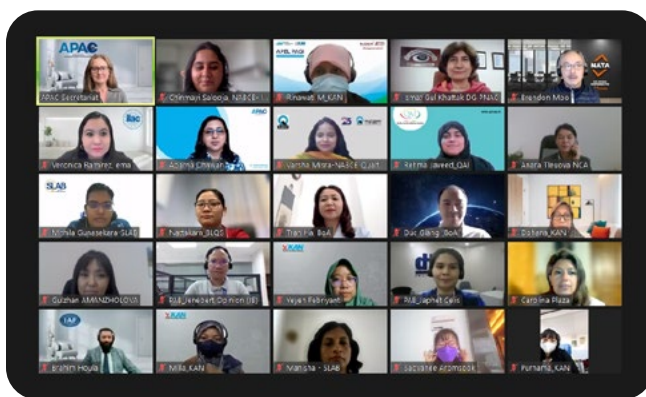
APAC training on Communication and Networking Skills held from 17-19 August 2022

APAC training on ISO/IEC 17025 Standard held from 30 August – 1 September 2022

APAC training on ISO/IEC 17029: Validation and Verification Bodies held from 20-22 September 2022

APAC training on Accreditation of ISMS Certification (ISO/IEC 27006) held from 6-9 September 2022

Product Certification Bodies

NABCB conducted a Webinar on 28th July 2022 on Accreditation of Product Certification Bodies with an overview on ISO/IEC 17065:2012 standard. Around 200 participants attended this webinar including from countries like Bangladesh, Bhutan, Kenya, Nepal, Philippines, Tunisia etc. The speakers were Mr. Anand Deep Gupta, Joint Director and Ms. Varsha Misra, Deputy Director, NABCB.

Inspection Body Webinar

NABCB organized monthly webinars to promote the Inspection Bodies Accreditation Scheme from July-September 2022. NABCB received an overwhelming response and more than 450 participants attended, including from countries like Australia, Bangladesh, Bhutan, Botswana, Kenya, Myanmar, Namibia, Nepal, Philippines, Qatar, Sri Lanka, Tunisia, UAE, Zambia, Zimbabwe etc. The speakers for the webinars were Mr Ajay Sharma, Joint Director; Mr. Anand Deep Gupta, Joint Director; Ms. Varsha Misra, Deputy Director and Ms. Chinmayi Salooja, Accreditation Officer from NABCB.

National Board for
Quality Promotion

Strives to promote application of quality management standards and statistical quality tools with an objective of enabling industry, to improve their competitiveness, with specific focus on SME sectors. Focusses on empowering the consumers to demand quality and consequently creating a back-pressure on suppliers to ensure quality of their products and services.

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ARTICLES

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BOARD UPDATES

"Brainstorming on Quality Challenges and Futuristic Solution"

About the workshop

QCI is endeavouring to develop focussed upgradation programs (functional/hierarchal) linked to key critical concerns in Operations Management for competitiveness and Quality. These issues appear as pain areas of MSMEs during their quest for sustainable profitable growth.

QCI has started interactions with MSMEs through their Industry Associations/OEMs to sense their needs and then quantify their requirements for the desired maturity of knowledge that can help in actionable ideas. Dividing the knowledge into four pillars of Management Accounting, Marketing, Purchase and Operations will help us provide enough tools for management practise that may be augmented with information technology needs. Our mandate is to enhance the knowledge of organisation and the supply chains they operate in, to a level of maturity wherein they are on a path of continuous improvement.

Takeaway

Our courses, training and mentoring programs are expected to create enough functional knowledge across the whole spectrum, be it from implementing an ERP to adding new software tools that will help transition to Industry 4.0. New management practises are evolving for the Volatility, Uncertainty, Complexity and Ambiguity (VUCA) world that will need to be adopted by MSMEs and QCI will be a beacon and a custodian of knowledge in these areas so that most of the industries have an easy access to knowledge that will transform business performance.

Brainstorming on Quality Challenges and Futuristic Solution, Noida

28th July 2022 with World Association for Small and Medium Enterprises (WASME) at WASME House, Noida

Attended by 35 Participants

Brainstorming on Quality Challenges and Futuristic Solution, Greater Noida

20th August 2022 with Indian Industries Association (IIA), Greater Noida Chapter

Attended by 51 Participants

Farewell to Mr. Sunil Mathur – Ex-Chairman, NBQP

Annapoorna-ANUFOOD India

SESSION

Leveraging Conformity Assessment Frameworks For Ensuring Food Safety From Frame to Fork

Date: 15th September 2022

During the 2- day Annapoorna-ANUFOOD India Conference, Quality Council of India powered a session with two speakers in association with the Chamber for Advancement of Small and Medium Businesses (CASMB).

The session was conducted by Dr. Manish Pande, Director and Head, Project Analysis and Documentation Division, QCI. His session mainly focused on what is compliance, how quality is maintained in various systems, and schemes by Quality Council of India for ensuring quality in the food industry. Dr. Pande also gave an overview of his division (PADD), explaining the different projects by the division. PADD currently handles numerous Voluntary Certification Schemes cutting across various sectors, from Agriculture, Healthcare to Food [Q Safe, IndiaGHP and IndiaHCCP].

He briefly discussed the challenges in the food industry such as timelines, traceability, market taxes, marketing and promotion etc. "QCI mainly focuses on food control and regulatory systems and tries to see the best way for all the stakeholders to be a part of the system and contribute towards the food safety", he stated. There are different approaches to address any issue. Quality on the farm can be maintained by good agricultural practices. He addressed the different elements such as hygiene for food safety. He also explained a few points for the production system before they go through the process of certification.

Dr. Pande also spoke about the transportation storage issue to the farmers, legislation codes and standards. Talking about Quality Compliance, he mentioned two ways to ensure quality; one is the government's acts and regulations to safeguard the food quality, and another way is a voluntary mechanism like Quality Council of India. The voluntary mechanism drives through three parameters; Quality, Competitive in the domestic and the global market, and Global Trade. He also explained the compliance ecosystem in India.

Concluding his session, Dr. Pande overviewed the schemes of QCI, PADD i.e, IndiaGHP & IndiaHACCP schemes and the Hygiene Rating Audit Agency (HRAA).

SESSION
Food Safety And Nutrition: Role of Conformity Assessment and Accreditation

Ms. Varsha Misra, Deputy Director, NABCB, QCI talked about the role of assessment and accreditation in food safety. She explained the ecosystem of accreditation in India. Ms Misra talked about different Conformity Assessment tools which are used for Testing and Inspection, Standardization, Certification and most important accreditation. Assuring that the accreditation process plays a vital role in food safety. Ms. Misra talked about the impact of accreditation tools in the food industry. She also explained the trade scenarios at the

world and builds confidence not only for the industries but also for the consumers. Ms. Misra presented a few examples of International Agencies, Regulators, and Government Industries relying on accreditation for the food industry.

Assuring that the accreditation process plays a vital role in food safety, Ms. Misra highlighted the influence of NABCB accreditation schemes in the industry

tools. The contribution of QCI's different boards for the accreditation in the food industry

National as well as International levels. Explaining the process of accreditation and how it works, she also talked about the benefits of accreditation. She focused on how accreditation enables a safer

and also accreditation supporting the food supply chain including certification and inspection. She also covered the Sustainable Development Goals (SDGs) supported by the accreditation

helps in the constant improvement of food standards & quality.

Education Summit of PHDCCI on "NEP 2020 - THE STORY AHEAD"

SESSION
Education Summit of PHDCCI on "NEP 2020 – THE STORY AHEAD" from the PHD House, New Delhi

Date: 2nd September 2022

The Education Summit of PHDCCI on NEP 2020- The Story Ahead at New Delhi, Quality Council of India powered a session. The Summit was addressed by Chief Guest, Dr. Jitendra Singh, Hon'ble Minister of State (IC), Science and Technology & Earth Sciences, Govt. of India; Dr. Sudhanshu Trivedi, Hon'ble Member

of Parliament, Rajya Sabha and Dr. Manish Jindal, CEO - NABET,QCI.

The objective of this Education Summit was to bring all the stakeholders together to discuss the National Education Policy 2020.

Addressing the Inaugural session, Dr Manish Jindal, CEO-NABET, QCI talked about the challenges to implement the NEP-2020 as the policy making part is over. Appreciating the efforts of all the stakeholders who made the framework of this policy, he also emphasized the fact to make NEP into an actionable plan with time bound deliverables. There has been a quantitative expansion of universalization of schools and education institutions but the challenge remains the Quality of education. Dr. Jindal elaborated further on the importance of accreditation in our education system, especially in schools. Quoting the Hon'ble Union Minister, Shri Dharmendra Pradhan, Dr. Jindal mentioned that every school in the

country will soon be accredited. He also highlighted the plans of NABET-QCI to help with the same. The major challenges for the implementation of NEP-2020 would be improving the quality of learning outcomes, the periodical National Achievement Survey (NAS) conducted by NCERT and the ASER report of PRATHAM reported alarming conditions of attainment level of learning outcomes. For a remedy to improve the health of the school education system, NEP 2020 has recommended and insisted on switching to "Competency-Based Education (CBE) System."

Dr. Jindal concluded his speech by appreciating the PHDCCI and all Session partners for bringing together this Education Summit on NEP-2020.

There was a special address by Dr. Sudhanshu Trivedi, Hon'ble Member of Parliament, Rajya Sabha. Dr. Trivedi appreciated the effort and hard work of all the officials involved in the success of NEP-2020. Moving forward, he explained the significance of NEP-2020 as a source of information that suggests major structural reforms to the educational system & gets into imagined versions of the glorious past of India that can only be accessed through education.

Dr. Jitendra Singh, Hon'ble Minister of State (IC), Science and Technology & Earth Sciences, Govt.

of India was the Chief Guest of the event. Addressing the session, Dr. Jitendra Singh stated that NEP-2020 seeks to link education with livelihood rather than a mere degree. The NEP-2020 also pursues to rectify the anomalies of the past to a large extent and reorient India's education system to global benchmarks. "India had been waiting for this "Revision of NEP" for a very long time. According to this policy, the Indian Educational System needs to pay attention to four different aspects: Access, Equity, Quality, & Accountability"- he stated.

The Inaugural session was also addressed by the Guest of Honour Prof. M Jagadesh Kumar, Chairperson, University Grants Commission. Theme presentation by Mr. ShreevatsJaipuria, Chair, Education Committee, PHDCCI; Presidential Address by Mr. Pradeep Multani, President, PHDCCI and Vote of thanks by Dr. Rubina Mittal,

Ms. Madhu Ahluwalia started the session by introducing the theme and panellists. She said that the vision of the NEP-2020 is to improve the quality of the education system by giving equal importance to innovation& creativity to transform India into a vibrant knowledge society. She highlighted that the policy emphasizes creating

Co-Chair, Education Committee, PHDCCI.

The Summit also witnessed a fireside chat on the theme "Leadership, Sports, and Education" by Col Rajyavardhan Singh Rathore, AVSM; Member of Parliament, Lok Sabha and Olympic Medallist. The session was moderated by Ms. Sonali Jain, Co-Chair, Education Committee, PHDCCI.

The QCI powered session "Building Leadership and Innovation in K12 Education for Quality Improvement" was moderated by Mrs. Madhu Ahluwalia, Senior Advisor, NABET, QCI. Other speakers in the session were; Dr. Biswajit Saha, Director, CBSE; Mr. Om Pathak, Chairman, DPSG Society; Dr.NiyatiChitkara, Director, Chitkara International School; Dr. D. K. Bedi, Former Principal, Apeejay School, Pitampura and Ms Sonali Jain, Co-Chair, Education Committee, PHDCCI.

an environment for a student to encourage critical thinking & logical decision making. The policy encourages the use of technology in the teaching-learning process as one of the key elements to eliminating the language barrier. She also emphasized that new and creative approaches to education design and delivery will be required in order to meet Goal #4 of the United Nations Sustainable Development Goals, focusing on access, equity, and quality in education. She concluded the session by stating that "it is the need of an hour to innovate& adopt the best practices globally in the education domain for continual improvement. This alignment would support schools & educational institutions to bring quality assurance in the education ecosystem."At the end of the session, PHDCCI felicitated the dignitaries.

Maharashtra MSME Sammelan: 'Building Competitiveness for Global Value Chain'

SESSION
Accelerating Quality Readiness For Indian MSMEs

Date: 16th September 2022

Quality Council of India powered a session in the Maharashtra MSME Sammelan: Building Competitiveness for Global Value Chain organized by The Associated Chambers of Commerce and Industry of India (ASSOCHAM). The main objective of this event was to develop and progress of industries in every sphere. The Sammelan not only included the special sessions but also MSME exhibitions, exclusive thematic sessions, B2B & B2G activities.

The Chief Guest of this event was Shri Narayan Tatu Rane, Hon'ble Minister, Ministry of Micro, Small &

Medium Enterprises, Government of India. Shri Rane inaugurated the Sammelan. Addressing the participants, the Hon'ble Minister congratulated ASSOCHAM for organizing such events which help the stakeholders to meet at a commonplace. Further, he stated the efforts of micro industries will surely bring out the results and increase the visibility of the home brands.

"We are collectively working to increase the visibility of the 'Made In India' tag in India & globally, along with an effort to double the number of micro industries in the next 5 years from the current 6 crores" he said. He also mentioned MSMEs are the growth engine of the country, it contributes 30% to the GDP of India. It plays a crucial role by providing large employment opportunities at comparatively lower capital cost than large industries as well as through industrialization of rural & backward areas, reducing regional

imbalances, and assuring more equitable distribution of national income and wealth.

Shri Rane was facilitated with a token of gratitude for gracing the event.

Dr. Aishvarya Raj, Sr. Director, ZED addressed the session on 'Accelerating Quality Readiness for Indian MSMEs'.He spoke about the benefits and various incentives of the Zero Defect and Zero Effect (ZED) Certification Scheme of the Ministry of MSME.

He explained that the ZED certification is an extensive drive to create awareness amongst MSMEs about Zero Defect and Zero Effect practices and it also provides an opportunity for the MSMEs to continuously improve their processes thereby aiming to move up the ZED maturity assessment model. Dr. Raj interacted with the crowd and shared a few examples with them making the session more interactive. He explained the functionality of ZED certification and why it is important. Dr. Raj was also facilitated with a token of gratitude.

23rd Virtual Quality Conclave

E-waste Management Quality Strategies for Driving Towards Circular Economy

Date: 7th July 2022
Time: 10:30 am onwards

About Conclave

Electronic waste (e-waste) is not only one of the fastest-growing waste streams in the country but has also become a global concern. E-waste is used to describe old, end-of-life or discarded electrical and electronic appliances. It includes their components, consumables, parts and spares. According to the recent Global E-waste Monitor Report 2020, India's e-waste production has increased nearly 2.5 times to 3.23 million metric tonnes in just six years. India is the 3rd largest e-waste generating country in the world. The conclave aimed at discussing Standards & Guidelines to tackle e-waste in India & achieve a Resilient Circular Economy.

The Conclave provided a platform for key stakeholders in the E-waste industry/sector to discuss E-waste management strategies, exchange knowledge, issues & concerns and good practices to promote Sustainability and Resiliency in India for brighter Smart Cities.

Sessions:

1. **SESSION I:** Government perspective: E-waste Management Regulations and Policy Recommendations.

2. **SESSION II:** Industry's Perspective: Implementation of Extended Producer Responsibility.

3. **SESSION III:** Research/Academia and Entrepreneurship Perspective: Role of Training and Challenges in Entrepreneurship Development.

Key Objectives

1. To discuss e-waste management quality strategies for transitioning to a Sustainable Human-Centric and Resilient Economy.

2. To provide a platform to regulators, e-waste practitioners, recyclers, academic institutions and stakeholders to exchange knowledge, issues & concerns and best practices.

3. To discuss compliance mechanisms to tackle e-waste & achieve a Circular Economy towards the development of requiting standards for the country.

Who Attended:

E-waste Consultant Organisations, Regulating Authorities, Bulk Consumers, UN Organisations & International, CEOs, Producers/ Recyclers, Business Heads, Professionals from Quality/ Production, Supply Chain, Training Institutions, and Universities.

No PARTICIPATION FEES

Registration Link:
https://bit.ly/3wVy0Dk

QCI organized the 23rd Virtual Quality Conclave (VQC) on "E-waste Management Quality Strategies for Driving Towards Circular Economy" on 7th July 2022

Overview:

The Conclave provided a platform for key stakeholders (government, industry, recyclers, academic and training institutions,entrepreneurs and consumers) in the e-waste sector for discussing e-waste management strategies. The criticality of handling and disposal of e-waste in India has become pertinent, as it has been flagged as a red category for environment and health challenges.

REPORT

Inaugural Session

Dr. HarveenKaur hosted the conclave and welcomed all. She emphasized a definition of e-Waste, its concerns and the need for strategies for the management of e-Waste. It was highlighted that to arrive at driving the circular economy, an imminent necessity for quality capacity building of all stakeholders in the entire value chain of 'e-Waste management' is felt, besides addressing the best practices to promote Sustainability and Resiliency in the country for realising the goal of ideal Smart Cities.

Welcome Address- Mr. C.K Biswas, CEO- National Board for Quality Promotion (NBQP), Quality Council of India (QCI)

Mr. Biswas elaborated about the National Accreditation Board for Education and Training (NABET), along with NBQP hosting this event. He highlighted NABET's activities and pointed out its key verticals as the Environment division, School Accreditation division, Skill Accreditation division and the MSME division.He also sensitized the audience to the pertinent requirement for the safe disposal of e-waste in the country on an urgent basis. Emphasizing the importance of recycling he stated; Recycling is the need of the hour for the environment & our community to achieve a circular economy".

Special Address- Dr. Rene Van Berkal, UNIDO Representative and Head, India

Dr. Rene, UNIDO highlighted the post-pandemic trends addressing the circular economy. He emphasised the need for digitalisation for visualising and enhancing information flow for tying tother the actors of the value chain for driving circular management of e-waste, including its prevention, collection & its treatment can be aided by digitalization thereby increasing information flow & tying together necessary actors along the value chain.

He flagged the 3 trends post-pandemic, which perhaps encompasses e-waste that arere-balancing of the global value chain, digitalization in marketing & manufacturing, circular economy and greening of industries.

He highlighted the need for the adoption of driving continuous innovation strategies in manufacturing towards embracing Reuse and improving the efficiency of recycling. He flagged the increasing e-waste led by mobile phones that have unsafe extraction processes for gold extraction. The controlled environment for its extraction is highly complex and expensive. He categorised the three determinants of mobile wastage as follows:

1. Commonly recyclable materials

2. High-value materials

3. Highlytoxic materials

He also stated that utilising the resources more efficiently will help produce less waste. The challenge of the country is to address the low recovery rate of high value materials being carried out at low cost leading to severe environmental challenges. He emphasized the need for advanced technology requirements for this activity addressing the cost efficiency.

Special Address- Mr. A.K. Jha, Sr. Director, NABET, Quality Council of India

Mr. Jha highlighted the importance of Extended Producer Responsibility (EPR) leading toward a circular economy. He spoke on the requirement of a robust recycling industry and recovery measures, besides touching upon the e-waste management challenges and the requirements to tackle the same. Further, the need for prioritizing environmental protection during
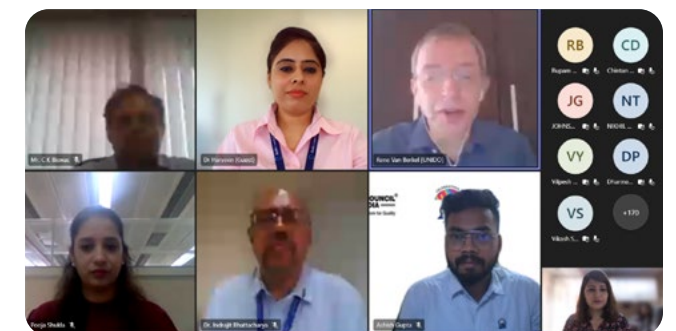
the recycling of e-waste;prioritizing the correct handling, processing & management of ecologically harmful materials. Mr. Jha suggested a few solutions for better e-waste management for a circular economy such as; an e-waste management industry in India, e-waste management practices must be supported.

Key Note Address- Sh Kunal Kumar (IAS), Joint Secretary & Mission Director, Smart City Mission, MoHUA

Sh Kunal Kumar (IAS)stressed upon Swachh Bharat Mission initiatives are being undertaken for waste management in smart cities. The purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to smart outcomes.He emphasized the implementation of standards and guidelines; attractive marketing for the entire electronic companies to come together; extensive engagement of enterprises/cities/corporations; supply chain management issues of bulk creators of e-waste & producers and tracking of e-waste generators. Elaborating his key points, Hon'ble JS also said that the Smart City Mission serves the purpose to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes.

In addition to this, the other points that were identified by him were innovation challenges and the need for showcasing technologies for managing e-waste. He suggested QCI for carrying out a study of the e-waste movement map in India enabling visibility, monitoring, and tracking of e-waste generation across the country.

Vote of Thanks- Dr. Indrajit Bhattacharya, Director, National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI)

Dr. Bhattacharya proposed a vote of thanks to the esteemed dignitaries of the Inaugural session.

Technical Session I

Government Perspective: E-waste Management Regulations and Policy Recommendations

Moderator: Dr. Indrajit Bhattacharya, Director, NABET, QCI

SPEAKER I

Dr. Deepali Khetriwal, Co-Founder, E[co]work

Dr. Khetriwal introduced E[co] work, a start-up working on e-waste management. She discussed the challenges in the current situation of e-waste dismantling. E[co]work illustrated a solution of a tech-enabled co-working space for safe e-waste dismantling. This solution is also bridging the gaps between the regulators, producers, recycling industries and the informal sectors.

Talking about the role of technology & skills in safe dismantling, she said "Technology has the ability to alter the efficiency of the e-waste recycling industry. In order to stop deceiving ourselves & actually gain control over the issue, we must prioritize recycling e-waste".

SPEAKER II

Mr. Dinesh Chand Sharma, Director – Standardization, Policy and Regulation, Seconded European Standardization Expert in India (SESEI)

Mr. Sharma discussed 'European/ International standards & policies around e-waste/circular economy'.He also touched on the points about the eco-design requirements on material efficiency aspects for energy-related products.

He also informed the present participants about a new technical committee for promoting the circular economy. "The Circular Economy's primary goal is to more effectively & quickly respond to recent legislative initiatives, particularly those that are specifically relevant to the Circular Economy" he explained.

Describing the elements for driving Circular economy - Ecodesign and Energy Labelling on consumer aspect (CEN-CENELEC Coordination Group on Ecodesign); Product design - Material efficiency aspects (CEN-CENELEC/ JTC 10 – Energy related products); material efficiency standards (CLC/TC 45550); packaging (CEN/TC 261). The; ISO Technical Committee 323 SCOPE Standardization in the field of Circular Economy is to develop frameworks, guidance,

supporting tools and requirements for the implementation of activities of all involved organizations, to maximize the contribution to Sustainable Development.

SPEAKER III

Dr. Sandip Chatterjee, Scientist F, Electronics Materials and Components Division, MeitY

Dr. Chatterjee presented an overview of the MEITY, GOI's role in circular economy in the e-waste sector. The present challenges flagged were low life of the products, refurbishment carried by informal sectors, dependency on the foreign smelters for re-extractions, lack of citizens awareness etc. He underlined the value of a circular economy, the fewer products we discard, the fewer materials will be extracted and hence it will be better for the environment. He also mentioned that in a circular economy, resources are used less frequently, materials are redesigned to be less resource-intensive, & waste is recovered & used to create new goods.The key action plans such as design and other CE principles for the electrical sector, a requirement of a sustainable product policy, adaptation design for recyclability, Green Public Procurement (GPP) in

line with global frameworks and BPs etc were emphasised. He flagged that the CE action plan in 2016 had 21 products categorised under e-waste; that stands now as 72 items.; whereas EU countries under Extended Producer Responsibility (EPR) have categorised 700 products.

He enumerated about European Union – Resource Energy Initiatives (EU-REI) alongwith NitiAyog, India in (1) Electrical and Electronics – through MEITY for Upgradation of skills in the informal sector (2) Extraction of rare earth from e-waste – dedicated waste processing zone – 5 eco-park (3) 11 different CE action plan -July 2021 to move from linear to Circular economy. He spoke about government initiatives for driving new Design thinking in manufacturing of E&E; sustainability in product policy; design of recyclability; improving the life of product; tracking critical raw materials; green public procurement and adoption of international standards CEN/CENELAC. 127 action plans have been drawn up for different ministries such as resource efficiency, green skill development, product substitution; upgradation of the informal sector for e-waste processing to formal and driving resource efficiency in machines.
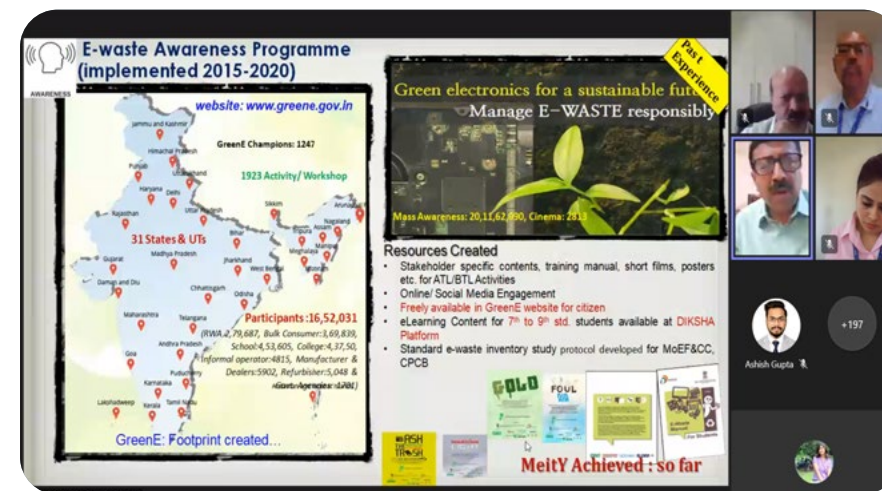
Technical Session II

Industry's Perspective: Implementation of Extended Producer Responsibility

Moderator: Ms. Ritu Ghosh, Chair – Environment Waste Council; Consumer Electronics and Appliances Manufacturer Association (CEAMA)

Ms. Ghosh explained the different phases related to e-waste management, starting with phase I of mass awareness till the regulations and guidelines came into action in 2016. She defined the three societal goals of sustainability as environmental, economic & social components. This idea can be applied at the international, national & consumer levels.

SPEAKER I

Mr. Pranshu Singhal, Founder, Karo Sambhav (National PRO)

Mr.Pranshu Singhal, Karo Sambhav, stated that the most important change that he has witnessed was the mindset changing from why 'e-waste' to how 'to process e-waste'. The approach from the system and processing has matured with time, but figuring out the cost of compliance at an organization at the brand level is still an issue. He underlined that there should be some benchmarks around the current challenges for example setting up a cost collection system for production, and awareness levels. He stressed upon creating an integrated recycling society for enhancing the smooth recycling process for the masses.

SPEAKER II

### Mr. Shiv Challa, Founder & CEO, 3R ZeroWaste Pvt. Ltd.

Mr. Shiv Challa, contributed to the discussion by relating his personal experience of working in this industry and building a start-up working towards this issue. He shared that his organization works on a 360-degree waste solution, that leverages technology in everything they do, IoT devices for tracking waste, geo-spatial technology, to monitor the entire world's waste and blockchain for rewarding citizens for proper segregation. Recycling is still a massive issue in the industries as 95% of the recycling is done by the informal sectors. Apart from general awareness, mechanical recycling, chemical recycling, and energy recovery are the components of today's successful plastics recycling. There is a need for research on a practical model for metal recycling.

SPEAKER III

Ms. Ibukun Faluyi, Executive Secretary, EPRON, Nigeria

Ms. Faluyi, EPRON, Nigeria highlighted the need for a high-tech upgradation process of recycling requirements for e-waste. Comparing the similarities between the Nigerian approach and the Indian approach towards it, she stated that there's a need for adhering to Circular Economy (CE) standards, also the use of good sensors to enable the

separation of the materials. Mentioning one of the challenges, she talked about the level of investment in recycling technology is low. Implementing/adapting the latest technologies to the other part of the world could help in overcoming that issue. Levelling up the equipment for dismantling should be a priority as well.

Technical Session III

Academia and Entrepreneurship Perspective: Role of Training and Challenges in Entrepreneurship Development

Moderator: Mr. Venkat Raman Krishnamurthy, Executive Director, NIELIT Kolkata
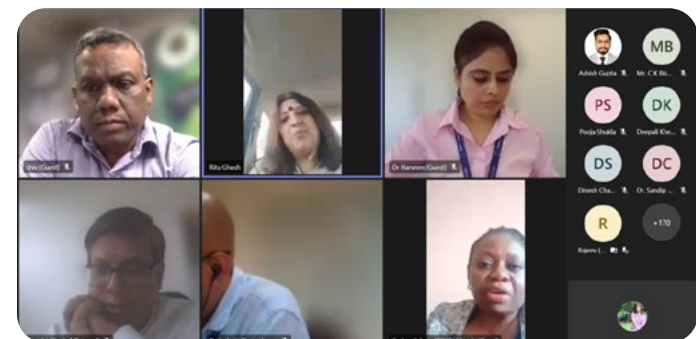
Mr. Krishnamurthy, NIELIT explained that it is a training arm of the Ministry of Electronics and Information Technology(MEITY), Govt. of India and has contributed to various training and awareness programmes related to Electronics and IT in the country.

SPEAKER I

Dr. Dietrich Kebschull, Chairman Indo-German
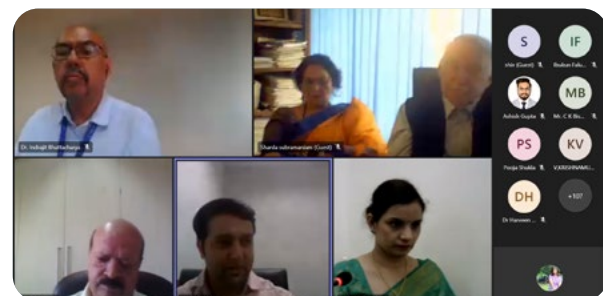
Environment Partnership Programme (IGEP) & Ms. Sharda, Co-Chairperson, Indo-German Environment Partnership Programme (IGEP)

Ms. Sharda represented the Indo-German Environment Partnership Programme (IGEP) along with the chairman Dr. Dietrich Kebschull. She emphasised the need for proper standards, transparency, and cost efficiency in handling of e-waste. The important aspect is also the supply chain which should be controlled with proper monitoring. She also highlighted the changes observed in consumers as they are now more aware of the recycling process. Another point she mentioned is infrastructure technology awareness. The Coordination among different stakeholders from business, government, non-profits, global organizations, and academia is necessary to successfully manage e-waste, she stated.

SPEAKER II

Mr. Vipan Thakur, Founder & Mr Ashish Arora, Asst Manager, Corpseed

Mr. Thakur gave an overview of Corpseed, a consultation firm, working as a technology platform for businesses and entrepreneurs. With the focus to create an entrepreneurial culture in India for waste management, his organization works aggressively to develop these entrepreneurs as it will be difficult for the country to manage the waste if it's not developed. Talking

around the theme of the session, he highlighted the challenges faced by entrepreneurs who want to set up the process of recycling. A few of the challenges that he mentioned were land acquisition for industrial set up, frameworks regulatory compliances to adhere for setting up a facility in the country, unavailability of recyclers, licencing and technology perspective i.e, lack of technical understanding of this sector etc.

SPEAKER III

Dr. Arti Maan, Scientist, Shriram Institute for Industrial Research, Delhi

Dr. Maan, Shriram Institute for Industrial Research (SRI) enumerated the initiatives on e-waste management. She did a comparative presentation between e-waste generation and recycling of the same. The results are alarming as the recycling rates are very poor. Only 5 per cent of recycling was done in India in 2019 out of 3 Metric tonnes generated. She highlighted that the linear model would lead to contribute catastrophic climate change. Circular Economy (CE) slows new product generation "The circular economy is a framework for systems-level solutions that address issues including pollution, waste, biodiversity loss, and climate change".

Dr. Maan also flagged the 7R's of handling electrical/electronic goods namely; Reduce, Reuse, Repair, Recycle, Recovery, Refurbish and Re-design. She mainly stressed on organic material, ceramic, and metals. The current practices in action for recycling were also discussed. Coming to the role of SRI in e-waste management, she highlighted the initiatives such as; the development of X-ray radiation shielding materials from e-waste in Moradabad, U.P, and the green process for recovery of copper from waste PCBs.

The session was concluded by Mr.

Krishnamurthy giving an overview of NIELIT. The major key point of the interaction was that appropriate skill training is required for the recycler and the team as well, modular electronic equipment can help in overcoming the problems related to e-waste, standard settings, help from the government of India, and technological advancements play an important role.

Vote of Thanks by Dr. Indrajit Bhattacharya, Director, NABET, QCI

In this critical sector of global importance both to the environment, and human health and towards addressing the Circular Economy goals, Dr. Bhattacharya thanked the speakers, moderators, hosts, team members and for contributing their time and making the event a great success.

Technical Tool used for Conclave
MS Teams

Duration of Conclave
10.30 AM to 2:30 PM (4 hrs)

No. of Participants Registered
434

No. of Participants Attended
354

No of participants who have submitted the feedback
115

Overall Rating of the VQC
94.8%

Key Recommendations:

- **Criticality of urgent implementation by all stakeholders is required as it has been flagged as a red category for environment and health challenges and towards arriving at Circular Economy (CE) goals**

- **There is a pertinent need for capacity building of all stakeholders' issues & concerns besides addressing the best practices to promote Sustainability and Resiliency in the country for building ideal Smart Cities**

- **QCI should carry out a study of the e-waste movement and map at the national level**

- **There is a need for the implementation of advanced technology adoption in the recycling process**

- **Strong focus required on implementation of global quality standards and ensuring effective 3rd party monitoring and evaluation (M&E) activities towards adherence to the same**

- **More innovation such as 'Manufacturing of X-ray shields from e-waste' needs to be promoted for supporting Circular Economy (CE) practices**

- **Advocacy is required for a movement of undertaking a national level pledge for safe handling and disposal of e-waste**

Quality Council of India (QCI) organized the 24th Virtual Quality Conclave (VQC) on "Decarbonisation, Climate Change and Sustainability" on 22nd July 2022

Overview:

The Conclave aimed to discuss the challenges in achieving Carbon Emissions, Climate Change and Sustainability goals. The Conclave was conceptualized to discuss with key stakeholders of the environment sector to deliberate on the importance of environment-friendly practices.

REPORT

Inaugural Session

Welcome Address: Dr. Manish Kumar Jindal, CEO-NABET, QCI

With a warm welcome to all the eminent speakers and participants, Dr. Jindal highlighted the idea behind this topic of decarbonisation, climate change and sustainability. Quoting the goal set by the Hon'ble Prime Minister that India will achieve net zero carbon emissions by 2070, he explained the sensitivity of this theme of the conclave. The sustainability of our environment will be a greater gift for our future generations "As far as
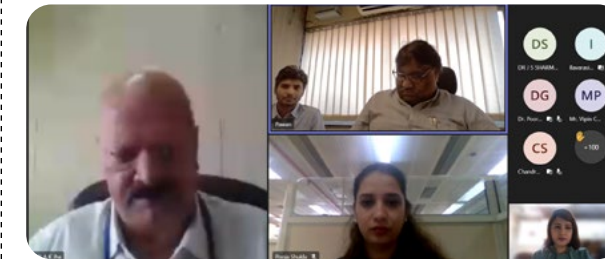
sustainability is concerned, we are aware that as a developing nation we must strike the right balance between economic growth & environmental concerns" he stated. There is a need to balance industrialisation and sustainability together.

Special Address: Mr. A.K Jha, Sr. Director-NABET, QCI

Mr. Jha briefly explained all the aspects of the theme. He gave an overview to the participants about each session's topics. Talking about the first session 'Global Quest for Net Zero Emission Target – Challenges Before India for Achieving Carbon Goal by 2070',Mr Jha underlined the importance of carbon footprints in controlling carbon emissions. The challenges before the nation to achieve net zero emissions were also discussed by him.

We have to keep our global warming below 1.5 degrees centigrade to eliminate the impacts of climate change. Net zero emission means any emission balanced by absorbing an equivalent amount from the atmosphere, in order to meet the 1.5 degrees of global warming target global carbon emission should reach net zero around mid-century.

Talking about the second session of the conclave on the topic 'Climate Change and Sustainability – Aviation perspective', he touched on the topic of climate change and sustainability. Climate change and sustainability are interrelated terms as the impacts of climate change can be tackled with sustainability.

The visible effects of climate change like wildfire, global warming, etc can be handled with a sustainable development approach.

He also stated that "To adapt and transition to greener economies, governments and corporations must make large financial investments in climate change".

Introducing the third session 'environmental & Climate Change Challenges: EIA Professionals to lead the way', Mr. Jha overviewed the climate change challenges before us to achieve the goal of net zero emissions.

Technical Session I

Global Quest for Net Zero Emission Target – Challenges before India for Achieving Carbon Goal by 2070

SPEAKER

Dr. J.S. Sharma, Former Group General Manager (Chem.) - Head Environment, Oil and Natural Gas Corporation Ltd. (ONGC)

Dr. J.S Sharma started the session by quoting that the Earth is only one, and the people living here are suitable only for this planet so the earth has to be

prevented at all costs. Discussing his presentation on the challenges before India in achieving its carbon goal by 2070, Dr. Sharma made the audience aware of the basic understanding of climate change first. To achieve the goal of net zero emission, there is a need to understand its need and the background. Dr. Sharma explained the background of net zero emission. The current policies of the countries have put the planet on a 3.2 degree C temperature increase trajectory. Explaining the paradox of the net zero emission, he shared some facts like;G-20 countries committed over $230 billion in fossil fuel industry to revive the economy, compared to $150 billion in clean energy, countries like the US, UK, Canada, Russia and India are pursuing major expansions in fossil fuel supply. He also displayed the 'net-zero' significance and the need for it.

Dr. Sharma also discussed the UN conference on climate change COP-26. Apart from these points, Dr. Sharma also pointed out the need for the development of the country which is a priority in the current scenario. He also discussed the updates on the progress so far, out of 196 parties to the Paris Agreement, 130 parties submitted a new or updated national action plan known as NDCs, he stated.

He also discussed a few cautions for the understanding of net zero. Dr. Sharma also highlighted the 'Panchamrit scheme' by hon'ble PM of India at COP-26 and briefly discussed the five embankments of it. The session was concluded with a Q&A session where Dr. Sharma patiently answered all the questions by the participants.

Technical Session II

Climate Change and Sustainability – Aviation Perspective

Climate Change & Sustainability:
An aviation perspective

Presented by:
Rekib Ahmed
Delhi International Airport Limited
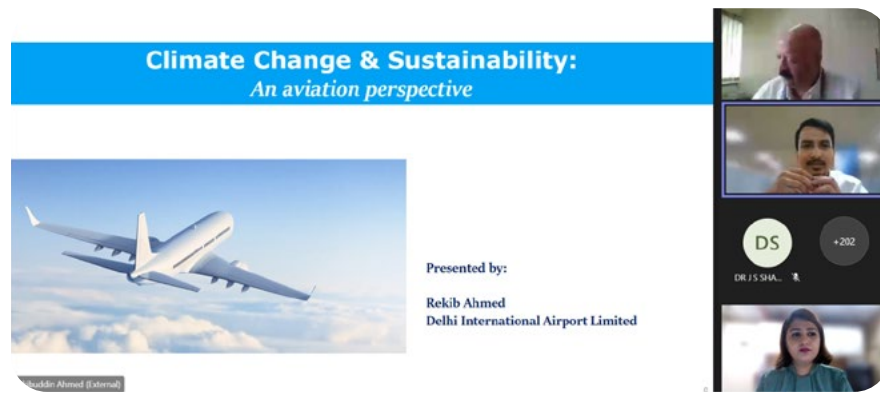
SPEAKER

Sh. Rekibuddin Ahmed, Manager - Environment, Delhi International Airport Ltd (DIAL)

Sh. Ahmed's presentation was on climate change from the aviation perspective. He explained that climate change refers to long-term shifts in temperatures and weather patterns. He discussed the impact of climate change on aviation describing it into different categories such as precipitation change, wind changes, extreme events, temperature changes and sea level rise. He also explained the different aviation bodies working towards environmental sustainability in the aviation sectors. One of the major bodies ICAO has been working toward various focus areas like aircraft noise, local air quality and climate change. He also stated that through deploying new technology, operational and infrastructure efficiencies and improvements in fleet utilization, a flight passenger takes today will, on average produce 54.3% less CO2 than the same flight in 1990.

He also covered the areas of aviation decarbonization targets. He gave a quick glimpse of the technological improvements. The new generation aircraft has double-digit fuel efficiency improvements, up to 20% more fuel efficient than the previous ones. He also explained hydrogen aircraft, and electrical aircraft and their differences. Talking about the technological, and operational improvements, he stated that it is essential for the aviation

sector to operate more fuel-efficient aircraft and create more efficient flight patterns using modern technologies.

He also gave an insight on the climate change adaption measures by the aviation authorities which includes the following steps; identify, analyse, understand, categorization, develop & implement and review. He also discussed the different strategies adopted by the airports to work toward the climate change challenges. Sh. Ahmed also explained the concept of green finance/bond to the audience. He also shared some of the Sustainable Development Goals (SDGs 2030) which have 17 goals, 169 targets, and 231 unique indicators and the areas where the aviation sector is contributing.
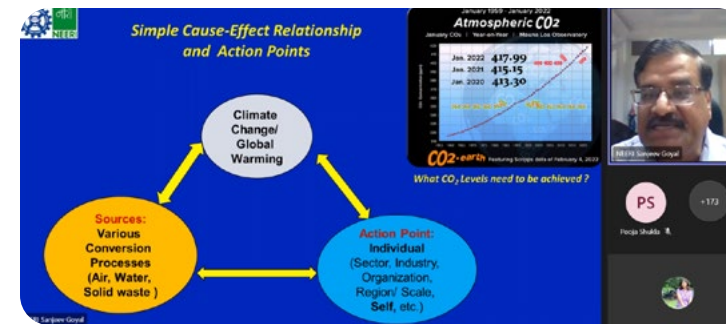
Sh. Rekibuddin Ahmed also answered the questions of the participants.

Technical Session III

Environmental & Climate Change Challenges: EIA Professionals to lead the way

SPEAKER

Dr. S.K. Goyal, Chief Scientist & Head, CSIR-NEERI, Delhi Zonal Center, India

Dr. Goyal shared his views on the climate change challenges from the perspective of EIA professionals. In the context of the conclave, he flagged the issues for the environmental & climate change in which an EIA professional can help. He explained that the EIA professionals help in planning/developing a 314 km area as a carbon neutral region. They do the identification, quantification, monitoring, budgeting, reduction, control and management for the same. The purpose of the EIA process is to inform decision-makers and the public of the environmental consequences of implementing a proposed project. He suggested that the climate change issue can be dealt with the air pollution problem in the country, CO2 and CH4 may be included in ambient air quality standards, need to adopt a holistic regional sustainable development approach to develop carbon-neutral regions with EIA process aligned and EIA professional's major role etc.

He also explicated the simple cause-effect relationship and the action points. He briefed the different sources of climate change and the need for action against it. He pointed out the

different industrial units contributing to the rise of CO2 emissions with the technological advancements to eliminate the waste in the process. In conclusion, he shared a few suggestions on self-assessment for the improvement of the environment. And also discussed the steps taken by the different regions for a sustainable environment. He also recommended the need of creating a robust ecosystem for regional sustainability with proper planning/assessment.

The session was concluded with Q&A.

Vote of Thanks by Mr. C.K Biswas, CEO-NBQP, QCI

In this crucial sector of climate change and sustainability, Mr. Biswas talked about the need for such events for providing a platform for different stakeholders to give their insights. He also thanked the speakers, moderators, hosts, and team members for contributing their time and making the event a great success. He appreciated the efforts of QCI media cell, IT cell and the team of NABET & NBQP for contributing their time and efforts for this conclave.
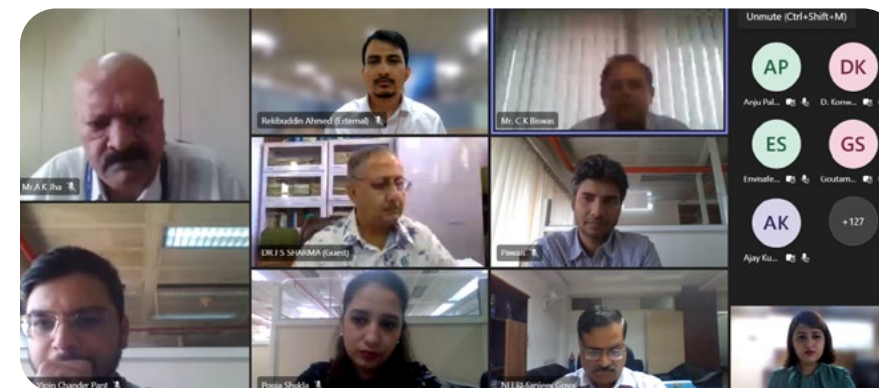
Key Recommendations

- **All the stakeholders should come together for better results in the 'net-zero' emission of carbon goals**
- **Better agricultural, transportation and energy choices can help in reducing greenhouse gas emissions**
- **The aviation sector should operate more fuel-efficient aircraft**
- **There is a need for proper training for the EIA professionals in which QCI can be helpful**
- **To stabilize the level of global temperature there must be a set goal to achieve at least NET ZERO anthropogenic CO2 emissions over the long term**

Technical Tool used for Conclave
MS Teams

Duration of Conclave
10.30 AM to 2 PM (3.5 hrs)

No. of Participants Registered
504

No. of Participants Attended
307

No of the participants who have submitted the feedback
55

Overall Rating of the VQC
98.1%

14th QCI- D.L. Shah Quality Awards

An opportunity for organizations to showcase their best-practices on quality excellence and share their success stories.

About the Award

QCI-D.L. Shah Quality Awards have been instituted with a view to promote awareness that performance improvement through quality initiatives is an important element for gaining a competitive edge. Each year the Award recognizes successful projects of an organization that have resulted in continuous improvement of products and/or services, better and effective operations as well as increased customers' /stakeholders' satisfaction.

There are 3 Levels of the Award

Level 1
Platinum Award

Level 2
Gold Award

Level 3
Silver Award

Each level has its own distinct rigors and requirements for quality and performance and has minimum marks to be achieved.

Project Assessment Stages

Documentation Review by QCI | Project Presentation by applicant | Site Verification for project implementation by QCI.

Eligibility

This award is open to all type of organizations/sectors(Govt of India, Public Sector, Private Sectors, Finance, Manufacturing, Infrastructure, Healthcare, Education, NGOs etc.).

An organization submitting projects must satisfy the following conditions:

- The organization should be registered in India
- The organization has not been convicted by any Court for any irregularities

Award Presentation

- The Award distribution happened during the Silver Jubilee Celebration of QCI held on 6th October 2022. Platinum Award was announced during Session 1 by Shri. Adil Zainulbhai(Chairperson-QCI) Shri. Khushroo Khambata (CEO-D.L. Shah Trust) and Shri. C.K. Biswas (CEO-NBQP)

- Gold and Silver Awards were announced during Session-3 by Dr. (Prof.) Mahesh Verma (Chairman, NABH), Shri Adil Zainulbhai (Chairman,QCI); Shri Khushroo Khambata(CEO,D.L. Shah Trust), and Dr. R. P. Singh (Secretary General, QCI)

- The 7th edition of the best practices publication was also released during the inaugural ceremony of the Silver Jubilee Celebration by dignitaries comprising of Sh. Piyush Goyal (Hon. Minister of Commerce & Industry, Consumer Affairs, Food & Public Distribution, and Textiles); Sh. Amitabh Kant (India's Sherpa to G20); Sh. Anurag Jain (Secretary, DPIIT); Sh. Anil Aggarwal (Additional Secretary, DPIIT); Sh. Adil Zainulbhai (Chairperson QCI) and Dr. R. P. Singh (Secretary General, QCI)

Award Winning Projects of 14th Cycle

QCI-D.L. SHAH QUALITY AWARDS

S.no	Organisation Name	Project Name	Project Location
PLATINUM AWARD			
1	Kanti Sweets Private Limited	Manifestation of Inclusion and Diversity in the manufacturing of Sweets and Savories	Bengaluru
2	Ashok Leyland Ltd	In-house front fascia dies commissioning to prevent delay in MBP launch	Pantnagar
3	Sakra World Hospital	To reduce the re-admission rate of extreme low birth weight preterm babies in a tertiary care hospital: A nursing initiative	Bengaluru
4	Wipro Ltd.	Improving SLA in Fraud Mailbox	Hinjawadi, Pune
5	My Home Constructions Pvt. Ltd.	ZERO DEFECT (ZeD) & ZERO LEAKS (ZeL) in Construction of High Rise building	Kokapet, Hyderabad
GOLD AWARD			
6	Accurate Gauging & Instruments Pvt. Ltd.	High Accuracy 3 Coordinate Measuring Machine (C10158-1391)	Pune
7	Larsen & Toubro Construction RBG	Optimization of OHE foundations, Earthing & Bonding, and galvanization of steel structures	Jaipur, Rajasthan
8	Dalmia Cement, Bharat Limited, New Delhi	Blended Cement – A Green Solution	Bihar
9	Axalta Coating System India Pvt. Ltd.	Service Complaint & COPQ Reduction through innovative lockring implementation on paint container.	Vadodara,Gujarat
10	Xpro India Ltd Biax Division - Barjora Unit ii	Development of film for bituminous waterproofing membrane torching application using waste film reprocessed granules	Bankura, West Bengal
11	Welspun India Ltd.	Automation and Productivity enhancement at External Coating Plant (ECP-3)	Kutch, Gujarat
12	Bharat Electronics Limited	Defect reduction in Front Panel Assembly of Ventilator	Jalahalli, Bengaluru
13	Belle Vue Clinic	Improving Patient Safety and Outcomes by studying predictors of mortality in covid-19 patients during the surge	Kolkata

14	Sri Ramachandra Medical Centre	A Safety culture approach to prevent process variables, cultural and clinical dilemmas resulted in anticipated and preventable DVTs in a quaternary care setting. (A robust system to prevent process variables, cultural and clinical myths causing anticipated preventable DVTs in tertiary care setting for Quality of Life.)	Chennai
15	Indraprastha Apollo Hospitals	CALL-A-CAB-66 (Heart to brain drive)	New Delhi
16	Manipal Hospital	Optimisation of Oxygen Use	Bengaluru
17	Dr. Lal PathLabs Ltd	Improving laboratory performance by developing an in-house automated process to monitor quality control	New Delhi

SILVER AWARD

18	Fujifilm Sericol India Pvt. Ltd	Color + Eco Solvent Digital ink	Shirur, Pune
19	Lotus Petal Charitable Foundation	Pratishthan Learning Centre: Improving the quality of pedagogy	Gurugram
20	Extension for Community Healthcare Outcomes (ECHO, India)	Training of frontline health workers on covid-19 preparedness, response & prevention to strengthen the public health system of the country against the noble corona virus	Okhla, New Delhi
21	Lupin Ltd	Cost Optimization of API Lupin Ltd, Dabhasa	Dabhasa, Gujarat
22	Larsen and Toubro Ltd,TLT Manufacturing Unit	Energy Conservation through SMART Energy Management System	Kanchipuram
23	Minda Industries Limited-Casting Division	Customer end rejection reduction in n49 CCRH(Crank Case Right Hand)	Hosur, Tamil Nadu
24	BEML Limited	Quality and Productivity Improvement on Motor Grader Transmission	Bangalore
25	Bharat Petroleum Corporation Limited	Integrated LPG Terminal Automation at BPCL Balangir LPG Plant	Balangir,Odisha
26	Iris Software Technologies Pvt. Ltd	Product Quality Framework	Noida
27	HDFC Life Insurance Company Limited	Achieving Industry Leading Persistency at HDFC Life	Mumbai

3rd QCI - Quality Champion Award

QCI Quality Champion Award

This award has been institutionalized by Quality Council of India with a purpose to recognize and motivate the individuals pursuing the path of Quality, Excellence for benefit of Organization associated with, society & Group/s. This Award provides a unique platform to the individuals for showcasing their significant & unique achievements and advancement in quality systems at all levels of the organization/society including recognition for their technological innovations, implementation of quality best practices for significant improvement in processes, products and services.

3rd QCI Quality Champion Award was given in the following 2 categories:

Outstanding Jury Selection Award: It is a special category of the award wherein the individuals are recommended and finalized through Jury consensus. The Awardees are as follows:

S.No	Awardees	Designation
1	Dr. Randeep Guleria	All India Institute of Medical Sciences, New Delhi
2	Dr. Balram Bhargava	Professor & Head Cardiology, Chief Cardiothoracic Sciences Centre, Executive Director, Stanford India Biodesign Centre,School of International Biodesign(SIB), All India Institute of Medical Sciences, New Delhi
3	Mr. N. Ramanathan	Founder Member & Past President- Indian Society for Quality (ISQ); Independent Counsellor in Quality-Based Management
4	Prof. Prem Vrat	Chairman, IIT (ISM) Dhanbad & Mandi and Pro-Chancellor; Professor of Eminence and Chief Mentor, The NorthCap University, Gurugram, Haryana
5	Dr.Mathew Varghese	Senior Consultant & Head of Department - Orthopaedics St. Stephen's Hospital, New Delhi
6	Dr. Narottam Puri	Principal Advisor, Quality Council Of India ; Advisor- Medical Operations; Member & Ex.Chairman, Fortis Medical Council
7	Mr. Surender Kumar Kakkar	Chief Mentor - Performance Excellence and Former Head of CII Institute of Quality

Online Application Category: Winners were recognized at Platinum, Diamond, Gold and Silver level as follows:

S.no	Awardees	Award Level
1	**Dr. R.V.Ramani** (Founder and Managing Trustee, Sankara Eye Foundation, India)	Platinum
2	**Dr. Jeewan Prakash Gupta** (Managing Director, Greenstat Hydrogen India Pvt. Ltd.)	Diamond
3	**Dr. RajKumar** (Director, Vallabhbhai Patel Chest Institute)	Diamond
4	**Mr. Gaurav Loria** (Senior Vice President, Group Chief Quality Officer & Head Operations at Apollo Hospitals Group (PAN India))	Gold
5	**Dr. Vijaya Sunder M** (Assistant Professor, Indian School of Business)	Gold
6	**Mr. Arun Digamberrao Adiverekar** (Associate Vice President - Corporate QA Kirloskar Pneumatic Co Ltd, Pune)	Silver
7	**Dr. Sucheta Banerjee Kurundkar** (Head Training, Clinical Development Services Agency-Translational Health Science & Technology Institute, Department of Biotechnology, Ministry of Science & Technology, Government of India)	Silver
8	**Dr. Deepak Kumar** (Chief Quality Officer, Delhi International Airport Limited)	Silver

CONSULTANT REGISTRATION
SCHEMES OF NBQP

Objective:
To serve as a consultant in various sectors in order to diligently Evaluate, Plan & Implement Improvements in organisation's processes and practices.

Prerequisites:

1. Specific knowledge & skills of relevant Management Systems

2. A sound understanding of issues & challenges related to risk management

3. General knowledge of national and international certification/registration and accreditation

4. Strong analytical , communications & technical skills

Benefits:

▶ Unique Professional Identity through Registration certificate

▶ Visibility of his/her details in NBQP Website

▶ Free subscription of Quarterly QCI Magazine i.e. Quality India

▶ Availing discount on participation fee in the Quality Conclave, Seminars, Training Programs and Periodic events organised by QCI

▶ An opportunity to contribute Articles/ Commercial advertisements in 'Quality India' Magazine

Schemes :

- Quality Management Systems (QMS)-ISO 9001
- Environmental Management Systems (EMS)-ISO 14001
- Food Safety Management Systems (FSMS)-ISO 22000
- Information Security Management Systems (ISMS)-ISO 27001
- Occupational Health and Safety Management Systems (OHSMS)-ISO 45001
- Energy Management Systems (EnMS)-ISO 50001

For more details on the criteria & Fee Structure, please visit:
https://acr.qci.org.in
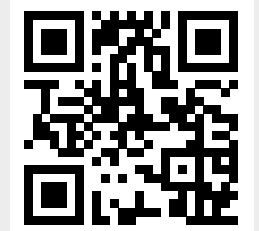
Mr. Prasoon Misra
Assistant Director, NBQP, QCI
Email: prasoon.nbqp@qcin.org | Mob: 7571908641

Ms. Sapna
Executive Assistant, NBQP, QCI
Email: sapna@qcin.org | Mob: 9599663755

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NAME OF THE **SCHEME**

MSME SUSTAINABLE (ZED) CERTIFICATION, MINISTRY OF MSME

ZED Showcased in 20th ARSO General Assembly held on June 30, 2022 at Cameroon, Africa

ZED Showcased in State Level conference of FKCCI on July 16, 2022 at Hubli, Karnataka

ZED Showcased in MSME Sammelan on June 27-28, 2022 at Lucknow, Uttar Pradesh

API integration process for fast delivery of incentives with States/UTs and 15 Financial Institutions (Banks) in process

Numbers as on date:

- Number of ZED Registered MSMEs: 17405
- Number of Payment Received for Certification (Document upload in process): 3792
- Number of Certified MSMEs: 423 (Bronze: 411, Silver: 04 and Gold: 08)

- Number of Assessment Agencies empanelled: 18 (3 in pipeline)
- Number of organizing partners empanelled for organizing awareness programs: 17
- Number of ZED Awareness Program Conducted: 20 (1200+ Participants)
- Number of ZED Assessor Training

Program Conducted: 4 (90 Assessors trained)
- Number of ZED Consultant Training Program Conducted: 01 (23 Consultants trained)
- Number of ZED Training program (face-to-face) for MoMSME Officials Conducted: 01 (26 MoMSME Officials trained)

NAME OF THE **PROJECT**

EXPANDING AND REVAMPING NIDHI & STAR CLASSIFICATION SYSTEM, MINISTRY OF TOURISM

NIDHI+ Website and Classification Systems have been made live (https://nidhi.tourism.gov.in/)

Development of modules related to project approval and tourism service providers in progress

Proposals under discussion:

- DRDO Vendor Assessment: e-tender (Single Tender) submitted, likely to be awarded soon

- ODOP Madhya Pradesh Government
- ODOP: Invest India

- ODOP Uttar Pradesh: Rating of Districts on ODOP Ecosystem
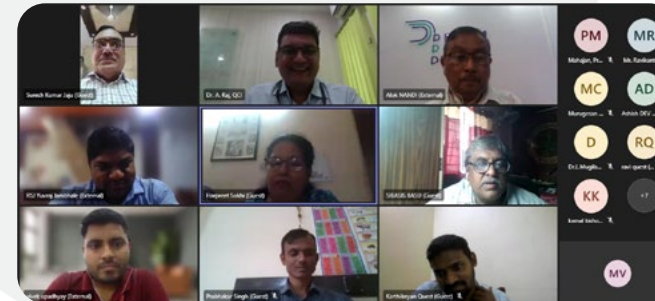
5-day Assessor Training Programs on ZED Certification Scheme
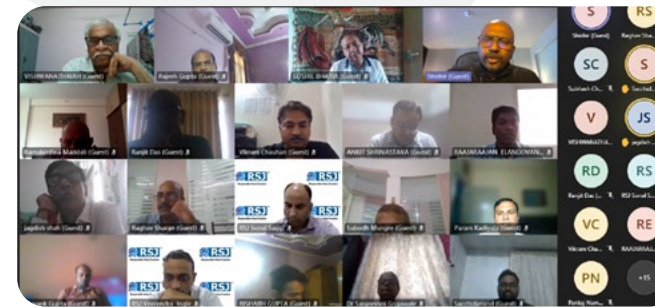
5-day Consultant Training Programs on ZED Certification Scheme
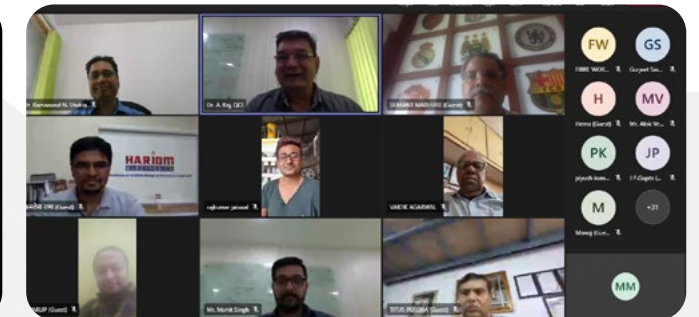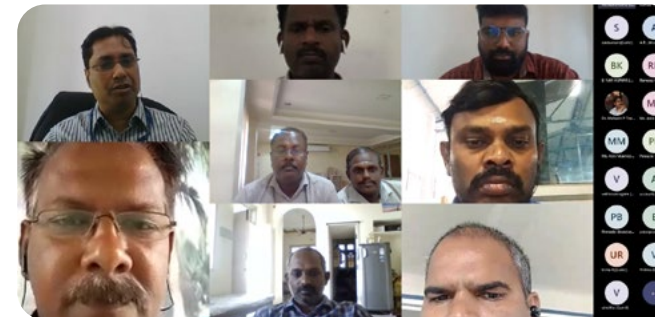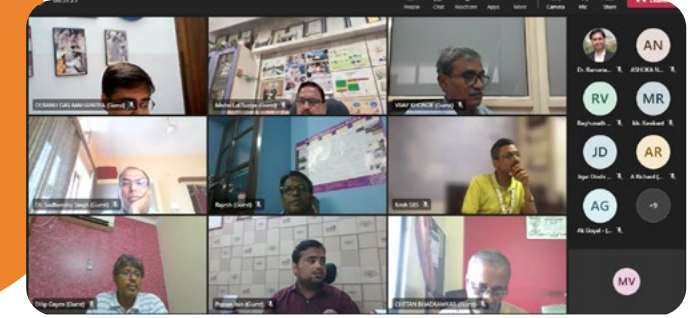
ZED Awareness Programs and Registration Camps conducted for MSMEs

ZED Showcased in MSME Sammelan on June 27-28, 2022 at Lucknow, Uttar Pradesh

ZED Showcased in 20th ARSO General Assembly held on June 30, 2022 at Cameroon, Africa

ZED Showcased in State-Level conference of FKCCI on July 16, 2022 at Hubli, Karnataka

PADD

Project Analysis & Documentation (PAD) Division

@QualityCouncilofIndia   @QualityCouncil   qualitycouncilofindia   Quality Council of India (QCI)

VOLUNTARY CERTIFICATION SCHEMES

Hygiene Rating Scheme (HRS) of FSSAI

- QCI has recognized 28 HRAAs till date that are conducting HRS audits

Certification Scheme for Unmanned Aircraft Systems (CSUAS)

- PADD was joined by 200+ participants during the 22nd Virtual Quality Conclave Program on 'Drone Sector: A way to Quality' on 17th June 2022

- 5th Technical Committee for CSUAS for incorporating Beyond Visual Line of Sight Compliance criteria held on 25th August 2022

- 3 Statement of Conformity submitted to DGCA for Issuance of Type Certificate on 30th August 2022

- Presentation as a Speaker on 'Conformity Assessment: A Tool to Drive Compliance in Drone Ecosystem' during 'Making India a Global Drone Hub' event organised by FICCI on 1st September 2022

22nd VQC on 'Drone Sector-A way to quality, 17 June 2022, Delhi

IndG.A.P. Certification Scheme

- PADD participated in the 'International Conference on GAP in coconut', organised by the Coconut Development Board and International Coconut Community, as the Chair for the country presentations and as the Speaker for presentation on IndG.A.P. Certification Scheme

- Meeting held with the Spices Board on 5th September 2022, to strategize and deliberate on various quality initiatives to promote GAP in the spices sector

Participation of PADD in the 'International Conference on GAP in coconut, 3 September 2022, Kerala

Meeting with the Spices Board for Pilot Project on IndG.A.P. Certification of Spices, 5 September 2022, Kerala

PROJECTS

Benchmarking IndG.A.P. to GLOBALG.A.P.

- 8 IndG.A.P. certificates issued under the Benchmarking initiative till date

VCSMPP | CB&S Project

- Total 65 trainings conducted pan-India till date

- Demonstration plots in 11 locations established, out of which 2 demo plots have been certified. In addition, TC has recommended 6 new demo plots for approval

Pilot Project on IndG.A.P. Certification of Spices

- Certificates issued to 5 spices projects under IndG.A.P. Certification Scheme

- Project has been completed and the project report has been approved by the Spices Board

Research study on categorization of work areas and competency mapping of traditional craftsmen

- The first FGD with the Redstone craftsperson was held at Sundar Nursery, New Delhi

NGCMA GLP CELL

- Assisted a total of 16 GLP inspections in the reporting period

- 4 Surveillance, 3 Surveillance cum extension in scope inspection, 1 new application, 4 re-certification and 1 final inspection received for GLP certification

FGD based interaction for the research study on categorization of work areas and competency mapping of traditional craftsmen, 26 August 2022, Delhi

Meeting with farmers under Pilot Project on IndG.A.P. Certification of spices, 15 June 2022, Rajasthan

PPID
Project Planning & Implementation Division

The division has mandate to explore Research and Capacity Building activities in the frontier areas relevant to the organizational mission.

Project Planning and Implementation Division (PPID)

Ranking of Jails in Haryana State

The Director General of Prisons, Haryana, commissioned Quality Council of India to rank all the District and Central jails in the state, with the primary goal of developing and ranking the jails based on several parameters. A team of 5 professionals conducted a pilot in District Jail, Faridabad to understand full structure (functional and process-related) of a jail and prepared a questionnaire which included various parameters including security, cleanliness, greenery, medical facilities, food, reform and skill development facilities etc. A thorough assessment would be conducted in 20 Jails within the state.

AB-PMJAY Quality Certification Scheme

The National Health Authority (NHA) has partnered with QCI in order to enhance patient satisfaction and to improve quality standards across the hospitals in the country by bringing a change in healthcare certifications through a unique digital certification initiative called AB-PMJAY Quality Certification. The aim of the initiative is to build a network of healthcare providers under AB-PMJAY scheme that strives to provide quality services to the patients and to get

fast-track quality certification. There are three levels of AB-PMJAY Quality certification: Gold, Silver and Bronze. As of Sept 2022, 114 hospitals have been certified with gold, 120 hospitals with silver and 46 hospitals with bronze quality certification. The steady rise in the number of applications portrays acceptance of the growing importance of quality and interest in quality certification.

Atal Bhujal Yojana

Atal Bhujal Yojana (Atal Jal) is a Central Sector Scheme of the Government of India that envisages improvement in groundwater management in the water- stressed areas of identified states viz. **Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh,** with an outlay of Rs 6000 Crores.

Quality Council of India has been appointed as a TPGVA (Third Party Government Verification Agency) by the DoWR, RD&GR to carry out

the verification, assessment, and certification of the achievements under Disbursement Linked Indicators (DLIs) in the scheme.

At present, QCI has conducted 3 rounds of assessment from September 2021 to June 2022. QCI conducted its pilot study for DLI#2 in September, 2022. This was followed by the 2nd phase of DLI#2, the assessment for which took place in April, 2022 - May, 2022. This phase of assessment focused on community-led preparation of water security plans with an emphasis over women participation in the decision making process. During this period, the QCI team undertook an extensive field assessment which included interaction with the people from the Gram Panchayats as well as the State officials to understand the extent of the awareness about the scheme in the villages.

The National Project Monitoring Unit organised a meeting-cum-workshop on public financing through convergence of ongoing central/state schemes (DLI#3) under Atal Bhujal Yojana. Along with NPMU and the World Bank, officials from all 7 participatory states, members from TPGVA QCI participated in the meeting.

Assessment of 434 Grain Procurement Centres

Under the MoU signed on 24th March 2021, Food Corporation of India and Quality Council of India have come together to review & upgrade existing policies, practices, and quality management systems through continuous monitoring, capacity

building & integration of end-to-end technology for traceability of grains in the country's food security supply chain affecting ~850 million beneficiaries. QCI shall undertake multiple rounds of assessments over a period of five years.

In order to benchmark the current practices, QCI is assessing 434 Grain Procurement Centers (Mandis) on infrastructure and services, farmer feedback interviews, and quality assay of the purchased grains across KMS 2021-22 and RMS 2022-23 in 23 States and Union Territories.

Third-Party Audit of Civil/Electrical Projects Being Executed by Uttar Pradesh Rajkiya Nirman Nigam (UPRNN) Under Directorate of Tourism, Govt. of Uttar Pradesh

Farmer stacking the grains at procurement center after quality assay and weighment of grains

Assessor conducting moisture analysis of the grains at a mandi in Telangana

QCI was nominated to conduct 3rd party audit of Civil/Electrical Projects being executed by Uttar Pradesh Rajkiya Nirman Nigam (UPRNN) under Directorate of Tourism, Govt. of Uttar Pradesh at the following locations under Swadesh Darshan scheme:

1. Buddhist Circuit: Kapilvastu, Shrawasti, Kushinagar

2. Ramayana Circuit: Ayodhya

3. Spiritual Circuit: Gorakhpur, Balrampur, Sidhharthnagar

The aim of the project is to check the quality of the executed work at the given sites.

The QCI team comprising of Civil & Electrical Engineers completed the first phase of the field assessment in 3 weeks, at the above-mentioned locations, in the month of September 2022 and a detailed report mentioning the field observations along with deficiencies and their corresponding recommendations has been submitted to the client. A second phase of field assessment would be initiated from second week of October 2022 to cross-check the compliance of the recommendations given after the first phase of assessment.

RACB

Research Analysis and Capacity Building (RACB) Division

f @QualityCouncilofIndia   @QualityCouncil   qualitycouncilofindia   Quality Council of India (QCI)

RACB Division has been working on a number of impact assessment and evaluation projects

Indo-U.S. Science & Technology Forum (IUSSTF)

The IUSSTF, a bilateral, autonomous organization, was established by the Governments of India and the United States of America in 2000. IUSSTF's mission is to "act as a catalyst to promote long-term scientific collaborations between India and the U.S. through partnerships amongst individual scientists, scientific institutions and the scientific community at large."

This prestigious project is awarded to the division by IUSSTF. The main aim of the proposal has been attributed to carry out the impact analysis of IUSSTF's programmatic portfolios. The analysis included evaluation of research projects/fellowships/collaborative R&D tie ups/scientific exchange programs/innovations under Virtual Networked Centres & Bilateral Workshops being taken up by the forum followed by an outcome-based assessment framework developed by the division in order to obtain the desired outcomes.

The division interacted with both Indian & US's PIs to gauge the impact of the programs.

The final report is under preparation for its submission to IUSSTF.

Promotion of R&D Activities at I.K. Gujral Punjab Technical University (PTU), Kapurthala

In accordance with MoU signed between PTU & QCI, RACB has taken the mandate to support PTU in establishing a R&D ecosystem at the university and associated institutes. Further, to create a progressive eco-system for research and development at PTU, RACB team interacted with PTU officials and tried to understand the current level in terms of availability of experienced professors, lab, and other infrastructure in university campus.

RACB accordingly submitted a detailed proposal to PTU, in terms of future steps required to be taken to further improve their R&D capabilities.

Interaction with Principal Investigators (PIs) to have their feedback about the scientific research program portfolios

The objective and aim of this proposal is to prepare a study report on R&D activities supporting PTU in strengthening its research programs. For the overall capacity building for R&D activities, QCI will engage PTU in a variety of events such seminars, guiding lectures & trainings also bringing them at par with global national and international programmes.

Indian Institute of Technology, Banaras Hindu University

Based on the meeting with Dean (R&D), Head CIF, Head SMST with RACB Head, QCI is preparing a higher level of proposals to assist IIT BHU in their overall R&D endeavours. The proposal from QCI includes:

- Impact Assessment of Academic departments of IIT BHU

- Research Impact and Outcome of Project investigated in IIT BHU

- Assessment & Evaluation of Central Instrumentation Facility (CIF)

The prime objective of QCI proposal is to enhance the organization's (IIT BHU) overall NIRF ranking performance and proposes the third-party impact evaluation of research outcomes of:

- Self-initiatives, community initiatives, government /industrial initiatives

- Review departments with SWOT analysis and

- Evaluation of Central Instrument Facility

Impact evaluation and review of performing & non- performing departments (academic, research, technology, placement) at IIT BHU shall also be worked under the mutual agreement.

A Leap from Virtuality into Reality

With Covid-19 restrictions weakening and world getting back into order, TCB has commenced with customised classroom trainings, along with keeping the tradition of continuing with the online training. In this quarter, TCB trained more than 1600 professionals on various accreditation and certification standards like ISO/IEC 17025:2017 for testing & calibration laboratories, ISO/IEC 17020:2012 for inspection bodies, ISO 15189:2012 for medical laboratories, ISO/IEC 17065:2012 for product certification Bodies. Several Instructor-led-Trainings were also conducted in the domain of general management like Cost of Quality, Organizational Values, and Ethics & Office/Workplace Etiquettes etc.

1. **The second season of training for Jal Jeevan Mission kicked off** for capacity building activities, reorientation of different stakeholders, dissemination of knowledge and information, development of high-quality print and audio-visual content, documentation of best practices, etc. for the transformation of the eco-system of drinking water supply sector. In this round, a total of 11, 2- day residential trainings for the professionals of middle management level like Executive Engineers, Assistant Engineers, Water Consultants, Chemists, Lab assistants etc. were conducted.

The trainings organised were spread across 6 states viz, Bihar, Assam, Rajasthan, Gujarat, Punjab, and Haryana.

3 trainings were conducted in Patna, Bihar and one of the trainings was inaugurated by the Honourable Minister of Public Health Engineering Department, Bihar, Shri Lalit Kumar Yadav

Three trainings were conducted at Gandhinagar, Gujarat and one at Jaipur, Rajasthan expanding its reach across Western India

The 2-day residential trainings were held between 30th August to 2nd September2022 in two batches. The participants in attendance were officials PHED Assam. Several media houses covered the event

Two trainings were also conducted at Chandigarh, Punjab, for the officials of DWSS Punjab. The trainings were held from 27th to 30th September 2022

2. **2-day classroom training in Nepal sponsored by PTB Germany on 'ISO 19011:2018** Auditing Management system' for the officials of Department of Food Technology and Quality Control (DFTQC), Government of Nepal (GoN) from 26th to 27th July, 2022. The training was aimed at garnering awareness towards Internal Audit as per the guidelines of ISO 19011:2018, to aid quality improvement as they also verify the effectiveness of corrective actions. The training focused on topics such as overview on ISO/IEC 17025:2017, Clauses, Requirements and Interpretation of ISO/IEC 17025:2017, Internal Audit as per ISO 19011:2018, and many more.

3. **Two batches of classroom training on 'Provisions of RTI Act, 2005'** for the officials of University Grants Commission. The training included RTI provisions and Landmark Court Decisions. The Welcome Note for the session was delivered by the Vice Chairman of UGC, Dr. D.K Srivastava.

4. **In this quarter, a new training on Six Sigma Yellow Belt was also introduced**, and two batches of successful trainings have been conducted as of yet, along with a training of Lean Six Sigma Green Belt Certification.

Unlocking possibilities through eLearning Courses- eQuest

eQuest has been witnessing a steady rise in the number of learners being benefited from the eLearning courses focusing on the core areas of QCI. In this quarter, more than 1200 participants registered with us.

- Cipla, the leading global pharmaceutical company, has availed 100 logins for their officials for the eLearning course on ISO 15189: 2012 "Medical laboratories: Requirements for quality and competence"

- TCB/eQuest inked an MoU with Indian Agricultural Research Institute (IARI), New Delhi for collaboration & coordination using as a platform for training & capacity building programs envisaging National Level Activities

Association with SWAYAM Continues

SWAYAM, the eLearning platform of Ministry of Education, has renewed two courses of eQuest, QCI. This would be the 6th batch of Continuous Quality Improvement (CQI) and 2nd batch of Total Productive Maintenance (TPM). Till now 2000 students have registered for the current semester.

TCB Talks: Championing Ideas of Quality at National & International Events

- TCB head delivered a talk at an event 'Advances in Metrology by the Custodian of Indian National Standards: CSIR-NPL' organized by CSIR

- TCB head gave a talk at the 11th International Conference on Advances in Metrology (AdMet 2022), held from 24-26 August 2022 on the topic "Role of Conformity Assessment in Facilitating Trade and Sustenance"

- TCB head gave a Lecture on 'Quality Infrastructure and Accreditation' in the Course on 'Basics of Quality, Assurance & Reliability' for Defence Research Technical Cadre personnel of DRDO held during 01-05 August 2022

In-house Articles

GHOST TOWNS AT BORDER AREAS
A NIGHTMARE FOR SECURITY CONCERN OF INDIA AND EFFORTS MADE TO REVERSE IT

Rachna | Coordinator, QCI

In 2020 when the border dispute between India and China intensified which was followed by objection from Nepal on several construction projects undergoing near Uttrakhand Nepal border, the issue of human migration at the border areas once again came on to the forefront.

Several defense and security experts from time-to-time alerted the government about benefits of villagers near the border but the declining population in border villages of Uttarakhand has become a security concern. The experts said that it is in the nation's interest that the population of these villages doesn't migrate to bigger cities as they are integral to the forces for information about incursions and early alerts.

Inadequate education and health facilities and absence of employment opportunities are the primary reasons for the migration of population from Uttarakhand to other parts of the country.

Former Sashastra Seema Bal (SSB), DG, S.S. Deswal, once said that migration of population is not only a socio-economic problem but is also a security threat as the force gets the locals' help to gather intelligence.

Most young people migrated to cities such as Dehradun, Delhi or even towns like Joshimath and Srinagar for better life, after sometime even call their parents to that cities leaving behind ghost towns, which serves as a hideouts for smugglers and opposite forces.

This is, in fact, a serious policy challenge that deserves immediate attention.

As per the 2011 census, only 17% population in the nine hill districts in Uttarakhand lives in urban areas compared to 42% (population) in the remaining three plain districts. Official records of 2018 of the state migration department now suggest that at least 16 border villages in Uttarkashi, Chamoli, Pithoragarh and Champawat districts have no families left, while the population in four others has declined by half.

Security experts emphasise that the trend of declining population in the border villages should be reversed. But since various infrastructure projects are underway including the Char Dham Corridor or the better road connectivity near the border towns the situation might get reverse in due course of time. Earlier this year Prime Minister Narendra Modi too emphasized on the importance of border area. During a rally in Almora, PM said the vibrant villages programmes have been introduced in this year's budget keeping in mind the requirements of all bordering areas, including those in Uttarakhand.

He said the programmes for villages would boost tourism and stop migration, besides providing infrastructure development in the border villages of Uttarakhand. Bridges and ropeways would be built, especially in the border areas which will be of great use for the people and for the security personnel.

Apart from it, Uttarakhand government is also working under Border Area Development Programme (BADP) which aims to meet the special development needs and well-being of the people living in remote and inaccessible areas situated near the International Boundary (IB) and to provide the border areas with essential infrastructure. The Programme covers 9 blocks of 5 districts in Uttarakhand.

However, despite all these efforts which are being done, there is still a long way to go as changing the mindset of the people takes time.

BRINGING FOCUS TO THE HEALTH EQUITY –
ACKNOWLEDGING 'RARE DISEASES' IN PUBLIC HEALTH ECOSYSTEM

Reeti Mahobe | Associate Manager, QCI

RARE DISEASE IS DEFINED BY WORLD HEALTH ORGANIZATION AS OFTEN DEBILITATING LIFELONG DISEASE OR DISORDER WITH A PREVALENCE OF 1 OR LESS, PER 1000 POPULATION.

More than 7000 rare diseases have been identified and known with majority of them having genetic origin and no definite cure, it becomes pertinent to bring in the much-needed focus to help the rare disease community.

Rare disease is defined by World Health Organization as often debilitating lifelong disease or disorder with a prevalence of 1 or less, per 1000 population. The definitions differ country to country or region to region based on the population and general prevalence rates.

For instance, in the USA, a rare or orphan disease is defined strictly according to its prevalence, specifically "any disease or condition that affects less than 200,000 persons in the United States," or about 1 in 1,500 people. On the other hand, European Union (EU) considers diseases affecting fewer than 1 in 2,000 persons to be rare, while in Japan a rare disease may be defined as affecting not more than 1 in 2500 people. Considering the population of India, the suggested threshold for India for a disease to be defined as rare is 1 in 10,000 as the prevalence ratio.

As indicated earlier, globally around 6000 to 8000 rare diseases exist with new rare diseases being reported in the medical literature regularly. However, 80% of all rare disease patients are affected by approximately 350 rare diseases which explains the paucity of awareness in the domain not merely among the people but also the medical fraternity to a large extent. It is worth noting that for a 1.35 billion population in the country, even a conservative estimate yields a count of nearly 81 million people to be affected by rare disease. India's NPTRD puts it at 72 to 96 million people which in itself makes it worthwhile to give due emphasis in the larger aim of promoting 'Health for all'.

Rare diseases may include autoimmune diseases, congenital malformations, metabolic in-born errors and rare cancers, infectious diseases inter alia. About half of the rare diseases affect children while the remaining manifest during adulthood. This takes us to the concern of missing new born screening or genetic pre-natal assay. This has been addressed to an extent in the Rare Disease Policy, 2021.

The experience is also personal, as I myself have been part of this journey

> About half of the rare diseases affect children while the remaining manifest during adulthood

having in-born metabolic disorder; henceforth of understanding what rare disease is, of having heard stories of how I was diagnosed as an infant, of discussions with geneticists, the prognosis,the various dimensions, the scenario that exists and is evolving nationally and internationally and so forth. This in itself generated interest to explore public health and its ecosystem.

The drafting of Rare Disease Policy, 2021 was instituted by an expert committee formed by Ministry of Health and Family Welfare. The policy document stated that the field of rare diseases continues to be at nascent stage with everyday developments adding to the existing medical literature. It has further recognized that there is need both in the short and long run to have a framework with the objective of tackling rare diseases comprehensively. The policy has covered key aspects of addressing the definition of rare diseases, challenges faced in the overall scenario including prohibitive cost of treatment, public health resource ecosystem for handling rare diseases, listing of certain conditions with their treatments and plausible way forward for the government to take action upon.

There's a need to give greater focus on patient and caregiver support, orphan drugs development, research and affordability of treatment options. It is advisable to tread forward on the focus areas by pushing forth the new born screening, pre-natal screenings, awareness sessions for both medical fraternity at different levels as well as patient support groups. Some of the states such as Goa, Kerala and UTs like Chandigarh have initiated program on new born screening for in-born errors. Government programs such as 'Rashtriya Bal Swasthya Karykram' have huge potential within their 4 Ds screening approach (Defects at birth, Deficiencies, Diseases, Development delays including disability) to anchor any program on rare diseases at the ground level with adequate provision of resources and capacity building of the staff. It is also quite important that database of such diseases and the related aspects are maintained well while upholding the principles of patient privacy. Recently in an order Delhi HC has directed to the government that all centres of excellence including AIIMS must begin with the treatment of rare diseases with allocation of adequate funds.

Further, it is suggested that implementation guidelines for policy needs to be prepared and released, effective steps are taken up to conduct regular evaluations of health facilities particularly centres of excellence with regard to treatment and other health facilities to initiate early diagnosis and care services, ecosystem mapping and patient and caregiver groups feedback mechanism to ensure that greater impact is created on the lives of people who may be directly or indirectly affected by it. The whole scenario also needs to be viewed comprehensively involving disability support, rehabilitation and provision of barefoot care in times to come. Collaborations nationally and internationally with institutes exceling in research in the field would have potential to instill greater hopes for those in search of treatment and better lives ahead.

It is a tumultuous task yet very significant that an action plan is undertaken which strengthens the health systems at multiple fronts to be able to inspire rare disease community for leading happier lives.

> It is a tumultuous task yet very significant that an action plan is undertaken which strengthens the health systems at multiple fronts to be able to inspire rare disease community for leading happier lives

QUALITY STANDARDS REQUIRED TO CREATE FUTURE FOOTPRINTS IN INDIA

Dr. Harveen Kaur | Assistant Advisor, QCI

INDIA NEEDS TO MAKE SIGNIFICANT PROGRESS IN TERMS OF THE CONFORMITY ASSESSMENT FRAMEWORK WHILE GETTING READY FOR A QUALITY REVOLUTION.

Standard, according to ISO, is a written description of requirements, specifications, guidelines, or other features that can be consistently used to ensure that materials, products, processes, and services are appropriate for their intended use. When standards are being developed, there is a consensus because they are the result of the collective work of experts in the field. Therefore, a published standard is an agreed-upon synthesis of what the group is willing to publish. Standardization organisations like ISO or the IEC are not required to develop standards. Standards can be created by any organisation for internal or external use. But for something to be called a standard, it must satisfy certain conditions.

Overview of International Standards Day

World Standards Day, also referred to as **International Standards Day** is observed on October 14 every year to remember the first conference of representatives from 25 nations, which took place in London in 1956. This day honours the contributions of professionals and scientists from around the world who work with organisations that develop standards, like the International Organization for Standards, to create voluntary standards (ISO). It aims to raise awareness of the value and importance of standardisation among policymakers, consumers, and the business community.

World Standards Day has a theme around which events and educational resources are developed each year. **"Shared Vision for a Better World"is the subject of World Standards Day in 2022. The campaign aims to raise awareness of the value of standardisation in achieving the sustainable development objectives of the UN.** International Standard-setting organisations namely the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC)and International Telecommunication Union (ITU) had established this day.

> When standards are being developed, there is a consensus because they are the result of the collective work of experts in the field

How Standards Work

Except when standards are specified in a formal contract, a law, or a regulation, compliance with them is entirely voluntary. Standards must be harmonised globally to ensure they are truly transboundary whenever possible to increase global tradeability and compatibility of goods and services.
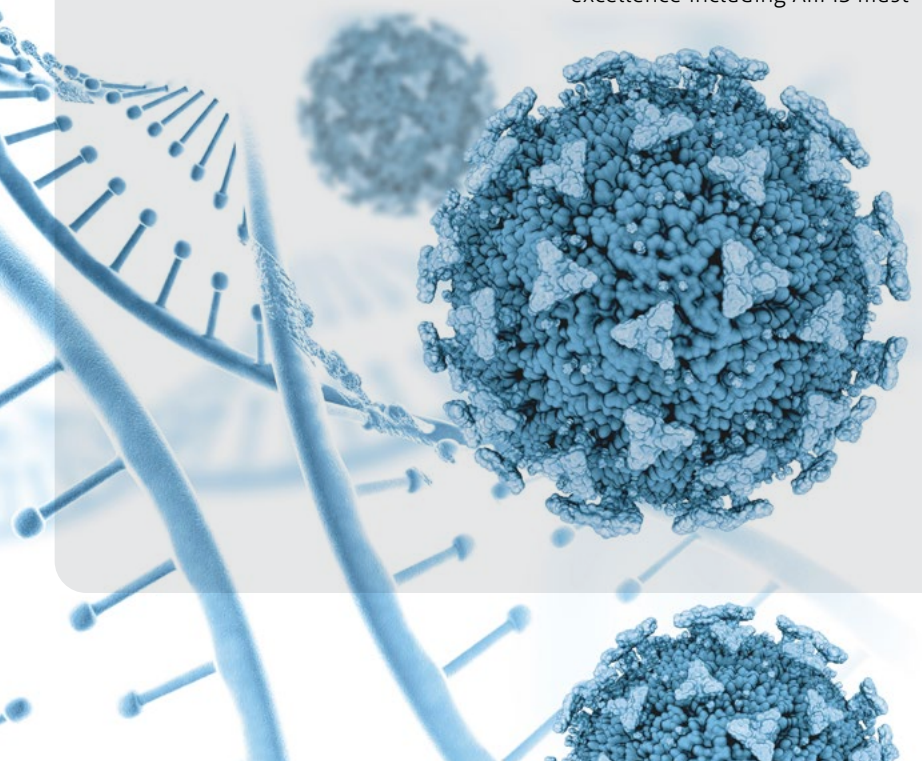
With the advent of the Industrial Revolution and the requirement for highly precise machinery and interchangeable parts, the application of standards in industry and commerce assumed a significant role.Companies, organisations, and industries all agree to uphold a set of standards that have been established around the globe. As part of their membership in the ISO, the International Organization for Standardization, these organisations have mutually agreed upon these standards. These kinds of standards propelled the industrial revolution, and they continue to propel the development of all technologies, from telecommunications to the automotive industry.

Standards Developing Organizations

Accreditation of Standards Developing Organizations (SDOs) is mandated by the recently published Bureau of Indian Standards Act, 2016. But accreditation rules have not yet been notified. A voluntary scheme for the Accreditation of SDOS has been published by the Quality Council of India (QCI). But as of now, no accreditation has been provided.Some of the National and International Standards Development Bodies are stated below.

National Voluntary Standards Development Bodies

The role of National Standard Bodies is to develop and maintain standards to meet industry needs. They also guide the use of standards to various agencies and stakeholders.

STANDARD

National Voluntary Standards Development Bodies

Bureau of Indian Standards (BIS)	▪ National Standard Body working under the Ministry of consumer affairs, food and public distribution, Government of India. ▪ Has more than 15000 Standards related to health hazards, products, imports/exports etc.
Bureau of Energy Efficiency (BEE)	▪ Agency under the Ministry of Power, Governmnet of India created under Energy Conservation Act. ▪ Standards include Energy Performance Standards for Appliances Energy Conservation Building Code
Central Drugs Standard Control Organization (CDSCO)	▪ Agency formed under the Drugs and Cosmetics Act. ▪ India's national regulatory body for health care devices / technologies, cosmetics, pharmaceuticals and medical devices under the Drugs and Cosmetics Act.
Central Pollution Control Board (CPCB)	▪ Statutory organization under the Ministry of Environment, Forest and Climate Change. ▪ Lays down standards for the environment, air, water, noise and waste etc. ▪ Prepares manuals, codes and guidelines relating to treatment and disposal of sewage and trade effluents.
Export Inspection Council of India (EIC)	▪ Export-certification authority, formed to certify the safety and quality of products exported from India. ▪ Does not formulate any standard and instead recognizes the technical regulations or national standards of the importing countries.
Food Safety and Standards Authority of India (FSSAI)	▪ Statutory body established under the Ministry of Health & Family Welfare, Government of India. ▪ Lay down standards for articles of food and regulate their manufacture, storage, distribution, sale and import.
Quality Council of India (QCI)	▪ Autonomous body set up by the Ministry of Commerce and Industry, Government of India jointly with the Indian Industry representatives. ▪ Provide third party assessment of products, services and processes. ▪ Lays quality standards in education, healthcare, environment etc.
Telecommunication Engineering Centre (TEC)	▪ Body under telecom commission and a nodal agency of the Department of Telecommunications, Ministry of Communications and Information Technology, Government of India. ▪ Formulate Standards with regard to Telecom network equipment, services.

Source: India Standards Portal

International Voluntary Standards Development Bodies

In addition to the national Standardization system, several overseas standards organizations have established Indian offices to assist Indian industry in the adoption of their standards, especially to meet international trade obligations. Notable among these are :

International Standards Organization (ISO)	▪ It is a worldwide federation of national standards bodies. ISO is a nongovernmental organization that comprises standards bodies from more than 160 countries. ▪ While ISO develops the standards, third-party certification bodies certify conformity with those standards
International Telecommunication Union (ITU)	▪ It is a specialized agency of the United Nations responsible for many matters related to information and communication technologies. ▪ IT coordinates telecommunication operations and services throughout the world.
International Electrotechnical Commission (IEC)	▪ It prepares and publishes international standards for all electrical, electronic and related technologies – collectively known as "electrotechnology"
International Code Council (ICC)	▪ It is a non-profit organization that develops and publishes standards related to building safety and fire prevention.
Export Inspection Council of India (EIC)	▪ Export-certification authority, formed to certify the safety and quality of products exported from India. ▪ Does not formulate any standard and instead recognizes the technical regulations or national standards of the importing countries.
Sustainable Electronics Recycling International (SERI)	▪ Non-profit organization in the world focused exclusively on minimizing the environmental and health risks posed by used and end-of-life electronics ▪ Created R2 standard (Responsible Recycling) for the electronics recycling industry. ▪ R2 standard provides a common set of processes, safety measures and documentation requirements for businesses that repair and recycle used electronics.
Seconded European Standardization Expert in India (SESEI)	▪ General objective is to enhance the visibility of European standardization activities and increase the cooperation between Indian and European standardization bodies
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)	▪ It is a non-profit organization that develops and publishes standards for the heating, ventilating, and air conditioning industry

Source: Harveen Kaur

Industrial Growth Story in India needs Standards and Certifications

Industries in India need to take the initiative to contribute to the development of a strong system of standards and regulations to advance the twin goals of product safety and quality. Forced compliance may, in some cases, be effective, but the best way to promote long-term, sustainable industrial and economic growth is through voluntary adherence to standards as India is the source of some of the world's highest-quality exports, including computers, cars, textiles, and pharmaceuticals.

The quality of these product categories, as well as others like toys, medical equipment, and electronic goods, available in India, is, however, inferior to that of domestic markets in even developing nations like China, Malaysia, Thailand, or Brazil

for the average Indian consumer. The quality of our goods and services needs to be completely overhauled right away as a result of this. India needs to make significant progress in terms of the conformity assessment framework while getting ready for a quality revolution. For some important items, there are well-developed standards, but their implementation has a lot of gaps.

Numerous product categories are unregulated, which leads to the import and sale of goods that may not meet compliance standards and have not been tested, which could have serious negative effects on the consumer's safety and performance.

Suggestions and Recommendation

- It is extremely difficult for the government to **develop, implement, manage, and monitor** a robust standards

regime in the complex and dynamic environment of today. We can all agree that the government and regulatory agencies play a critical role in ensuring the quality and safety of products

- The industry that continuously monitors product manufacturing and processing is ultimately responsible for allocating the financial and managerial resources required for putting in place the **appropriate controls**

- Requirement of an instrument is there to identify areas that require national regulation in the interests of **health, safety, the environment, national securityand misleading business practices**

- The key is to collaborate with the private sector, in particular **Third-Party Certification Bodies** and most crucially with Industry Associationsfor standards implementation

Conclusion

While much work needs to be done to improve quality in India, the symbiosis of the proper leadership, partnership, and systematic programme can boost economic growth while enhancing the lives of the citizens. Industry participants need to be taught to feel a sense of ownership and to

understand the long-term benefits of standards, quality, and certifications.

Most industry associations give more attention primarily on topics such as tax, policyand GST to name a few but awareness about standards and adherence to them is equally important. Thus, Industry associations, Standards formulating

bodies andthe Government have crucial role in creating a positive impact on the development, harmonisation, and application of standards. By doing so, they can increase the competitiveness of the represented industries on the international market and guarantee that Indian consumers are getting a fair deal.

SOCIAL SERVICE

Meenakshi | Coordinator, QCI
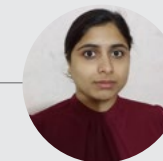
Social Service is most often a service provided by the people or a community of the people to people to improve the life, quality, and health of the society. It is promoted as a very important function of life.

The term social service has many other terms such as social welfare, social protection, assistance, or care towards people to improve their life. Social work has mainly three most important reasons they work in these sectors.

There are a very wide range of social services provided by individuals, and private or government organizations in different sectors such as education, food, poverty, health services, transportation, and housing. These social services are largely defined as charities by private organizations.

POVERTY

Social Work by community, individuals or government can be helpful in reducing poverty from the society to bring the positive impact in the society.

EDUCATION

Many social programs started by community workers and government to aware people about education which can be helpful for the vulnerable people to bring positive impact on the society.

HEALTH

Health is an important issue which needs to be promoted well by bringing awareness program to enhance the knowledge among the weaker and vulnerable people in the society.

Social work can be community-based or individual. In the healthcare sector, social work has different impacts because it improves the social life by improving the lives of people by improving their physical, and mental health through clinics or hospitals or any health campaign which helps improve the physical and mental health of the person.

They help people through many phases of life in handling difficult issues like depression or the transition plan when a client may leave one level of care to another.

According to Friedlander, "The term welfare means all the services

(social and economic) that deal with economic support, welfare provisions, and social security. Social welfare is people's well-being promoted by society through a wide variety of ways and means. Wilensky and Lebeaux define social welfare as those formally organized and socially sponsored institutional agencies and programs which function to maintain or improve the economic condition health or interpersonal competence".

The development of social services has increased in the last two decades of the nineteenth century in Europe. Several factors have contributed to the development of social services during this era such as poor quality of life, uncertain wars, death, pandemics, hunger, and education.

After industrialization in the nineteenth century, the extent of social services in the form of labor schemes and compensation expanded. The expansion of social services began following Britain's Legislation Act of the 1833 'Factory Act'. In Asia, the significant development of social services first began in Japan after the conclusion of World War II. Due to rising levels of social inequality in the Japanese economy in the 1950s, the health-related law was upheaval. In Korea, voluntary health insurance was made

available in 1963 and mandated in 1976. After that, other Asian countries also showed the availability of social services considerably increased positive changes in society.
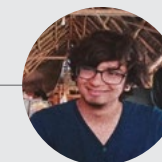
The important question of social welfare is how it deliberately changes the life of society by targeting the weaker sections and vulnerable people of society. The aim of social welfare lies here to protest and promote the interest of the vulnerable and weaker

During festival season in India, we can see that many social workers or communities introduce many important programs to help them lead better life with joy and prosperity. The reason behind doing this is that it influences positive energy and brings positive changes to the mind of the people and ultimately the society. During these festivals, many social communities start a social campaign to collect money and another important things to help other people.

is a great impact of social work in the society for women also. Women's education and healthcare matters in society. Social service for women is helpful in terms of improving the lives of women by giving them various rights related to education or health, especially in the weaker sections of cities or villages.

Social services have played a central role in the global response to the covid-19 pandemic. Many public

Social services have played a central role in the global response to the covid 19 pandemic.

section of society by enabling them to realize their potential talents and abilities and provide the necessary things to live a dignified life with respect.

Social work plays a very important role to inspire many people through mutual aid such as festivals or any social events such as sports, or educational tours which can help provide them food and drinks to help each other.

Social work by the government or leaders is helpful in the establishment of new schools, colleges, hospitals, transportation, and bridges which helps improve the quality of life. Social works are also inspired by the stories of Mother Teresa, Swami Vivekanand, and others.

Social work gives special attention to vulnerable and oppressed communities which is not only helpful to individuals but improves whole families. There

officials, teachers, social welfare officers, and other community workers have provided critical services in containing the pandemic and ensuring society functions. The impact of the pandemic was compounded by the shortage of social services globally, with the world requiring six million more nurses and midwives to achieve the goals set within the sustainable development goal at the time of the outbreak.

GROUND WATER CONTAMINATION IN JHARKHAND: FINDINGS FROM PARTICIPATORY RURAL APPRAISAL

Dishant Parakh | Analyst, QCI

Natural and man-made contamination of aquifers is becoming a global issue; India, the world's largest consumer of groundwater, surpassing even China, experiences the most severe effects of this disaster. Groundwater resources are integral to the sub-continent due to their advantages such as (i) year-round availability at the demand locations (near agriculture fields), (ii) higher productivity and lower initial investment, (iii) public subsidies, and (iv) lack of formalized groundwater tariffing.

The principal focus of the article is to highlight the presence of gross inequity in water sustenance among the agrarian communities

within the periphery of industrial clusters in Giridh District, Jharkhand. Negative externalities in economics are defined as the third-party cost during the production and consumption of a product. There are various reasons due to which the negative externalities contributed by the sponge iron industries are not held accountable. One of the significant factors is the employment provided to residents for the operation and maintenance of the peripheral factories. However, the effluents released from the factory lead to heavy metal contamination of their local groundwater, which is an integral source for domestic and agricultural purposes.

Participatory Rural Appraisal (PRA) is a hands-on technique to gather/collect snapshot information with the community's involvement. Various tools can be utilised to enable stakeholders to arrive at the key focus areas and to generate an action plan. Timeline trends and resource mapping from the appraisal revealed health concerns after

the inception of these factories. A surge in the number of patients with cancer, children born with disabilities, along with increased livestock mortality was observed.

Toxicity of groundwater has risen drastically near the foraging territories of the indigenous tribal groups. Macro-level policy and programmes for improving groundwater quality were primarily focused upon as a 'state' subject.

The principal focus of the article is to highlight the presence of gross inequity in water sustenance among the agrarian communities within the periphery of industrial clusters in Giridh District, Jharkhand

Macro-level policy and programmes for improving groundwater quality were primarily focused upon as a 'state' subject.

Puzzlingly, states are free to change the national water policy as necessary to meet their needs, with some even having their own state water policy. Concerns of the nomadic tribes whose migration has become restricted due to access to safe drinking water have largely been neglected by the media.

Farmers have begun to shift from dugwells to deeper tubewells due to high contamination and depletion of groundwater levels. Analysis from the seasonal calendar revealed that the cropping season, especially during the Kharif season, substantially impacts groundwater quality due to fertilizers and pesticides application. Therefore, the preliminary step for redressal of these marginalized communities should start with monitoring and evaluating the wells. This can drastically alter the region's agricultural sector and sustain the long-term viability of

groundwater resources.

Diverse viewpoints on the extraction of groundwater from the aquifer exist among scholars. Depending upon the type of property, groundwater aquifers can be viewed either as a common public resource or as free for extraction in the case of private property.

Regardless of the ownership debate, there is an interconnected relationship between degraded surface water flows such as rivers and canals

and groundwater pumping areas. Households near the site area of the factory have been shown to move away from the notion of low maintenance cost of water, instead acting as informed decision makers making choices similar to purchasing consumable goods in the market.

Members/ Guests Write

Deepak Bandyopadhyay

Management Systems Consultant

ANNUAL PERFORMANCE ASSESSMENT OF STUDENTS IN SCHOOLS

Preamble

In India, learning levels and progress of school going students are being reported to some extent through National Achievement Survey (NAS), a nationally representative examination. In addition, Annual Status of Education Report (ASER), an independently conducted survey, also throws light on this. These efforts are well meaning and this article only aims at supplementing these efforts. In writing this article, I have drawn inspiration from the academics in one school in Toronto, Canada, where my granddaughter is a student.

It is not known to me when the system of assessment of performance of students in a class was initiated by the human civilization; perhaps the earliest evidence is available in Mahabharata where Guru Dronacharya puts all his students (the five Pandava brothers and the hundred Kowrava brothers) in a test of archery by asking them one-by-one to hit the eye of a fish kept at a height by arrow, which was hung from a tree, not by directly aiming but using the reflection of the fish in water kept in a vessel on the ground below. Indeed a very tough test! When a student takes position, Guru asks what he was able to see in the reflection in water. Every student stated that he was able to see the fish, tree leaf, tree branches, etc. Now the Guru signals him to shoot. That student could hit the target and so also all others. At last Arjuna's turn came. When Guru asked the same question to Arjuna he answered that he was only able to see the eye of the fish and nothing else. Guru signaled him to shoot and Arjuna hits the target successfully. The Guru attributed Arjuna's concentration as the most dominant factor. He advised all the students to sharpen their concentration.

Report card

A report card generally shows subject-wise maximum marks, the qualifying (pass) marks, the marks scored by the student and the suggestions of teachers to parents for ensuring better performance in future. Other criteria possibly taken into account could be class work, home work, timely submission of assignments, relationship with class mates, attentiveness in class, obedience to teacher, extra-curricular activities (sports, art work, hobby, music, scouts and guide activities, etc), etc. Of late, some new criteria have been added such as innovativeness, willingness to take up challenges, positivity in attitude, awareness of rights of self and other students (influence of democracy), attentiveness in class,

Etymology in the context of this article

Mean or Average percentage in a subject

It is the percentage of marks in a subject calculated by dividing the sum of marks scored by all students in that subject by the number of students.

Possible interpretation: If the mark scored by a student is lower than average, it can be concluded that the appropriateness of the concerned subject for that student needs a review.

Mean or Course median (subject wise) – It

is that percentage of marks at which 50% of the students have higher percentage and 50% have lower.

Possible interpretation: This brings out the actual performance of a student in the class in relative terms, consistent with the other common influencing factors like (i) the complexity of curriculum, (ii) the competency of the teacher and (iii) the teaching aids used.

Mode – It is the most common percentage scored by the students in a class in a particular subject.

Possible interpretation: If in a class, the highest number of students score the maximum marks in say "history", then "history" is the mode and it can be inferred that "history" is the preferred subject for the students or the teacher is efficient or "history" is the preferred subject for the human population to which the students belong. However, if the highest number of students scores lowest in "history", it may be concluded that either the concerned teacher is inefficient or "history" is not the preferred subject of the population to which the students belong.

Note: For convenience of those who are not very conversant with statistics, an example with some imaginary data is given in Annex.

etc. With passage of time, steps in personality development by aspects such as individual student's goal setting, identifying his/her capacity for self development, leadership qualities, etc being included progressively.

The report cards in Toronto schools has adopted a statistical tool namely "median" which they call "course median" though other tools like 'mean' and 'mode' have not yet been adopted. If the above three possible interpretations are accepted, "mean" and "mode" are elements for consideration by the school management. On giving more thought, I have concluded that appropriateness of adoption of these tools are amenable for consideration in India, for arriving at holistic decisions for identifying the following facts and thus improve the pedagogy:

- Subject-wise aptitude, strengths and weaknesses of each student

- Aptitude, strengths and weaknesses of each teacher

- General subject preferences of the parents and students so that eventually the student may get preconditioned for his future career and perhaps contribute in the family's earnings or enter into family business

On the basis of this detailed analysis of the annual results, the school management may take appropriate administrative decisions to improve the quality of teaching by:

- Introducing appropriate teaching skill improvement programmes for the identified teachers

- Relocating the teachers

- Improve teaching aids

- Inviting research scholars and academicians for evolving the best possible education policy and

- Changing the subject allocation to the students, keeping in mind their desired future professional carrier

Concluding, I would suggest to National Board for Quality Promotion (NBQP) of Quality Council of India (QCI) to initiate a programme on exchange of knowledge and experience of experts on annual performance assessment of students and forward the findings to the Education Ministries of states and central government for appropriate administrative actions for overall betterment of students' performance.

Annex

Mean, Median and Mode explained through marks obtained by 50 students in a class in a certain subject.

Marks obtained out of 100 (a)	Number of students scoring that mark (b)	Total of marks of all students X (b) (c)
40	5	200
41	4	164
45	7	315
46	5	230
49	8	632
56	3	168
65	4	260
70	6	420
75	7	525
Total	50	2414

Mean: 2414 ÷ 50 = 48.28 or 48 (using the rule of rounding)

Median = 49 (50% above and 50% below)

Mode = 49 (maximum number of students have scored this)

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RENDERING HEALTHCARE IN THE COMMUNITY– AWAY FROM HOSPITALS

In ancient India around the fifth century BC, the Buddhists built viharas – wayside monasteries catering to ailments of both body and soul.

The origin of the hospital:

The ancient Indian physicians, the Hippocratic physicians in Greece, the Chinese physicians and even the European physicians traditionally paid house visits.

The first hospitals evolved ostensibly for economies of scale in treatment and training. Originally built in ancient Mesopotamia, the culture spread to Europe and the Middle East. Religious missionaries were largely instrumental.

Meanwhile, in ancient India around the fifth century BC, the Buddhists built viharas – wayside monasteries catering to ailments of both body and soul.

The downside of hospitalization is becoming apparent. Isolation from family, astronomical bills, hospital acquired resistant infections, medical errors---, to name a few.

A patient committed suicide by jumping off the top floor of a corporate hospital upon receiving the bill!

Intermediate solutions:

Now more than 50 percent of women are being discharged after normal childbirth. Coronary angiograms and chemotherapy are being performed as day care procedures. Many surgical procedures are becoming ambulatory.

This is a half-way measure for the delivery of healthcare within the community.

The advantage of house visits from the patient perspective are apparent. No need to set up appointments, negotiate traffic snarls. Wait in queue exposing oneself to crowds, discourtesy and infections. All this for a 15minute- half an hour interact with the doctor.

From the physicians' perspective, the flip side is an ability to assess the patient in his/her natural settings, assess the degree of family support and so forth. The downside is time, travel, traffic snarls and spreading infections.

Online consultation:

The Covid -19 epidemic, though an unprecedented epidemiological disaster, made virtual consultation both feasible and acceptable.

It also highlighted the role of co-morbidities in the complications and recovery from Covid infection.

Non communicable diseases have now assumed epidemic proportions:

At the present time, over 60 percent of the mortality in India is due to Non-Communicable Diseases (NCDs).

The major NCD's are diabetes, hypertension, coronary artery disease, stroke, abnormalities of cholesterol and other lipids, thyroid disorders, bone and joint disorders, deficiencies of Vitamin D and B12.

These disorders typically have a long symptom free period. For instance, 10 years before the diagnosis of diabetes, the changes in the small blood vessels which set the stage for future complications have begun.

The conventional model of the patient presenting to the clinic or hospital for the illness, being treated for it recovering and going home might no longer be the norm.

As far as these lifestyle disorders are concerned, periodic check-ups, primary prevention where feasible and secondary prevention of complications is the most suitable approach.

Moreover, in the early stages of these disorders physical examination might not be very meaningful. This scenario makes online evaluation an attractive alternative. A physician's assistant who makes a home visit and updates the physician might be another useful model. Periodic evaluation could preempt many of the complications and render hospitalization unnecessary. In some scenarios such as bedridden seniors, stroke patients and others hospice care might be a useful alternative.

Unless a patient needs intensive monitoring being nursed at home by a qualified nurse or even a nursing aide under the doctor's guidance might suffice.

Assessing the quality of home healthcare:

Setting the benchmarks and the quality standards and monitoring them would be a challenge in all the above settings.

Fortunately, home healthcare has been a standard practice in many western nations since 1970. There are, therefore, some useful benchmarks and guidelines.

Certainly, these have to be further customized and standardized to be of practical use in India.

These are broadly:

1. Quality of care defined in terms of outcome
2. Quality of care defined in terms of process
3. Quality of care defined in terms of structure

Quality of care defined in terms of outcome:

It is self-evident that outcomes of care are all important. Sometimes, it is virtually impossible to distinguish between outcomes due to the natural progression of the disorder and outcomes owing to care per se.

For instance, healing of a wound, recovery from stroke and so forth. In most cases objectively definable measures could be used.

For instance, in grading an improvement in patient's mobility:

1. Is able to independently (i.e., without human assistance) walk on even and uneven surfaces without the use of a device (e.g., walker, cane) and climb stairs with or without railings

2. Is able to walk alone only when using a device (e.g., cane, walker) or requires human supervision/ assistance to negotiate stairs/ steps or uneven surfaces

3. Is able to walk only with the supervision/assistance of another person at all times

4. Chairfast, unable to ambulate even with assistance but is able to wheel self independently

5. Chairfast, unable to ambulate even with assistance and is unable to wheel self

6. Bedfast, unable to ambulate or be up in a chair

Other such measures could be pain management, symptom control, Activities of Daily Living (ADL), satisfaction with services and so on.

Quality of care defined in terms of process:

This assessment could be made in comparison with the processes that one follows in an inpatient setting.

Quality of care defined in terms of structure:

These metrics could also be benchmarked against the facility and the expertise available in a higher instituition.

Alongside the strides that medical science is making, there must be innovation in the delivery of care. This would ensure assess to and the quality of care rendered.

Virtual assessments and home care are promising strategies which have to be brought under the purview of stringent yet realistically set out standards of quality assurance.

Meeta Asthana

Business Improvement Consultant, NBQP, QCI

MOM
MASTERCLASS ON MANAGEMENT

Hailing from a humble home, since very beginning, I have seen how my mother has stepped up and demonstrated resilience and intelligent management of, I would say, pretty much everything, to provide for us.

She was a caterer. Belting out delicious delicacies on regular and occasion basis which was highly appreciated by one and all. She would make and take north Indian sweet and savory snacks, kilos of it, to our community hall, every Sunday, to sell them after the weekly prayer meet. She did not have much help. Us, the sibling sisters were her littlehelpersmaking it pretty much a one woman show. I had clearly assigned responsibilities, mostly administrative and logistics including but not limited to making small packages, adding a tiny sticker and hand writing the quantity and price of the package, preparing small parcels for customers who have pre-ordered and helping her carry it as we commute. If we used those sweet boxes for packaging, then she preferred we wrote our name, address and contact number on it. She was very particular about the smallest of details.So much that she ensured the packaging looked uniform, the folds of polythene bags

were perfect and space between the staplers pins I used was standard and she wanted my handwriting to be the best. All this to ensurethe buyers were delighted receiving finely packed orders.

At the community hall, I was the cashier andkept track of sales. She had this knack of understanding the needs of the buyers beforehand and make offers that suited them for their occasions like birthdays and anniversaries and parties. She ensured when we left for the day, she already had preorders for following week. Her planning and execution before the big yearly festivals like Basant, Holi, Diwali and others was impeccable.She ensured almost all of her customers came back to her for more tasty food.

She had a line of credit ongoing with a kind grocery store owner who admired her strength and will to brave through this phase of her life. She somehow always had her measurements perfect. Never spent a penny extra on buying more quantity of ingredients and always ensured every last package was always sold out. Ensured the shop owner got his payment before her next batch of purchase.

At times when there was a large order to cater to, she ensured the packages of sweet and savory dishes reached the delivery location before

time and in perfect condition without damage, even if it meant that she had to take an auto rickshaw, which obviously costed more than the public transport like bus or train. All this because she wanted to give a great customer experience, every time.She surrounded herself with a small group of well-to-do ladies who always had her back. She dealt with every situation with grace and dignity.

Today, I am a management graduate. And I realized, while I studied about customer specific requirements, strategic planning, tactical planning including estimations and resource planning, financial and budget planning, operational excellence, vendor management, advertisements and marketing, pre-sales and sales operations, logistics, timely and qualitative customer delivery, customer satisfaction, business continuity and P&L, I have been learning all this from my mom, all through, just not knowing these fancy and technical jargons. While we all know how important skills like being visionary, building meaningful and strong network, having attention to details, practicing precision, ensuring transparent communication, displaying street smartness and thinking on your feet, demonstrating amicable negotiation, monitoring and measuring every move, and living the continuous improvement mindset

are, I have seen them in action and have been in awe of its impact on a successful business since my early ages.

One of those speechless moments of my life was when I realizedI have been privileged to have a masterclass on management all along, with real life experiences, this up close. And how my mom, with no professional management degree had made logic, common sense, ethics and humilityas her strength and used them as critical ingredient to successful management of her small business.

Appreciating learnings and drawing inspiration from every aspect and every experience of life is what makes for a true quality professional and when one applies these learnings and inspiration, is when he becomesa successful practitioner adding value to any business or organization. So today, I urge you all to take a moment, look back, reflect on your journey and evaluate if you have been staying true to these philosophies and thank me later for the change in perspective that you will definitely observe.

> Appreciating learnings and drawing inspiration from every aspect and every experience of life is what makes for a true quality professional

MEMBERS/ GUESTS WRITE

Dr. S Rahul Kamble

Project Head, Antimicrobial Stewardship,
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HEALTHCARE IN INDIA: CHALLENGES AND OPPORTUNITIES

On Healthcare market in India

India is expected to rank amongst the top 3 healthcare markets and Indian healthcare sector, is one of the fastest growing industries. India has an advantage over its peers in the West and Asia in terms of cost of high-quality medical services offered.The hospital industry in India, accounting for 80% of the total healthcare market, is witnessing a huge investor demand from both global as well as domestic investors. Indian companies are entering into merger and acquisitions with domestic and foreign companies to drive growth and gain new markets.

Presence of world-class hospitals and skilled medical professionals has strengthened India's position as a preferred destination for medical tourism. Superior quality healthcare, coupled with low treatment costs in comparison to other countries, is benefiting Indian medical tourism which has, in turn, enhanced the prospects of the Indian healthcare market.

Telemedicine is a fast-emerging sector in India. Per capita healthcare expenditure is rising due to rising incomes, easier access to high-quality healthcare facilities and greater awareness of personal health and hygiene. Greater penetration of health insurance aided the rise in healthcare spending, a trend likely to intensify in the coming decade. Contract research is a fast growing segment in the Indian healthcare industry. Rising income levels, ageing population, growing health awareness and changing attitude towards preventive healthcare is expected to boost healthcare services demand in future.

On Proportion of budgetary allocation for healthcare

India continues to face the challenge of a low spend on healthcare around. Despite several government initiatives relating to social protection, only about one-fourth of the population is covered by some form of health insurance. The increased focus on healthcare will go a long way in meeting the Government's target to enhance its spend on healthcare and is in line with the Government's aim of becoming a payer rather than a provider of healthcare services.

On vision for Health and Family Welfare

Increase life expectancy and improve physical quality of life of people so that they attain the highest level of physical, mental and spiritual health and contribute towards the development of the country.

On perspective on monitoring the quality of private healthcare

For the success of healthcare organizations, accurate measurement of healthcare service quality is as important as understanding the nature of the service delivery system. Without a valid measure, it would be difficult to establish and implement appropriate tactics or strategies for service quality management. The private sector has improved access to medical and healthcare. Improving the quality of medical and para-medical education, capacity building, improving access to standards and guidelines, and encouraging accreditation are some of the measures that can improve Quality of Care. There is also an urgent need for developing an effective mechanism to monitor the quality of care. A centralized system might prove useful in ensuring uniformity in standards adherence as per the prescribed norms as state-level implementation has been found to be lacking.

On importance of Public Private Partnership in making healthcare a success

While PPPs may enhance the quality of clinical services, weaknesses in the state's capacity to run competitive procurements, write complete contracts and budget for them proficiently generate risks. Partnership with the private sector is not a substitute for the provision of health services by the public sector. Also, public-private partnership initiatives cannot be uniform across all the regions or suitable under all kinds of political and administrative dispensations. There has to be a clear rationale for partnering with the private sector. The first step must be to improve basic administrative systems. Even with additional capacity in place, it may be that the regulatory instruments—such as accreditation—can play a useful role as an additional source of performance pressure.

On areas where government should invest to make healthcare available to everyone on the go

India needs to invest more in public healthcare and build a robust health delivery system in all aspects, including infrastructure and human resources, with special focus on rural areas. Roughly 60 percent of medical and surgical devices used in India are imported.The government needs to consider that healthcare services are already expensive for the common man and further taxes would only make them inaccessible.The government should lower the tax on import of equipment essential for healthcare.

The Budget should focus on inclusive growth and this should be reflected in defining the Budget spends across key sectors, including healthcare and infrastructure.

Many reforms that have been talked about in the past, including those for the insurance sector, need to be brought in at the earliest to spur economic growth. It is imperative for the government to look at building positive sentiment through growth-oriented policies on a regular basis.

On policy interventions that the healthcare sector in the state needs to align with the healthcare objectives at large at national level

While decentralisation is a policy direction the government has already embarked on, Health is a state subject in India, which means that although some fund allocation, policy and legislation is done at the central level, states have a wide scope for implementing all of this and for doing more than what the Centre prescribes. Every state has a distinct health story. Data and evidence need to be more individualised, and policy interventions need to be bespoke. There is wisdom in shifting health to the concurrent list so that both Centre and State can manage it.

Decentralisation can likely happen when planning for health would be done at the most local possible level. It means all levels of government have a role with the locus of decision making shifting to the lowest possible level.

Sarika Agarwal

Managing Director and Principal Consultant, Food Safety Works

HYGIENIC DESIGN OF EQUIPMENT

You might be keeping your car clean, but what if you hit a pothole? Will your car stay that way?

Answer will start with "it depends", but what if we made the road pothole free? To take this analogy to the food processing you may be taking care that your product and the ingredients are of the best quality but what if your equipment is the one contaminating the product? If you have a good QC process in place, that means a lot of rejects and losses that could have been avoided.

In recent years, there have been several serious outbreaks of foodborne illness in India and other parts of the world. Often times, these could be root caused to contamination from equipment. The fundamental reason for hygienic design of the equipment is to prevent contamination of food products. Air frying technique is not just air but also equipment for frying: A good design makes the equipment easy to clean, and things like these have to be incorporated right from the get-go and retrofitting it almost always not possible. The additional benefits of doing so is that you will most likely increase the life of the equipment, and reduce maintenance and operating costs.

There are multiple factors that need to be considered while buying equipment. Here we list some of the most critical ones.

Cleanability

This is a very important hygiene requirement which enhances the effectiveness of the method that is going to be used, whether automatic or manual, CIP (Cleaning in place) or COP (Cleaning out of place). Integrating hygienically designed equipment while not a guarantee, it is still a key to achieve cleanliness to the pre-determined level. The cleaning process will depend on the product and its characteristics, eg. stickiness and viscosity, the cleaning parameters: time, temperature, chemistry, and mechanical action will **depend on the design of the equipment.** All the product contact surfaces must be non-absorbent and must not react with the detergents, chemicals and disinfectants being used as a part of the cleaning process.

Prevention of Growth and Ingress of Microorganisms

Equipment should be designed to prevent any areas where microorganisms can harbor and grow, eg: sharp corners, dead areas, gaps, and crevices.

Prevention of Ingress and Infestation of Pests

Equipment should be designed to avoid any opening where pests can enter, harbor and multiply. Enclosures which may have some openings but are not accessible for cleaning like the motor chamber of a tilting wet grinder give space for the harbor of pests.

Prevention of Foreign Particulate Contamination

The material of construction should not be a source of contamination. Material of construction should resist cracking, chipping, flaking, and abrasion. The equipment must ensure that the functional openings are sealed with covers or caps and that an effective preventive maintenance program is implemented.

Prevention of Chemical Contamination

Equipment should be designed to prevent contamination from cleaning chemicals, lubricants, thermal heating, and cooling fluids.

Material of Construction

Material used for equipment construction should ensure that it is inert to the product, inert to the detergents and disinfectants, corrosion resistant, non-toxic, non-tainting, mechanically stable and the surface finish is not adversely affected. Stainless steels (SS) are the preferred metallic materials but the alloy depends on the application. Some plastics may have advantages over SS such as lower cost and weight, wear resistance, better chemical resistant.

Construction

The surface finish affects the time needed for cleaning. For SS, a Ra value of equal to or less than 0.8μm achieved by mechanical polishing or machining is recommended. Direct metal to metal joints shall not be used other than welding. If seals or gaskets are used, their design must be that no crevice exists where dirt and residues may be trapped and microorganisms can grow. All internal angles of 135° or less shall have a minimum radius of 3mm. Sharp corners (<90°) must be avoided.

All surfaces in contact with the product must be either easily accessible for visual inspection and manual cleaning or verified that routine cleaning completely removes all dirt and residues.

Welding

Permanent metal-to-metal joints which are in contact with the product must be continuously welded and free of a rough surface. The non-product contact side welds must also be continuous. All welds must be smooth and located in a way to allow proper cleaning.

Drainability

All equipment shall be self-draining or drainable with surfaces sloping to one side with a minimum angle of 3 degree.

Insulation

Insulation can be done through sealed cladding or vacuum. For sealed cladding material shall be constructed from corrosion-resistant materials and shall be fully sealed to avoid any ingress of air or moisture in order to avoid microbial growth. Moisture trapped in the enclosed surfaces increases the risk of corrosion of the cladding and the equipment. For vacuum insulation, it is done by evacuation of air in the outer shell or jacket of pipework and vessels.

Installation

Equipment and support structures must be sealed to the supporting surface (floor, walls, columns, ceiling) in such a way that no pockets or gaps exist. The number and area of floor contact points shall be minimized. Condensation is a major problem and the risk of condensation from equipment, and pipework onto the product contact surfaces should be avoided. Measures must be taken during installation such that condensate is diverted away from the product contact surface.

Hygienic design of food equipment is critical to food safety but they are described at very high level in most regulatory and industry food safety management systems. However, making sure that the specific requirements are considered will go a long way in reducing hazards from contamination of the food emanating from the equipment.

> The fundamental reason for hygienic design of the equipment is to prevent contamination of food products

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QUALITY STANDARDS FOR DIGITAL PRINTING OF PACKAGING

Packaging Industry

Packaging is an industry which encompasses all industries through its design, development and technology by offering solutions for storing, handling, transportation, advertising and selling. Packaging is an essential part of any product and service. It is also a major selling proposition. This industry is growing and evolving in a fast and dynamic fashion. The global demand for the packaging industry will reach USD1.05 trillion by 2024 according to Smithers Pira (York Saw & Knife, 2022). Indian packaging industry stands at USD 73.6 billion (2020) (Williams, 2022) and is growing at 22-25% per annum covering both rigid and flexible packaging. Its major demand comes from processed food, pharmaceuticals, cosmetics, personal care products, consumer durables, industrial products including spares and consumables packaging. This is a trade surplus generator, the Indian packaging industry exports of USD 853 million provides a trade surplus of USD 543 in 2019-20 (World Trade Center, Mumbai, 2020).

Printing and Packaging

Printing and packaging are interrelated and they thrive on each other for functional reasons like display, information and communication. Conventional printing techniques like offset, flexography and gravure

rule the roost in this industry, as they offer the advantage of cost, speed and production volumes. However, in recent years digital printing technologies are making inroads in the packaging

> Packaging is an essential part of any product and service. It is also a major selling proposition

industry. World over, many packaging companies are switching to digital printing techniques in this decade. It is estimated that the global digital printed packaging market will reach USD 28 billion in 2024 (Kazarian, 2019).
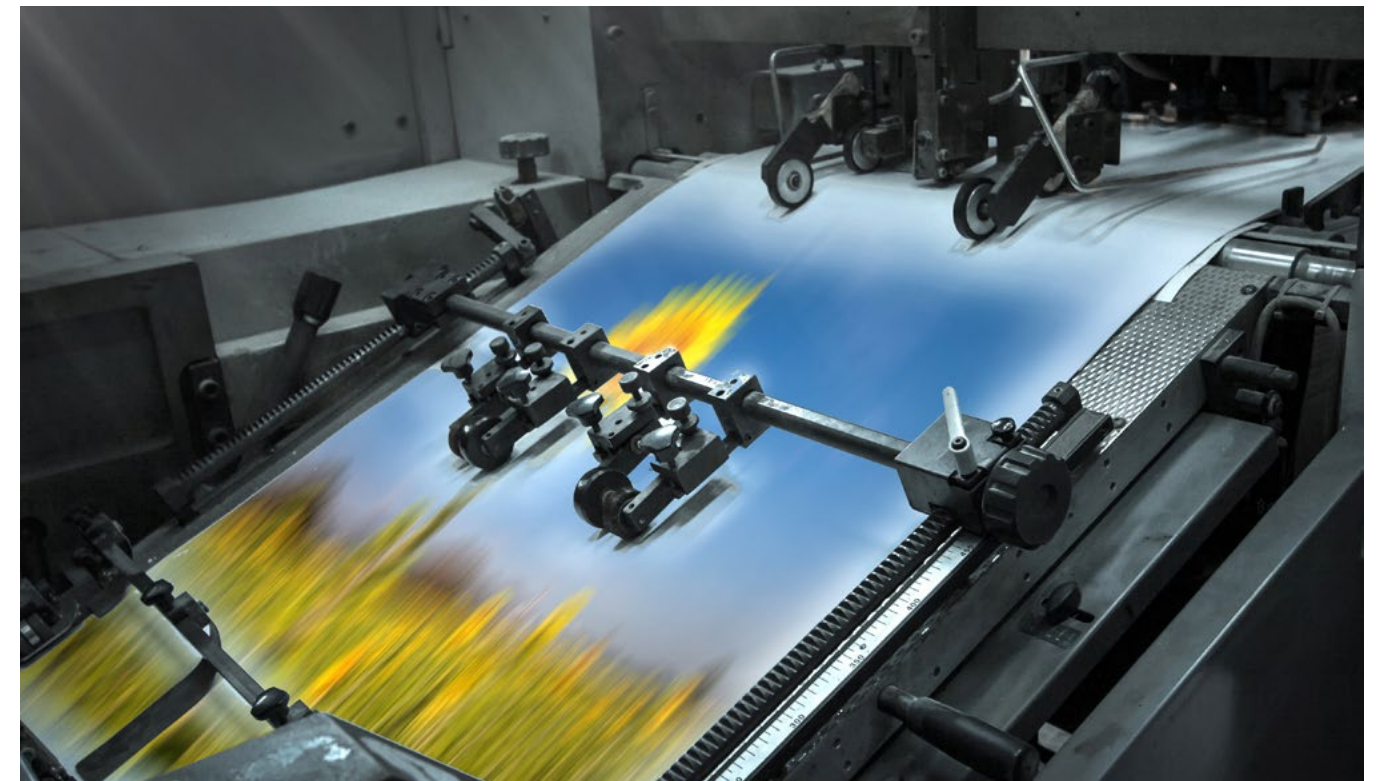
Digital Printing

Digital Printing generate images and print surfaces using computers and other digital media for image creation, generation, transmission and printing on the required packaging surfaces. This offers a great scope for generating interesting graphical solutions and other functional advantages for packaging designers and producers. Digital printing allows greater degrees of personalisation

and customisation in packaging. A number of top brands are resorting to this printing process for higher impact to retain and ensure customer loyalty through personalisation. Digital printing facilitates bold designs and new effects and better gradients due to inherent characters. It also is making greater inroads in the domain of flexible packaging and printing of labels and is more compatible with e-marketing and sales. This is helpful in after sales track and traces functions.

Quality Standards

There are clear set of standards for packaging for each product to be produced, packed, transported and stored. The norms and standards are set by the relevant industry body, administration and government on the basis of the product to be packed. These also govern the standards of materials used for packaging and the printing inks and process used for their production. Standards for major physical printing processes are codified by the Bureau of Indian Standards (BIS) and International Organisation for Standardization (ISO), British Printing Industries Federation (BPIF), British Association for Print and Communication (BAPC), The European Flexo Technical Association (EFTA) and the Flexographic Technical association (FTA) based in USA.

ISO/TC 130 is working on digital printing standards which cover, digital file conversion, generation of digital reference file, communication to the prepress operator abut technical details of the required operations in order to ensure creation of the correct digital data forms, digital proof print, delivery of digital proof print, digital files, digital printing under ISO 15311 and ISO 15339 (ISO /TC 130 Graphic Technology, 2020). ISO 12647-7 Standardized digital printing covers some aspects of digital printing. Process Standard Offset or Process Standard Flexography or Process Standard Gravue cannot be applied for digital printing due to its inherent characters.

The X-rite Pantone has developed a set of new series of documents 15301 as the things change quickly in the digital world in two parts, where Part 1 defines new tests that are more focused on digital, offering printers a more concrete way to compare work and form the basis for tests used in other parts of the series and Part 2 is focused on digital production print and

> Digital printing is a process independent concept, which deals with the individual applications with dedicated quality measures

helps companies compare their output in an objective way. This is a huge difference because potential clients can compare apples to apples when evaluating both printer technologies and print providers, instead of the subjectivity that results from everyone each conducting their own unique tests (Cheydleur, 2019).

Digital Printing Quality Standards

Digital printing standards are applied in the areas of colour image quality

in printing and colour management. Digital Print Standardization - ISO 15311 provides industrial and typical guidelines ranging from data creation all the way to printing and is provided by Fogra. The ISO title for this standard is, Graphic Technology - Requirements for Printed Matter for Commercial and Industrial Production. However, there is some discussion within ISO TC130 WG3 if the standard should be restricted to digital printing process. In contrary to ISO 12647- x, the ISO 15311 is a multipart standard based on representative use of cases (rather than printing technologies). The current structure looks as follows:

- ISO 15311-1 - Part 1 Parameters and measurement methods
- ISO 15311-2 - Part 2 Commercial production printing (almost published)
- ISO 15311-3 - Part 3 Large format printing (draft will be published as Fogra specification)
- ISO 15311-4 - Part 4 Additional parts based on use case (in discussion)

The Process Standard Digital is conceived with three main objectives

- Output process control to achieve repeatable print quality

- Colour fidelity for consistent colour fidelity in reproduction

- PDF/-X compliant workflow to ensure that the entire workflow is under critical scrutiny (Christos Trochoutsos, 2018 November)

The factors that affect the quality of digital printing are Substrate and Toner / Colourant

Ensuring Digital Printing Standards

Printing for packaging is a sensitive and responsive act to fulfil the packaging needs of a specific product for e.g., processed food, medicine, food, personal care items, etc. Each category of product or material being packaged shall cater to unique set of requirements and also meet and comply with regulations, mandatory and statutory needs. This requires unique formulation of substrates and inks for each type of packaging, which need standardization. In the meantime, until the formal publication of ISO standards, a digital packaging printer has to ensure the following during the printing process:

1. Follow manufacturer's instructions

2. Maintain both the print system and substrate in designated conditions

3. Ensure proper materials and their combination

4. Select the correct print mode

5. Understand the printer and the workflow well

6. Maintain appropriate curing conditions for drying

7. Use the correct colour references

8. Calibrate the machines as required periodically and ensure correct ICC colour profile is maintained

9. Validate the printed product using control strip, guide or other tools

10. Ensure that the product is well under the set tolerances of pass or fail

Conclusions

Digital printing is a process independent concept, which deals with the individual applications with dedicated quality measures. The established print quality control methods have limitations and cannot be applied to digital packaging print production. The range of digital printing technologies available and the regulations on packaging are a challenge to be overcome in a systematic but in a speedy manner.
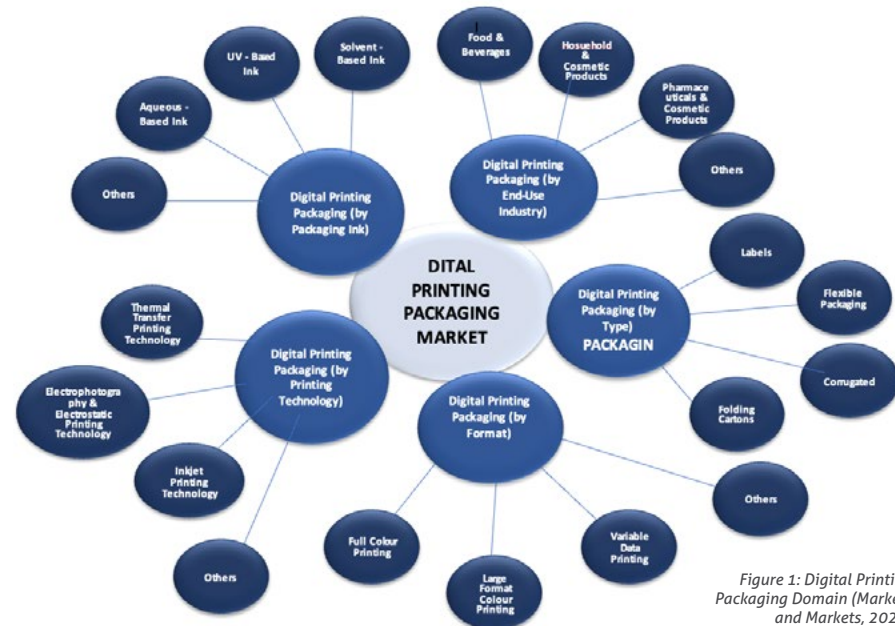

Figure 1: Digital Printing Packaging Domain (Markets and Markets, 2022)

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