2025

Disability and Accessibility

Initiatives by ICMR

Compiled and Edited by:

Ms.Seema Verma

Table of CONTENTS

Message

The Indian Council of Medical Research (ICMR) recognizes the imperative of integrating accessibility into the fabric of public health and biomedical research. As we strive for Universal Health Coverage, it is crucial to acknowledge the intricate relationship between health outcomes, disability, and accessibility.

The continuum of healthcare, encompassing prevention, diagnosis, treatment, rehabilitation, and assistive care, necessitates a multidisciplinary and multimodal approach. Environmental and social interventions, such as accessible environments and awareness of legal provisions, play a pivotal role in facilitating equitable access to healthcare services.

At ICMR, we are committed to promoting accessibility and inclusion in all our research endeavors. Our initiatives aim to:

1. Foster an inclusive research environment that empowers persons with disabilities to participate in shaping research priorities and accessing scientific outcomes.
2. Generate evidence-based research that informs policy and improves accessibility standards.
3. Design and implement research programs, facilities, and information systems that adhere to universal access and participation principles.

By embedding accessibility into our scientific mission, ICMR reaffirms its commitment to advancing health equity and promoting the well-being of all individuals, including those with disabilities.

Dr. Rajiv Bahl
Secretary, Department of Health
Research & Director General, ICMR

Message

The Indian Council of Medical Research (ICMR) is firmly committed to fostering an inclusive and accessible environment across all its institutions and affiliated organizations. As the apex body for biomedical research in the country, ICMR recognizes accessibility as a fundamental right and an essential component of equitable public health and scientific advancement.

In alignment with the Government of India's policies on accessibility and inclusion, ICMR is undertaking sustained efforts to ensure that its physical infrastructure, digital platforms, communication systems, and institutional practices are barrier-free and universally accessible. These efforts are aimed at enabling equal participation of all stakeholders, including persons with disabilities, in our research, academic, and administrative endeavors.

Accessibility is not merely a statutory obligation, but a strategic priority that reflects ICMR's commitment to promoting dignity, autonomy, and equal opportunity for all. We remain dedicated to continuously evaluating and strengthening our systems to uphold the highest standards of inclusivity.

Through collaborative action and sustained engagement, ICMR will continue to work towards creating an enabling ecosystem where no individual is left behind.

Sanghamitra Pati

Dr. Sanghmitra Pati
Additional Director General
ICMR

Message

Health is not best infra-structure, manpower, and financial support, but it is complete system of supporting all kinds of people with health conditions and functional impairments including disabilities with high support needs. Among the six pillars of healthcare continuum, the fourth and the fifth pillars related to rehabilitation and assistive care need mutli-disciplinary and multi-modal approach through environmental and social interventions like accessible environments and awareness of legal and social provisions. Accessibility in all its forms is a crucial component in achieving Universal Health Coverage.

Accessibility is not merely a matter of infrastructure—it is a fundamental aspect of human rights, dignity, and social justice. At the Indian Council of Medical Research (ICMR), we are deeply committed to promoting accessibility and inclusion within all our institutions, initiatives, and scientific endeavors.

As a researcher working in the field of disability, I strongly believe that the integration of accessibility into the core framework of public health and biomedical research is essential. ICMR is actively taking steps to ensure that our facilities, research programmes, and information systems are designed and implemented with the principles of universal access and participation in mind.

This commitment extends to fostering a more inclusive research environment—one that encourages the meaningful involvement of persons with disabilities in shaping research priorities, participating in studies, and accessing scientific outcomes. We are also focused on generating evidence that informs policy, improves accessibility standards, and ultimately contributes to the well-being and empowerment of people with disabilities across the country.

By embedding accessibility into our scientific mission, ICMR reaffirms its role not just as a research leader, but as an advocate for a more equitable and inclusive society.

Dr. Ravinder Singh
Scientist (Disability and Accessibility Research)
Indian Council of Medical Research

Message

The Indian Council of Medical Research (ICMR) stands firmly committed to upholding the principles of accessibility and inclusion across all its institutions and administrative functions. As an organization deeply rooted in service to public health and scientific excellence, ICMR recognizes the importance of ensuring that every individual—regardless of ability—has equitable access to opportunities, resources, and infrastructure.

From an administrative standpoint, accessibility is a core value that is being systematically integrated into our policies, operational procedures, and institutional planning. Whether it is the modernization of physical infrastructure to ensure barrier-free access, the adoption of accessible digital platforms, or the facilitation of inclusive workspaces, ICMR is proactively working to align with national guidelines and international best practices on accessibility.

We are also committed to sensitizing our workforce and stakeholders through awareness and capacity-building initiatives, ensuring that accessibility becomes an integral and sustained part of our institutional culture.

Through these continued efforts, ICMR reaffirms its dedication to creating an environment where inclusivity is not only envisioned but actively realized—paving the way for equitable participation and dignity for all.

Dr. Lakshminarayan
Deputy Director General (Administration)
Indian Council of Medical Research

INTRODUCTION

The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination and promotion of biomedical research. ICMR is one of the oldest medical research institutions which spearheads bio-medical and health research in the country. ICMR's mandate covers capacity building in research in the country; providing fellowships and funding to foster research in medical colleges and research/ academic institutions; initiate nationwide task force projects oriented to new knowledge generation, technology development, evaluation of products or interventions and generating evidence for programmatic improvement and policy, making it the foremost research body that works to promote, formulate, fund and co-ordinate biomedical research in India. ICMR works in close collaboration with all science ministries and departments as well as the department of health and ministry of AYUSH.

ICMR's research priorities are aligned to the nation's health priorities. Research has focused on maternal and child health, nutrition, communicable diseases and non-communicable diseases. The Council promotes biomedical research in the country through intramural and extramural research undertaken by a network of affiliated 25 National institutions/Research Institute/ Regional Medical Research Centre and also supports Centres of Excellence in key areas to undertake cutting edge research. ICMR plays a crucial role in India's public health landscape. They are undertaking innovative or pioneering research by addressing problems associated with individual health as well as with public health.

Intramural research is carried out currently through the Council's 25 Research Institutes/Centres/Units. These include (i) 19 mission-oriented national institutes located in different parts of India that address themselves to research on specific areas such as tuberculosis, leprosy, cholera and diarrhoeal diseases, viral diseases including AIDS, malaria, kala-azar, vector control, nutrition, reproductive health, immunohaematology, oncology, medical statistics, etc; (ii) 6 Regional Medical Research Centres/Research Institute that address regional health problems, and also aim to strengthen or generate research capabilities in different geographic areas of the country, dealing with food &drug toxicology, viral diseases, handling microorganisms of highly infectious nature, prenatal diagnosis for neonatal retardation etc and supply of various animal models and feeds for experimental purposes.

Extramural research is promoted by ICMR through (i) Setting up Centres for Advanced Research in different research areas around existing expertise and infrastructure in selected departments of Medical Colleges, Universities and other non-ICMR Research Institutes.(ii) Task force studies which emphasize a time-bound, goal-oriented approach with clearly defined targets, specific time frames, standardized and uniform methodologies, and often a multicentric structure.(iii) Open-ended research on the basis of applications for grants-in-aid received from scientists in non-ICMR Research Institutes, Medical colleges, Universities etc. located in different parts of the country.

In addition to research activities, the ICMR encourages human resource development in biomedical research through (i) Research Fellowships (ii) Short-Term Visiting Fellowships. (iii) Short-Term Research Studentships. (iv)Various Training Programmes and Workshops conducted by ICMR Institutes and Headquarters.

Realizing the critical role of Information and communication technologies (ICT), the organization established Local Area Network (LAN) in ICMR. ICMR has installed and is managing Local Area Network (LAN) consisting of over around 4600nodes spread across 25institutes of ICMR. Internet access is provided through 2X2 Mbps line from NIC and 1Gbps line from NKN at each location. ICMR has established and managing Video Conferencing facility at eight major institutes of ICMR. Recently ICMR has signed an MoU with the project ECHO for setting up ICT enabled communication across the network. The facility is being used extensively for National and International Conferencing and meetings. ICMR is also managing centralized email and antivirus services.

The ICT setup at ICMR is being used extensively for facilitating and managing research activities which include developing and managing epidemiological, biochemical, clinical and patient data on various diseases including sensitive diseases such as Leprosy, tuberculosis, STDs etc.

Department of Empowerment of Persons with Disabilities (DEPwD) launched the Accessible India Campaign (Sugamya Bharat Abhiyan) as a nation-wide Campaign for achieving universal accessibility for Persons with Disabilities (PwDs) on December 3, 2015. It has three important verticals, namely - the Build Environment, the transportation sector and the Information and Communication Technology (ICT) ecosystem. As per the ICT ecosystem, the website under different ministries should be made disable friendly by June 2022. Also as per the Rights of Persons With Disabilities (RPWD) ACT, 2016, the disability legislation passed by the Indian Parliament to fulfill its obligation to the United Nations Convention on the Rights of Persons with Disabilities, which India ratified in 2007. It provides the right to the PWD enjoy the right to equality, life with dignity, and respect for his or her own integrity equally with others.

The Indian Council of Medical Research (ICMR) is committed to fostering a culture of inclusivity and accessibility, recognizing the inherent value of diversity and the importance of equal access to opportunities. To achieve this, ICMR has undertaken a

comprehensive approach to transform its digital and physical infrastructure, ensuring seamless navigation and engagement for individuals with disabilities. This includes adhering to web accessibility guidelines, enhancing website navigation, conducting accessibility audits, organizing capacity-building workshops, and establishing a network of trained Nodal Officers. By prioritizing accessibility and inclusivity, ICMR aims to create a more equitable healthcare research ecosystem, valuing diversity, promoting participation, and celebrating contributions of all individuals, regardless of their abilities.

Introduction of RPwD Act 2016

The **Rights of Persons with Disabilities Act, 2016 (RPwD Act)** is a landmark and progressive legislation that has transformed the landscape of disability rights in India. Enacted on **December 28, 2016**, this Act replaced the earlier *Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995*. It upholds the principles of **equality, dignity, respect for individual autonomy, and non-discrimination**, in line with India's commitment to the **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)**.

Key Provisions of the RPwD Act, 2016

- **Comprehensive Coverage:** The Act expands the recognized categories of disabilities from 7 to 21, covering a wide range of **physical, mental, intellectual, neurological, and sensory impairments**, and also allows for the inclusion of additional conditions by notification.

- **Accessibility and Inclusion:** It mandates **reasonable accommodation**, ensures accessibility in **public buildings, transport, information, communication, and technology systems**, and provides measures to strengthen **education, skill development, healthcare, employment, and social security** for persons with disabilities.

- **Barrier-Free Society:** The Act envisions the creation of an **inclusive, barrier-free, and rights-based society**, where persons with disabilities can live independently, enjoy equal opportunities, and participate fully in political, economic, cultural, and social life.

- **Institutional Mechanisms:** The legislation establishes strong **monitoring and enforcement mechanisms**, including the appointment of **Chief Commissioners and State Commissioners for Persons with Disabilities**, special courts, and grievance redressal systems.

ICMR Initiatives for Accessible Websites

The new ICMR website has been designed and developed with a focus on accessibility, usability, and overall user experience. The website adheres to the GIGW Guidelines for accessibility, ensuring that it is inclusive and user-friendly for all.

- Modern Design Standards: The website features a clean and intuitive layout, aligning with modern design standards.
- Consistent Design and Layout: The design and layout are consistent across different sections, providing a seamless user experience.
- Improved Navigation and Search Functionality: The website features improved navigation and search functionality, making it easier for users to find the information they need.
- Updated and Comprehensive Content: The website features updated and comprehensive content, including features to update contents, circulars, notices, schemes, etc. in accessible formats such as PDF, HTML, and text formats, ensuring that users with disabilities can access the content.
- User-Focused Content: The content is tailored to the needs of various user groups, including researchers, healthcare professionals, and the general public.
- Text/Font Size Changes: The website allows users to change text/font sizes, ensuring readability for users with visual impairments.
- Contrast Feature: The website features a contrast feature, allowing users to adjust the color scheme to suit their visual needs.
- Language Adaptability: The website is adaptable to different languages, ensuring that users who speak different languages can access the content.
- Screen Reader Compatibility and Accessibility: The website is compatible with screen readers, enabling users with visual impairments to access content. Screen reader users can access the website's content using popular screen readers like JAWS, NVDA, and VoiceOver.
- Keyboard Navigation: The website allows users to navigate using their keyboard, providing accessibility for users with mobility impairments.
- Fast Loading Times: The website features fast loading times, ensuring a better user experience, particularly for users with slower internet connections or people with cognitive impairments.
- Reliable Links and Pages: All links and pages load correctly, ensuring the site's reliability.
- Robust Security Measures: The website features robust security measures, including SSL certification and up-to-date security protocols, to protect users' data.
- Compatibility: The website is compatible with all browsers and operating systems, ensuring that it functions correctly for all users.
- Interactive Elements: The website includes interactive elements, such as videos, infographics, and interactive charts, to make the content more engaging.

In conclusion, the new ICMR website is a significant step forward in providing a user-friendly, accessible, and informative platform for all stakeholders. With its modern design, robust security measures, and accessibility features, the website is poised to become a leading resource for medical research and healthcare information in India.

ICMR Initiatives for Accessibility and Inclusion

The Indian Council of Medical Research (ICMR) has embarked on a transformative journey to promote accessibility and inclusivity in its workplaces. A dedicated "Committee on Creating Enabling & Accessible Environments" has been established at ICMR Headquarters and Institutes to identify and address accessibility barriers, ensuring equal opportunities for persons with disabilities.

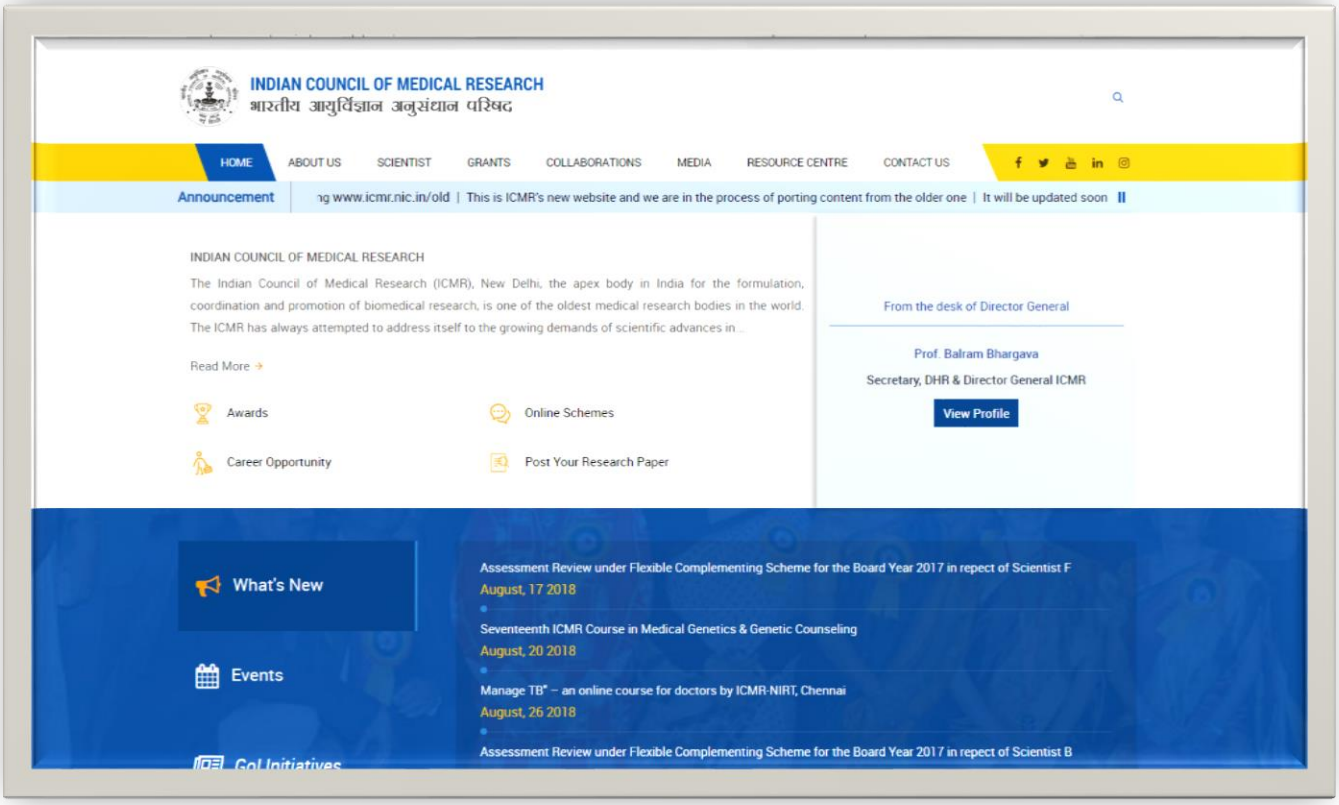
Commitment to Accessibility

- The Indian Council of Medical Research (ICMR) is committed to promoting accessibility and inclusivity for persons with disabilities (PwDs). To achieve this goal, ICMR has made the following commitments:
- The preparation of the ICMR policy on Accessibility, Disability, and Inclusive ICMR is underway. This policy aims to provide a framework for promoting accessibility, inclusivity, and equal opportunities for PwDs.
- ICMR has allocated 3% of its total budget for disability-related activities, focusing on health research and inclusive ecosystems for PwDs.
- These commitments demonstrate ICMR's dedication to creating an inclusive and accessible environment for all individuals, including those with disabilities.

ICMR's Commitment to Inclusion

The Indian Council of Medical Research (ICMR) is committed to incorporating these inclusive principles into its premises, ensuring equal access and opportunities for all through accessibility audits, capacity-building workshops, and inclusive infrastructure, ultimately contributing to a barrier-free society where persons with disabilities can live with dignity and participate fully in all aspects of life.Building Inclusive environment ICMR take various steps.

ICMR promotes diversity and inclusion by taking proactive steps to create an accessible and supportive environment.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INDIAN COUNCIL OF MEDICAL RESEARCH
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Capacity Building Initiatives: Awareness programmes

(1) Breaking Barriers: Workshop on Accessibility and Disability Awareness

A sensitization and awareness workshop was conducted on Sept. 24th, 2021 from 11am to 12 pm, to increase awareness among employees of ICMR HQ & Institutions (Tentative Audience: Approximately 2000, ICMR officials participated in the workshop, joining through both online and offline platforms.) about disability and the situation of persons with disabilities at family, community, and workplace levels. Dr. Vidhu Rajput, a mother of a special child herself, delivered a heartfelt and insightful lecture on awareness of disability, legal instruments for persons with disabilities (PWDs), and accessibility. Having personally experienced the challenges of raising a child with disabilities, Dr. Rajput brought a unique perspective to the discussion, highlighting the difficulties faced by families and individuals with disabilities.

According to the UN Convention on the Rights of Persons with Disabilities (UNCRPD), 2006, persons with disabilities include those who have long-term physical, mental, intellectual, or sensory impairments that hinder their full and effective participation in society. The barriers to participation include attitudinal, environmental, and physical barriers, such as lack of ramps, inaccessible transportation, and inadequate assistive technology. However, by working on these barriers, participation can increase through measures like use of assistive technology, accessibility, and curriculum modifications.

Accessibility refers to the design of products, devices, services, or environments to be usable by people with disabilities, ensuring both direct access and indirect access, meaning compatibility with a person's assistive technology. Article 9 of the UNCRPD states that States Parties shall take appropriate measures to ensure access to physical environment, transportation, information, and communications. The Department of Empowerment of Persons with Disabilities (DEPwD) launched the Accessible India Campaign (Sugamya Bharat Abhiyan) in 2015 to achieve universal accessibility for PWDs, focusing on built environment, transportation sector, and ICT ecosystem, and aiming to create accessible routes, parking, entrances, reception areas, corridors, lifts, staircases, toilets, and drinking water provisions.

The vision of the Accessible India Campaign is to create a barrier-free environment for independent, safe, and dignified living of PWDs. Key features of this vision include: • accessible and adaptable environments, • accessible transportation systems, • accessible information and communication technologies, and • accessible and inclusive education. The vision statement declares, "Accessible India. Empowered India." Dr. Rajput's personal experience and expertise shed light on the importance of creating an inclusive.

Society, and her lecture served as a call to action for all participants to work towards a more accessible and equitable environment.

(2) **Awareness workshop on Persons with Disabilities and their Rights**

Awareness workshop on "Persons with Disabilities and their Rights" was held on 3rd July 2024 from 10:30AM to 12:30 PM. Dr. Hemlata, Additional Director at the National Centre for Disability Studies, IGNOU, conducted the workshop for ICMR employees(Tentative Audience: Approximately 2000 ICMR officials participated in the workshop, joining through both online and offline platforms.). The program aimed to introduce participants to the Rights of Persons with Disabilities Act, 2016, a landmark legislation that aims to promote the rights and well-being of persons with disabilities in India.

Dr. Hemlata deliberated on the paradigm shift from a medical to a social model of disability, which recognizes disability as a natural part of human diversity. She defined disability and its types, highlighting the 21 disabilities recognized by the Act, including locomotor disability, cerebral palsy, dwarfism, muscular dystrophy, acid attack, blindness, low vision, deafness, hard of hearing, speech and language disability, intellectual disability, specific learning disabilities, autism spectrum disorder, mental illness, multiple sclerosis, Parkinson's disease, haemophilia, thalassemia, sickle cell disease, and multiple disabilities.

Dr. Hemlata also discussed the key provisions of the Act, including the rights and entitlements of persons with disabilities, such as equal access to education, employment, healthcare, and transportation. She emphasized the responsibilities of employers and service providers to provide reasonable accommodations and accessible infrastructure to ensure equal opportunities for persons with disabilities.

Prerequisites for Getting Benefits as PwD

The person must either have a disability certificate issued by authorized medical board or have a Unique Disability ID (UDID) issued by the Ministry of Social Justice & Empowerment (MSJ&E). Disability Certificate can be obtained from the district hospitals/authorized hospitals having medical board by submitting the requisite information. To get the benefit of any scheme or concession of the Government, the person must have a minimum of 40% or more disability (benchmark disability).

Reservation in Admission for Education

As per the Rights of Persons with Disabilities Act (RPwD), 2016: Section 31 provides free school education for every child with benchmark disability from age of 6 to 18 years. Section 32 (1) says that Higher Education Institutions (HEIs) and those receiving grants shall reserve a minimum of 5 per cent seats for persons with benchmark disabilities. There is also a provision of 5 years relaxation in age limit for admission.

Concessions during Examinations

The facility of Scribe/Reader/Lab Assistant should be allowed to any person with benchmark disability. Persons with benchmark disabilities should be given, as far as possible, the option of choosing the mode for taking the examinations, i.e., in Braille or on the computer or in large print or even by recording the answers, as the examining bodies can easily make use of technology to convert the question paper into large print, e-text or Braille and can also convert Braille text in English or regional languages.

Reservation of Jobs

RPwD Act, 2016 under Section 34(1) provides 4% reservation in government jobs for persons with benchmark disabilities as per following break-up:

- Blindness and low vision: 1%

- Deaf and hard of hearing: 1%

- Locomotor disability including cerebral palsy, leprosy-cured, dwarfism, acid attack victims and muscular dystrophy: 1%

- Autism, intellectual disability, specific learning disability and mental illness: 1%

- Multiple disabilities (more than one of the above specified disabilities): 1%

Income Tax Concessions

Under the Income Tax Act of India, persons with disabilities or their family members can avail income tax concessions as per the following sections:

- Section 80 DD: This section provides for a deduction in respect of the expenditure incurred by an individual or Hindu undivided family (HUF) resident in India on the medical treatment (including nursing), training and rehabilitation etc. of a dependent being a person with disability.

- Section 80U: Under this section, the tax payer (who is a person with disability) herself or himself can avail a rebate of Rs.75,000/- for 40% disability, and Rs.1,25,000/- for 80% and above disability.

Travel Concessions

Air India provides concession of 50% of basic fare of Economy class for persons who are totally blind and those who have 80% or above locomotor disability, which includes cases of paraplegia, hemiplegia, cerebral palsy, severe cases of poliomyelitis, kyphosis, muscular dystrophies, and amputees. The person should have a valid disability certificate.

In conclusion, the workshop on "Breaking Barriers: **Workshop on Persons with Disabilities and their Rights** " was a resounding success, providing valuable insights into the Rights of Persons with Disabilities Act, 2016. Participants gained a deeper understanding of the rights and entitlements of persons with disabilities, and the importance of accessibility and inclusivity. The workshop aimed to

promote a culture of inclusivity and empathy, and to empower participants to become agents of change in promoting the rights of persons with disabilities.

(3) **Promoting Health Equity for Persons with Disabilities: A Global Imperative**"

Mr. Darryl Barrett, Technical Head (Disability) and Co-Lead of the UNDIS Secretariat at WHO Geneva, presented the groundbreaking "Global Report on Health Equity for Persons with Disabilities". This comprehensive report sheds light on the alarming health disparities faced by over 1 billion people worldwide living with disabilities, highlighting the need for urgent action to address these inequities.

The report reveals that individuals with disabilities are more likely to experience premature death, poorer health outcomes, and are disproportionately affected by health emergencies. These inequities are not solely attributed to underlying health conditions but are also the result of unfair and avoidable factors, such as inaccessible healthcare services, inadequate consideration in emergency planning, and social and environmental barriers.

In response to the World Health Assembly's resolution to achieve the highest attainable standard of health for persons with disabilities, this report aims to raise awareness and mobilize action among governments, civil society organizations, and health sector partners to address these long-standing health inequities. The report emphasizes the importance of inclusive and accessible healthcare systems, and the need for policies and programs that promote health equity and social inclusion.

Through personal testimonies and emphasizing the importance of inclusivity in health sector planning, the report seeks to inspire change and ensure effective health systems strengthening. Ultimately, its objective is to promote health equity and improve the lives of people with disabilities worldwide, enabling them to reach their full potential and participate fully in society.

Following the presentation, ICMR employees posed several queries, which were addressed by the esteemed experts. Mr. Jitesh Kumar, Scientist 'D' at KIHT, AMTZ, who uses a wheelchair, shared his personal experiences, adding a relatable dimension to the conversation. His testimony served as a poignant reminder of the importance of inclusivity and accessibility in healthcare, and the need for greater awareness and understanding of the challenges faced by persons with disabilities.

The presentation and subsequent discussion highlighted the urgent need for collective action to address the health inequities faced by persons with disabilities. By working together, we can promote health equity, improve lives, and create a more inclusive and accessible world for all, where everyone has the opportunity to reach their full potential and live a healthy and fulfilling life.

(4) **Awareness Workshop on "Accessibility and Inclusion: Need of the Hour"**

The workshop on "Accessibility and Inclusion: Need of the Hour" was conducted on October 4, 2024, at the ICMR Headquarters, New Delhi. Dr. Navjeet Gaurav, Assistant Professor, Department of Architecture and Planning, IIT Roorkee, delivered a comprehensive and engaging lecture on accessibility and inclusion, highlighting the importance of universal design principles in creating inclusive and accessible environments. He emphasized that accessibility is not just about physical access, but also about social and economic access, and that it is essential for promoting equality, dignity, and human rights.

A pre-workshop questionnaire was administered to the participants to assess their knowledge and attitudes towards accessibility and inclusion. The questionnaire consisted of 10 questions and was designed to evaluate the participants' understanding of accessibility and inclusion, their attitudes towards people with disabilities, and their knowledge of universal design principles. A post-workshop questionnaire was also administered to assess the impact of the workshop on the participants' knowledge and attitudes.

The post-workshop questionnaire revealed a significant increase in the participants' knowledge and understanding of accessibility and inclusion. The results showed that 90% of the participants reported an increase in their knowledge of universal design principles, 85% reported a change in their attitudes towards people with disabilities, and 80% reported an increase in their understanding of the importance of accessibility and inclusion. The workshop had a positive impact on the ICMR employees, who reported feeling more confident and empowered to promote accessibility and inclusion in their work.

The workshop emphasized the importance of accessibility and inclusion in creating a barrier-free environment and provided practical recommendations for promoting inclusive design and accessibility. The recommendations included incorporating universal design principles into design practices, conducting accessibility audits of public buildings and spaces, promoting inclusive design and accessibility in education and training programs, and supporting policies and legislation that promote accessibility and inclusion.

Initiating Universal Design Principles:

To initiate universal design principles, the following steps can be taken:

- Initiate discussion and awareness about universal design principles
- Conduct training and workshops on inclusive design and accessibility
- Hold department discussions and meetings to promote inclusive design and accessibility
- Involve people with lived experiences in the design process
- Conduct access audits to identify barriers and develop strategies for removal

Steps of Access Audit:

The steps of access audit include:

- Identifying barriers in physical environments
- Assessing the accessibility of buildings, transportation systems, and public spaces
- Developing strategies for removing barriers and promoting accessibility
- Implementing accessibility features and monitoring progress

Need for a Participatory Approach:

A participatory approach is essential for promoting accessibility and inclusion. This involves:

- Involving people with disabilities and lived experiences in the design process
- Conducting accessibility audits and assessments
- Developing strategies for promoting accessibility and inclusion
- Implementing accessibility features and monitoring progress

Why Don't We Do What We Know?

Despite the importance of accessibility and inclusion, many barriers still exist. To address this, it is essential to:

- Raise awareness about the importance of accessibility and inclusion
- Provide training and education on inclusive design and accessibility
- Promote policies and legislation that support accessibility and inclusion
- Involve people with lived experiences in the design process

Approximately 2000 officials participated in this workshop, which promises to be an enriching and enlightening experience. The event will be video-linked to all ICMR institutes, allowing for maximum participation. Dr. Gaurav's invaluable expertise and insights will significantly enhance our officials' understanding of accessibility, promoting inclusive environments, empowering persons with disabilities, and fostering a culture of inclusivity.

Preliminary Physical Audit: ICMR Headquarters Building Accessibility

The ICMR Headquarters building has undergone a preliminary physical audit on June 28, 2024, to assess its accessibility features. This preliminary Physical Audit highlights the findings, recommendations, and implementation plan to enhance the building's accessibility.

The initiative for conducting a comprehensive physical accessibility audit at ICMR institutions was kick-started with a meeting of expert group, led by DDG (ICMR). The group reviewed a comprehensive checklist prepared by Ms. Seema Verma and agreed to utilize it for conducting a preliminary physical accessibility audit at ICMR-NIMS and ICMR Headquarters campus, marking the beginning of a thorough assessment of accessibility features within the ICMR premises, including buildings, websites, and transport facilities.

Expert Group Members

1. Dr. R. Lakshminarayanan, DDG (Admn.), ICMR - Chairperson
2. Dr. Hem Lata, Addl. Director, National Centre for Disability Studies (IGNOU)
3. Dr. Nek Ram Upadhyay, Director, International Centre for Assistive Technology & Accessibility (ICTeAT), Delhi
4. Mr. Jagjit Singh, Founder, JS Design
5. Mr. Bhupinder Singh, Swayam NGO
6. Mr. Jitesh Kumar, Scientist 'D', AIMTZ, Vishakhapatnam

ICMR Secretariat

1. Dr. Ravinder Singh Scientist D
2. Mr. Javed Akhtar, Sr. Tech. Officer
3. Mr. Mukesh Amanta, Tech. Officer
4. Mrs. Seema Verma, Sr. Tech. Officer (Member Secretary)
5. Mr. Akash, Project Admin Assistant

Discussion and Observation

A comprehensive physical accessibility audit conducted at the ICMR headquarters building in Delhi revealed that while the organization has made notable efforts towards promoting inclusivity, it unfortunately falls short in several key areas. Specifically, the audit highlighted inaccessible ramps, inadequate signage, and insufficient adaptations in restrooms as major concerns that need immediate attention. The Expert Group members emphasized that these shortcomings not only hinder the valuable contributions that individuals with disabilities can make to the organization but also underscore the need for prompt and effective action. In response, ICMR is committed to addressing these issues and transforming its building into a truly inclusive and accessible space for all stakeholders, including employees, visitors, and individuals with disabilities. Recognizing that accessibility is both a legal requirement and a fundamental social responsibility, ICMR will work diligently to implement necessary modifications and upgrades. By creating a workplace that values diversity, promotes inclusivity, and fosters a culture of accessibility, ICMR aims to provide equal opportunities for growth, development, and success to everyone. To ensure that its workplace remains truly inclusive, welcoming, and accessible, ICMR will

continue to regularly monitor and assess its building's accessibility features, making adjustments and improvements as needed. Through these concerted efforts, ICMR demonstrates its unwavering dedication to fostering an environment where all individuals can thrive, contribute, and reach their full potential.

Recommendations

The Expert Group recommended that ICMR take necessary steps to create accessible built environments, transport, and ICT systems, ensuring equal opportunities for all individuals, including those with disabilities. The following specific recommendations and specifications were suggested:


Prof. N.K. GANGULY


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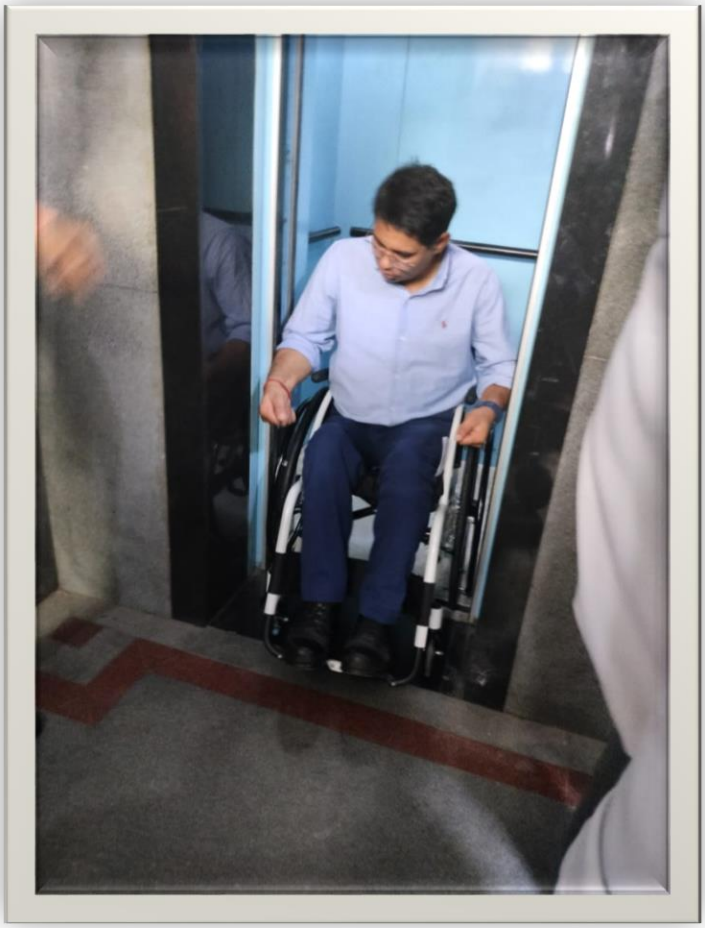
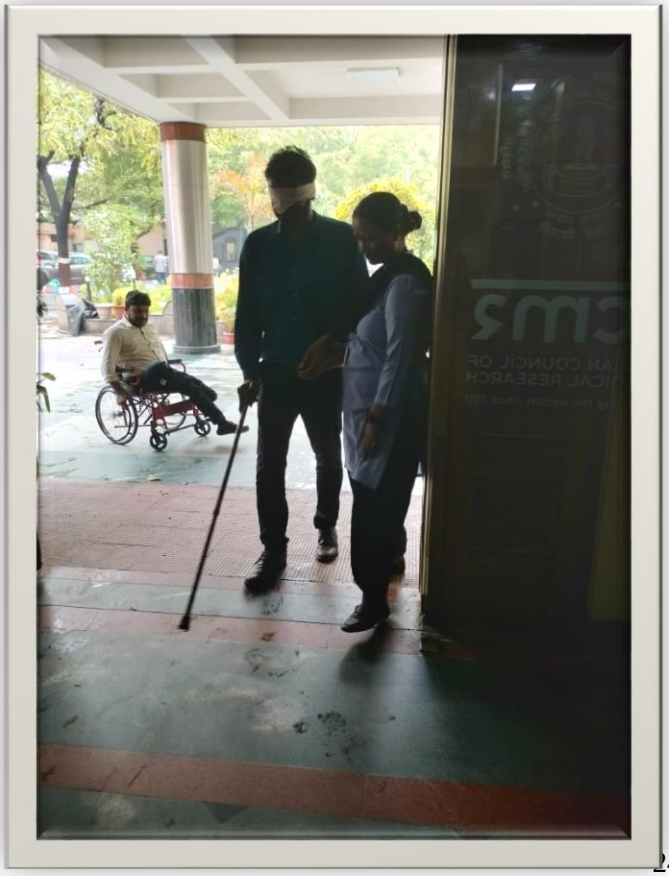
Prof. N.K. GANGULY





1. **Built Environment**

To create an inclusive and accessible built environment, ICMR should incorporate the following design features:

- Accessible Paths of Travel: Clear paths with sufficient space for wheelchairs, incorporating universal design principles to cater to diverse users.
- Accessible Routes and Pathways: Minimum width of 1200 mm, firm and slip-resistant surface, and maximum slope of 1:12 to facilitate easy navigation.
- Entrances: Clear opening of at least 900 mm, automatic doors preferred for main entrances, and threshold not exceeding 12 mm to ensure smooth entry.
- Ramps: Maximum slope of 1:12, minimum width of 1200 mm, and handrails on both sides to provide safe and accessible passage.
- Handrails: Mounted at 850-900 mm from the floor, with a tubular or oval shape and diameter of 30-45 mm, contrasting with the background for easy noticeability.
- Door Hardware: Operable with one hand, mounted at 850-1100 mm from the floor, and designed to avoid tight grasping, pinching, or twisting.
- Corridors and Passageways: Minimum width of 1200 mm, with resting areas at intervals not exceeding 30 meters to facilitate comfortable navigation.
- Public Information and Reception Areas: Braille and tactile signs, audio-enabled signage, and reception counters at two levels to cater to diverse users.
- Toilets and Sanitary Facilities: Minimum clear opening of 900 mm, sufficient space for wheelchair maneuvering, and grab bars installed at 850-950 mm from the floor.
- Lifts and Elevators: Minimum car dimension of 1500 mm x 1500 mm, clear door opening of at least 900 mm, and control panel located between 900-1100 mm from the floor.

2. **Signage and Infographics**

- Accessible Signage: Internationally recognized symbols, high contrast between text and background, and positioned at a height of 1400-1600 mm from the floor.
- Emergency Evacuation Plans: Personalized plans for individuals with disabilities, visual and tactile notification systems, and regular staff training on assisting persons with disabilities during emergencies.
- Public Information: Braille and tactile information, audio-enabled signage, and incorporation of assistive technologies like hearing loops and tactile maps.

3. **Transport**

- Accessible Parking: Minimum dimensions of 5000 mm x 3600 mm, clear and visible signage, and firm and level surface to facilitate safe and obstacle-free access.
- Vehicle Modifications: Ramps and wheelchair space within vehicles to ensure accessible transportation.

4. **ICT/Documents/Reports**

- Website Evaluation: Critical evaluation of design, usability, content, performance, accessibility, and overall user experience to ensure alignment with modern standards and accessibility guidelines.
- Accessibility Features: Text resizing options, screen reader compatibility, and keyboard navigation to facilitate access for individuals with disabilities.
- Content: Updated, complete, and user-focused content catering to diverse audiences, with incorporation of assistive technologies like chatboxes for content discovery.

The meeting concluded with a vote of thanks to all members, acknowledging their valuable contributions to creating a more inclusive and accessible environment for all.

Appointment of Nodal Officers

As per the recommendations of the ICMR Expert Group, each institute was required to appoint a Nodal Officer to oversee the creation of an accessible environment for Persons with Disabilities (PwDs). Institutes were requested to nominate a suitable officer as Nodal Officer by 25th May.2024. The appointed Nodal Officers underwent training to understand accessible environments and conduct an accessibility audit of their respective institutes. Additionally, they were responsible for sensitizing institute staff on issues related to PwDs.

Training of Nodal officers

Accessibility Audit and Sensitization Training Workshop for ICMR Nodal Officers

The Indian Council of Medical Research (ICMR) organized a comprehensive training workshop on Accessibility Audit and Sensitization for Nodal Officers from ICMR Headquarters and institutions across India. The workshop took place from July 25-27, 2024, at the Andhra Pradesh MedTech Zone (AMTZ), Visakhapatnam. A total of 45 Participants attended the workshop (the list of Expert Group members, Nodal Officers, and ICMR Secretariat personnel

Inaugural Session

Welcome and Introduction

On behalf of the Director General, ICMR, Dr. Ravinder Singh (Scientist D) welcomed the expert members and Nodal Officers to the Accessibility Audit and Sensitization Training Workshop. He gave a comprehensive background on the Rights of Persons with Disabilities Act (RPWD) 2016, emphasizing the importance of inclusive growth in achieving Sustainable Development Goals (SDGs) and India's global leadership.

Dr. Singh highlighted the RPWD Act's vision for universal accessibility, encompassing accessible websites, buildings, roads, and habitats. He stressed the need for non- discrimination against Persons with Disabilities (PwDs) and the responsibility of families, communities, and governments in providing equal opportunities.

He emphasized the imperative of implementing the RPWD Act 2016 in its true spirit, ensuring accessibility in built environments, transport systems, and ICT platforms. Dr. Singh mentioned the Sugamya Bharat App, which enables users to report inaccessible buildings, and urged institutions to comply with the Act to avoid legal action.

Context and Objectives of the Training Workshop

The accessibility workshop commenced with an introduction session, where Dr. R. Lakshminarayanan, DDG (Admn.) ICMR, joined via video conference. He highlighted the need for the workshop, emphasizing its tri-fold objective: raising awareness, understanding standards, and pinpointing barriers that hinder full participation of individuals with disabilities. By doing so, he adeptly set the stage for the workshop's goals, which include cultivating inclusive skills, promoting design inclusivity, and fostering a culture of accessibility within ICMR institutions, thereby providing a comprehensive overview of the current accessibility landscape.

He informed that the Training Workshop on Accessibility was convened by the Indian Council of Medical Research (ICMR) in recognition of the urgent need to establish inclusive environments and practices within its institutions. In alignment with the increasing acknowledgement of the rights and valuable contributions of individuals with disabilities, this workshop aimed to empower participants with the requisite knowledge, skills, and attitudes to facilitate barrier-free access to healthcare, education, and employment opportunities.

Through the promotion of a culture of accessibility, this initiative sought to advance equal opportunities, social justice, and human rights, ultimately enhancing the overall quality of life for individuals with disabilities and enriching the diversity of ICMR's workforce and communities.

Introducing the Purple Tag Building Concept

Dr. Jitendra Sharma (DirectorAMTZ, Vishakhapatnam) introduced the Purple Tag Building concept, a novel initiative aimed at setting accessibility and inclusivity standards for buildings, similar to the Green Tag certification. The Purple Tag Scheme will be developed by a team of experts comprising a Steering Committee, Technical Committee, and Certification Committee. The scheme's objectives include establishing clear accessibility benchmarks, ensuring compliance with the National Building Code (NBC) and relevant standards, promoting best practices, and providing a framework for regular audits. The Steering Committee consists of members from various organizations, including AMTZ (2), ICMR (2), Builders Association (2), Construction Association (8), and expert members (4). This collaborative effort aims to make buildings more accessible and inclusive for all.

Formulating the Purple Tag Scheme: A Technical Perspective

Dr. Mrutunjay Jena delivered an in-depth session on the formulation of the Purple Tag Scheme, detailing its technical components and development process. He outlined the establishment of the Steering and Technical Committees, and emphasized the crucial technical aspects that must be considered to ensure comprehensive accessibility standards are met. Dr. Jena's session provided valuable insights into the scheme's development, covering key steps and considerations to create a robust and effective framework for accessibility in buildings.

Module 1:

Understanding Disabilities

Dr. Hemlata, Additional Director, National Centre for Disability Studies (NCDS), Indira Gandhi National Open University, led the first session, bringing her extensive experience in designing awareness programs and conducting research on disabilities.

Dr. Hemlata defined disability as a complex and multifaceted phenomenon that encompasses physical, sensory, cognitive, and mental health impairments, which can impact an individual's ability to participate fully in society. She emphasized that disability is not solely the result of an individual's impairment, but rather the intersection of that impairment with environmental, social, and attitudinal barriers that prevent full inclusion. Her definition highlights the dynamic interplay between the individual and their context, underscoring the need for a holistic and inclusive approach to understanding and addressing disability, and promoting equal opportunities and human rights for all individuals, regardless of their abilities.

Disability Awareness

Mr. Bhupinder Singh explained that understanding disability entails recognizing it as a natural aspect of human diversity, rather than viewing it as a defect or limitation. Disability can manifest in various forms, including physical, sensory, cognitive, and mental health conditions, and can affect anyone at any stage of life. It is crucial to approach disability from a social model perspective, which highlights that barriers and exclusions are created by societal attitudes, environments, and structures, rather than by the individual's impairment itself. By adopting this understanding, we can work to eliminate barriers, promote inclusivity, and empower individuals with disabilities to reach

their full potential, thereby fostering a culture of acceptance, respect, and equal opportunities

Self-Assessment

According to Bhupinder Singh, self-assessment regarding accessibility is a reflective process where individuals or organizations evaluate their own environments, policies, and practices to identify barriers and gaps that may hinder accessibility for people with disabilities. This introspective approach enables individuals and organizations to recognize their strengths and weaknesses, set realistic goals, and develop strategies to improve accessibility and inclusivity. By conducting regular self-assessments, individuals and organizations can foster a culture of continuous improvement, ensure compliance with accessibility standards, and create a more inclusive and equitable environment for everyone

Module 2:

Persons with Disability and their Entitlements

DrHemlataexplained all the 21 disabilities with suitable examples and discussed the symptoms of all these disabilities. She distributed a handout having a brief of each disability and symptoms of these disabilities, rights and entitlement of persons with disabilities, terminologies to be used for persons with disabilities and tips for better interaction with them **(Annexure II**).

She discussed the Rights and entitlements of persons with Disabilities. Persons with disabilities deserve equal opportunities and access to education, employment, and healthcare. They have the right to dignity, respect, and protection from harm. By providing support and resources, we can empower them to thrive and reach their full potential. She urged all to create a world where everyone can shine, regardless of their abilities. The following topics of related to rights and entitlements' were discussed at length:

- Equality and Non-Discrimination
- Accessibility
- Education
- Employment
- Healthcare
- Social Security
- Legal Protection
- Disability Certificate
- Reservation Quota
- Scholarships
- Assistive Devices
- Concessions
- Pension and Insurance
- Rehabilitation

Terminologies to be used for addressing PwDs

Using appropriate language when interacting with persons with disabilities is crucial to show respect and inclusivity. Person-first language should be used, prioritizing the individual over their disability. Referring to someone as "a person with a disability" instead of "disabled person" makes a significant difference. This subtle change in language helps to emphasize the person's identity and worth, rather than defining them solely by their disability. Inappropriate language, on the other hand, can lead to feelings of humiliation, exclusion, and create barriers to full participation. To promote an inclusive society, it's essential to use respectful terminologies, avoiding words that perpetuate negative stereotypes and stigma. For instance, instead of saying "wheelchair-bound," say "person who uses a wheelchair"; replace "mentally retarded" with "person with an intellectual disability"; and use "deaf or hard of hearing" instead of "hearing impaired." By adopting inclusive language, we can foster a culture of respect, dignity, and equal opportunities for all individuals, and work towards creating a society that values diversity and promotes inclusivity.

How to Interact with Persons with Disabilities

- She gave some tips for interacting effectively with persons with disabilities and facilitating them i.e. greeting them appropriately, making them comfortable by asking for sitting, listening to them carefully and having patience while interacting with them as it may be difficult for them to understand things quickly because of hearing loss.

Modules 3

Current Laws on Accessibility in India

United Nations Convention on the Rights of Persons with Disabilities

- Dr Hemlata discussed the main sections of UNCRPD and the key points of United Nations Convention on the Rights of Persons with Disabilities (UNCRPD).She informed that the purpose of UNCRPD is to promote, protect and ensure the full and equal enjoyment of all humanrights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity. The uniqueness of this convention is that it is a Both a development and a human rights instrument, a policy instrument which is cross-disability and cross-sectorial and it is llegally binding. She further added that The Convention marks a ‘paradigm shift’ in attitudes and approaches to persons with disabilities. Persons with disabilities are not viewed as "objects" of charity, medical treatment and social protection; rather as "subjects" with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society. The Convention gives universal recognition to the dignity of persons with disabilities. (Power Point Presentation on UNCRPD

Annexure III)

The Rights of Persons with Disabilities Act, 2016

She informed thatthe current Act on accessibility in India is the Rights of Persons with Disabilities (RPwD) Act, 2016. This Act has replaced the Persons with Disability Act, 1995, and is in line with the United Nations Convention on the Rights of Persons with Disabilities. RPwD Act 2016 is a comprehensive law that aims to protect and promote the rights of individuals with disabilities in India. It recognizes 21 disabilities, including physical, mental, and intellectual disabilities, and provides for accessibility, education, employment, healthcare, social security, and recreation. The Act also establishes a grievance redressal mechanism and penalties for offenses. Its goal is to create an inclusive society where persons with disabilities can live with dignity and equality.

She has elaborated following key points about the RPwD Act 2016:

- Definition of Disability: The RPwD Act recognizes 21 disabilities, including physical, mental, and intellectual disabilities.
- Accessibility: The Act mandates accessibility in physical environment, transportation, information, and communication.
- Education: The Act provides for inclusive education, with provisions for free education, scholarships, and reservation of seats in government institutions.
- Employment: The Act provides for reservation of jobs in government establishments and incentives for private companies to employ persons with disabilities [1].
- Healthcare: The Act provides for free healthcare, priority attendance, and treatment, as well as schemes to promote healthcare and prevent disabilities.
- Recreation and Cultural Life: The Act provides for recreational activities and cultural life, including access to arts and culture.

Key Provisions

- Data Collection: The Act mandates data collection on persons with disabilities.
- Grievance Redressal: The Act provides for grievance redressal mechanisms, including the appointment of a chief commissioner and state commissioners.
- Penalties: The Act specifies penalties for offenses, including fines and imprisonment.

Status of Implementation

- Progress: The implementation of the Act has been slow, with low budgetary allocations and lack of sensitization among government officials.
- Challenges: Despite the Act, persons with disabilities still face challenges in accessing government schemes, employment, and healthcare

Harmonised Guidelines & Standards for Universal Accessibility in India 2021

Mr. Bhupinder Singh's presentation showcased the key features of the Harmonised Guidelines and Standards for Universal Accessibility in India 2021 through a series of visuals and diagrams. He highlighted the importance of universal accessibility in creating an inclusive environment for all, regardless of age, size, or ability. The presentation covered the guidelines' focus on accessible infrastructure, transportation, information, and communication, including standards for ramps, elevators, toilets, and signage. Mr. Singh also emphasized the role of technology in enhancing accessibility, such as audio signals at pedestrian crossings and Braille signage. Through his presentation, Mr. Singh effectively communicated the need for a universal accessibility framework in India, emphasizing its benefits for persons with disabilities, elderly individuals, and the broader population.

Module 4:

Accessibility & Inclusion by Mr**.** Bhupinder Singh

What is Accessibility

According to Bhupinder Singh, accessibility refers to the design and implementation of products, services, and environments that can be used by everyone, regardless of their abilities or disabilities. It involves creating inclusive and barrier-free access to:

- Physical spaces (ramps, elevators, accessible restrooms)
- Information and communication (Braille, audio descriptions, sign language)
- Technology (assistive technologies, screen readers, keyboard-only navigation)
- Transportation (accessible vehicles, pedestrian infrastructure)
- Education and employment (inclusive learning materials, accommodations, and opportunities)
- He emphasizes that accessibility is not just about physical access but also about ensuring equal opportunities and participation for all individuals, including those with disabilities. It requires a proactive and inclusive approach to design, policy, and practice.

Principles of Inclusion Mr. Bhupinder Singh informed that the principles of inclusion are:

1. Zero Rejection: Ensuring no one is excluded or rejected.
2. Acceptance: Embracing diversity and promoting equal opportunities.
3. Accessibility: Ensuring physical, social, and economic access for all.
4. Participation: Encouraging active involvement and engagement from all individuals.
5. Non-discrimination: Prohibiting discrimination based on age, gender, disability, or other characteristics.
6. Empowerment: Fostering autonomy, self-advocacy, and self-determination.
7. Support: Providing necessary accommodations and resources for inclusive participation.

8. Sensitivity: Promoting awareness and understanding of diverse needs and experiences.
9. Flexibility: Adapting to individual needs and circumstances.
10. Collaboration: Working together to create inclusive environments and communities.

These principles, as outlined by Bhupinder Singh, aim to promote a culture of inclusion, where everyone has the opportunity to participate and contribute.

Assistive Technology and Devices by Dr. Nekram Upadhyay Unlocking

Potential: The Power of Assistive Technology


Accessibility &
Sensitization Training
workshop for
ICMR Nodal Officers
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Accessibility &
Sensitization Training
workshop for
ICMR Nodal Officers

Dr. Nekram Upadhyay led a pivotal session, "Unlocking Potential: The Power of Assistive Technology," emphasizing the transformative impact of Assistive Technology (AT) on individuals with disabilities. By understanding the needs of others through the Human Activity & Assistive Technology (HAAT) Model, we can create a more inclusive world.

Key Takeaways:

- Assistive Technology empowers individuals to break free from limitations and unlock their full potential.
- The HAAT Model considers the individual, their activities, and required assistive technology to create a more inclusive world.
- The GATE initiative aims to make high-quality assistive products accessible to everyone, everywhere, focusing on five key areas: people, policy, products, provision, and personnel.
- Providing access to assistive technology can unlock employment opportunities, open doors to education, foster independence, and build stronger communities.

Data on disability

- 15% of the global population lives with a disability (WHO, 2011).
- In India, 2.68 Cr persons are disabled, accounting for 2.21% of the total population (Census 2011).
- 2.4% of males and 1.9% of females have disabilities (National Sample Survey 2018).

Wheelchair Accessibility: A Basic Human Right

He informed that proper assessments and tailored solutions can ensure that everyone can navigate their world with confidence and ease. He demonstrated various techniques for using the wheelchair in different situations.

Accessible transportation (Automated solution or improving accessibility for all by Mr. Jagjit Singh (JS Motors)

Mr. Jagjit Singh, an expert in accessible transportation, highlights the crucial need for ramps in vehicles to facilitate easy access for wheelchair users. He emphasizes that ramps are essential for ensuring independence, safety, and dignity for individuals with mobility impairments.

He informed that the need for Ramps is for the following reasons:

Accessibility: Ramps provide a gentle slope for wheelchair users to enter and exit vehicles, eliminating the need for lifting or manual handling.
Independence: Self-driven vehicles with ramps empower wheelchair users to travel independently, without relying on others for assistance.

Safety: Ramps reduce the risk of accidents and injuries associated with manual handling or lifting.

Dignity: Ramps promote dignity and self-respect for wheelchair users, allowing them to maintain their autonomy and confidence.

Modification of Vehicles with Folding Ramps:

Mr. Jagjit Singh's work focuses on modifying vehicles to incorporate folding ramps, enabling wheelchair users to:

1. Self-Drive: Operate vehicles independently, using folding ramps to enter and exit the vehicle.
2. Transport: Transport persons with disabilities safely and comfortably, with easy access in and out of the vehicle.

Key Features of Folding Ramps:

Compact Design: Folding ramps are designed to be compact, allowing for easy storage and deployment.

Lightweight Materials: Ramps are made from lightweight materials, ensuring easy handling and minimizing vehicle weight.

Durable Construction: Ramps are built to withstand regular use, with a durable and rust- resistant finish.

Easy Operation: Ramps are designed for simple and effortless operation, with minimal manual effort required.

Benefits of Modified Vehicles with Folding Ramps

Enhanced Mobility: Increased independence and mobility for wheelchair users. Improved Safety: Reduced risk of accidents and injuries.
Increased Accessibility: Easy access to vehicles, enabling wheelchair users to participate fully in daily activities.

Enhanced Quality of Life: Improved overall quality of life, with increased autonomy and confidence.

Mr. Jagjit Singh's work demonstrates the importance of accessible transportation solutions, highlighting the need for ramps in vehicles to promote independence, safety, and dignity for wheelchair users.


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ADDITIVE MANUFACTURING &
ADVANCED MEDICAL TECHNOLOGY
(NIAMAT)


Accessibility Sensitization
Training Workshop
for ICT Officers

Module 5:

Universal Design Principals by Mr. Bhupinder Singh

Mr. Bhupinder Singh outlined the Universal Design Principles as following: Principle 1: **Equitable Use**

- Design should be accessible and usable by everyone, regardless of age, size, ability, or disability.
- Avoid segregating or stigmatizing any user group.

Principle 2: **Flexibility in Use**

- Design should accommodate different user needs and preferences.
- Provide choices for users to interact with the environment or product.

Principle 3: **Perceptible Information**

- Communicate information in a clear, concise, and accessible manner.
- Use multiple formats (visual, auditory, tactile) to reach diverse users.

Principle 4: **Tolerance for Error**

- Design should minimize hazards and errors.
- Anticipate user mistakes and provide feedback or warnings.

Principle 5: **Low Physical Effort**

- Design should minimize physical effort required to use the environment or product.
- Provide ergonomic and comfortable interactions.

Principle 6: **Size and Space for Approach and Use**

- Design should accommodate users of various sizes and abilities.
- Provide sufficient space for approach, use, and maneuverability.

Principle 7: **Perceptible and Understandable Elements**

- Ensure all elements are perceivable and understandable by users.
- Use clear and consistent language, symbols, and icons.

Principle 8: **Minimal Cognitive Load**

- Design should minimize cognitive effort required to use the environment or product.
- Provide intuitive and simple interactions.

Principle 9: **Intuitive Use**

- Design should be intuitive and easy to understand.
- Use familiar concepts and consistent design patterns.

Principle 10: **Feedback**

- Provide timely and effective feedback to users.
- Inform users about their actions and the results.

By applying these Universal Design Principles, designers and architects can create inclusive and accessible environments, products, and services that benefit everyone, regardless of their abilities or disabilities.

Summing up of Day 1

Day1 concluded with thanks to all the experts and the participants for active participation in Accessibility Workshop. The feedback of the participants was that the experts covered all the relevant topics related to accessibility at length. It has given the insights to them to deal with the issues related to disabilities in a more professional manner. This initiative of ICMR will go a long way in providing accessibility and exploring the Universal Design Principles in its institutions across the country. Accessibility is not about just compliance but it is about creating a more inclusive environment for everyone. The learning of this session will enable the participants to apply it in their work and daily life. They will be able to break down barriers and create a more accessible world for all

They all were looking forward to the next day to be another informative day.

Accessibility Audit and Sensitization Training Workshop for ICMR Nodal Officers Day 2

Module 6:

Accessibility and Challenges in Bureaucratic Work Environment by IRS Deputy Commissioner Nilesh Kumar Keshari:

Nilesh Kumar Keshari discussed the accessibility and challenges in a bureaucratic work environment, highlighting the need for inclusive policies and practices to ensure equal opportunities for all employees. He emphasized that despite existing guidelines and regulations, accessibility remains a significant challenge in government offices, with physical barriers, inadequate technology, and attitudinal biases hindering the participation of persons with disabilities. Mr. Keshari stressed that a bureaucratic work environment must strive to remove these barriers, providing reasonable accommodations, accessible infrastructure, and sensitive communication to foster a culture of inclusivity. He also underscored the importance of training and sensitization programs to raise awareness among employees, promoting a disability-inclusive workplace that values diversity and promotes equal opportunities for growth and development. Furthermore, he suggested that the Purple Tag Scheme can play a crucial role in bridging the gaps in accessibility standards, encouraging government offices to adopt and implement inclusive practices, and ensuring that the bureaucratic work environment is accessible, inclusive, and empowering for all employees.

Key Challenges

The following key challenges being faced by persons with disabilities were discussed by Mr. Nilesh:

- Inaccessible Physical Infrastructure: Lack of ramps, elevators, and adapted toilets
- Insufficient Assistive Technology: Limited access to screen readers, braille displays, and other assistive tools
- Limited Job Accommodations: Inadequate flexible work arrangements and modified duties
- Attitudinal Barriers: Stigma, bias, and stereotyping
- Inadequate Training and Support: Lack of training and support to address attitudinal barriers
- Inaccessible Communication: Limited access to sign language interpreters and braille materials
- Limited Opportunities for Career Advancement: Limited opportunities for growth and development
- Social Isolation: Exclusion from team-building activities and social events

Recommendations

- He recommended the following measures for realization of accessibility:
- Strengthen Enforcement of Accessibility Policies
- Implement the Purple Tag Scheme
- Provide Accessible Physical Infrastructure
- Offer Assistive Technology and Job Accommodations
- Provide Training and Support to Address Attitudinal Barriers
- Ensure Accessible Communication
- Foster a Culture of Inclusivity and Support

In conclusion, creating an inclusive bureaucratic work environment necessitates a multifaceted approach that tackles physical, technological, and attitudinal barriers faced by disabled officers. By implementing these recommendations, we can promote equal opportunities, foster a culture of inclusivity, and unlock the full potential of our workforce. It is our collective responsibility to ensure that our work environment is accessible, equitable, and empowering for all employees, regardless of their abilities. Notably, the Indian Council of Medical Research (ICMR) deserves acclaim for its exemplary commitment to fostering an inclusive and accessible work environment, with initiatives promoting diversity and equity, particularly for employees with disabilities. The proactive measures undertaken by ICMR to address the challenges faced by officers having disabilities and their families demonstrate its dedication to creating a barrier-free workplace, I extend my sincerest appreciation to the leadership and team of ICMR for their tireless efforts in building a more inclusive and supportive work environment, and I urge us all to work together to build a more inclusive and supportive workplace that values diversity and promotes growth and development for all.

Simulation exercise by Mr. Jitesh kumar and Vinay Kumar Consultant. (NHSRC):

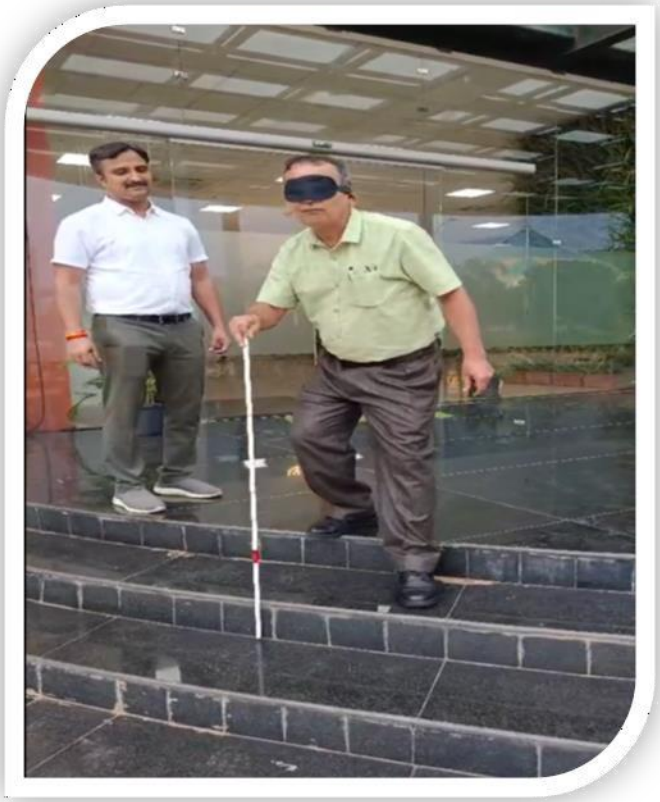
Simulation Exercise: Walking in the Shoes of others. The simulation exercise, conducted with an aim to build empathy and sensitize participants towards individuals with locomotor, visual, speech, and hearing disabilities. Through this immersive experience, participants gained a deeper understanding of the challenges faced by individuals with disabilities, including:

- Physical barriers: navigating a mock office setup with obstacles and challenges while experiencing an assigned disability
- Attitudinal barriers: understanding the impact of stigma, bias, and stereotypes on individuals with disabilities

- Accessibility: recognizing the importanceof accommodations, support, and inclusive design in creating an equitable environment The exercise culminated in a commitment from participants to drive positive change and create a more inclusive work environment, with recommendations including:

- Implementing accessibility measures
  - Providing accommodations and support
  - Conducting regular sensitization and training programs
  - Fostering a culture of inclusivity and respect

By experiencing disabilities firsthand, participants gained valuable insights and pledged to promote inclusivity, diversity, and equal opportunities in the workplace.



Module7:

Access Audit Checklist for Inclusive Spaces

Mr. Bhupinder Singh led this session, focusing on the Access Audit Checklist, a crucial tool for creating inclusive environments. This comprehensive checklist enables Nodal Officers to conduct thorough examinations of institutional premises, identifying physical barriers and opportunities for improvement. Checklist at Annexure ….

Key Components of the Access Audit Checklist:

1. Site location and approach road
2. Signage and way finding
3. Parking
4. Entrance
5. Information counter/reception area
6. Circulation within the building and flooring
7. Door handles
8. Stairs and handrails
9. Lift
10. Restroom/toilet
11. Canteen and eating area
12. Conference hall/board room
13. Billing counter
14. Emergency and evacuations
15. Transportation
16. Information and communications technology
17. Web accessibility

Evaluation Criteria:

The checklist assesses the presence and adequacy of features such as:

- Directional signage
- Accessible parking
- Drop-off zones
- Step-free entrances
- Handrails
- Tactile guidance
- Accessible building layout plans
- Lever-type door handles
- Automatic door openers
- Consistent step height and depth
- Color contrast

- Wide corridors
- Non-glary flooring
- Resting areas
- Wheelchair-accessible toilets
- Grab bars
- Emergency alarms
- Accessible tables
- Clear knee space
- Varied menus
- Accessible stages
- Dedicated accessible seating
- Hearing enhancement systems
- Accessible billing counters
- Clearly marked emergency exits
- Emergency alarms
- Evacuation chairs
- Accessible shuttle services
- Designated accessible transportation coordinators
- Accessible digital platforms
- Assistive technologies
- Accessible software applications
- Web accessibility features (perceivable content, operable navigation, understandable content, and robust compatibility)

Objective:

The Access Audit Checklist is a vital tool for creating inclusive spaces. Nodal officers may use it to conduct a thorough examination of institutional premises, identifying physical barriers and opportunities for improvement. By documenting their findings and prioritizing changes, they develop a clear plan to enhance accessibility, working collaboratively to break down barriers and build a more welcoming environment for all.

The second day of the workshop featured a comprehensive, hands-on training program designed to equip participants with practical skills and knowledge to conduct thorough accessibility audits and identify barriers in various physical and digital environments. The workshop commenced with an introduction to accessibility audits, covering the significance of inclusive design, the importance of accessibility in today's society, and the crucial role of audits in creating barrier-free, inclusive spaces. Participants then engaged in immersive, hands-on training sessions, assessing physical environments such as ramps, doors, corridors, and bathrooms, with objectives to identify and document accessibility barriers and suggest feasible, effective modifications. The training methodology included interactive practical exercises, group discussions, and real-life case studies, leading to learning outcomes that enabled participants to conduct mock accessibility audits, compile comprehensive reports, and communicate findings and

recommendations effectively to stakeholders.

Empowering Accessibility: Hands-on Training for Inclusive Environments

The hands-on training program empowered participants with practical skills and knowledge to conduct accessibility audits, identify barriers, and suggest modifications, ultimately contributing to creating inclusive environments that promote equal access for all.

Session Two Speaker of the session: Mr. Jagjit Singh presented valuable insights on the necessity of ramps for vehicles, highlighting the importance of accessibility features for individuals with mobility impairments. He shared his extensive work and expertise in modifying vehicles to incorporate folding ramps, which enable easy access and exit for wheelchair users. Through his innovative designs and modifications, Mr. Singh has made significant contributions to enhancing the mobility and independence of individuals with disabilities, demonstrating his commitment to promoting inclusivity and accessibility in transportation solutions. His work serves as a testament to the impact of innovative thinking and design in improving the lives of individuals with disabilities. By providing accessible transportation options, Mr. Singh's modifications have opened up new possibilities for social participation, education, and employment, ultimately contributing to a more equitable and inclusive society. His dedication to this critical aspect of accessibility has set a high standard for the industry, inspiring others to follow in his footsteps and strive for excellence in inclusive design.

Practical Session: Conducting an Accessibility Audit

The practical session of the accessibility audit training workshop was a hands-on, immersive experience where participants applied their knowledge in a real-world setting. Divided into small groups, participants conducted accessibility audits of assigned physical or digital environments, including building entrances, websites, and mobile apps.

Physical Environment Audit

Groups auditing physical environments utilized accessibility checklists and measuring tools to assess entrance ramps, doors, corridors, and bathrooms. They identified barriers and documented findings, measuring ramp inclines, door widths, and clearance spaces, and evaluating signage, lighting, and emergency evacuation procedures.

Digital Environment Audit

Groups auditing digital environments employed specialized software and tools to evaluate websites, mobile apps, or digital documents. They assessed color contrast, font sizes, navigation, and multimedia accessibility, identifying barriers and suggesting

modifications to ensure equal access.

Group Discussions and Feedback

Following the audits, groups reconvened to share findings and discuss challenges. Participants received feedback from trainers and peers, gaining insights into best practices and effective strategies for conducting accessibility audits.

Takeaways

Through this practical session, participants gained hands-on experience in conducting accessibility audits, developing essential skills to:

- Identify barriers in physical and digital environments
- Document findings and suggest modifications
- Communicate effectively with stakeholders
- Integrate accessibility into their work practices
- By applying theoretical knowledge in a real-world setting, participants left the workshop empowered to create inclusive, accessible environments. Ultimately, they acquired the expertise, confidence, and resources necessary to promote accessibility in their respective fields, enhancing the quality of life for individuals with disabilities.

By the end of the workshop, participants are empowered with the expertise, confidence, and resources necessary to create inclusive, accessible environments and promote accessibility in their respective fields, ultimately enhancing the quality of life for individuals with disabilities.

Conclusion

As we conclude this Accessibility Training Workshop, we are confident that participants have acquired valuable knowledge, skills, and insights to create inclusive environments that empower individuals of all abilities. We emphasize that accessibility extends beyond legal requirements, representing a fundamental human right. We urge participants to apply their newfound expertise in their daily work, fostering a ripple effect of inclusivity that positively impacts lives. Together, we can dismantle barriers and build a world where everyone can participate, contribute, and thrive, unlocking the full potential of individuals with disabilities and creating a more inclusive, equitable world for all.

Two-Day Capsule Course on Accessibility in Buildings and Built Environment at Bureau of Indian Standards (NITS, Noida): for ICMR Nominated Nodal Officers

Empowering inclusivity and accessibility, the Two-Day Capsule Course on National Building Code of India 2016 - Accessibility in Buildings and Built Environment, held during **11-12 November 2024,** at NITS, Noida, enlightened professionals and homeowners on universal design principles. This comprehensive training delved into the 115+ pages of accessibility provisions in NBC2016, illustrated by 100+ figures, ensuring better implementation at the local level. By promoting barrier-free design, the course helped create safer, more comfortable, and convenient built environments, benefiting everyone, including those with temporary impairments or needing assistance. The event enhanced participants' expertise and contributed to a more inclusive and compliant society.

Day 1 Introduction: Accessibility and Govt. of India Campaign

Shri Subhash Chandra Vashishth, Director of the Centre for Accessibility in Built Environment Foundation, emphasized the importance of accessibility and the Government of India's campaign to raise awareness on this critical issue. He highlighted

the need to understand diverse access needs, recognizing that individuals had varying requirements for inclusivity. Additionally, he stressed the importance of addressing attitudinal and physical barriers that hindered accessibility, promoting a shift in mindset and infrastructure. Furthermore, he discussed the significance of disability etiquettes and language, encouraging respectful communication and interaction with individuals with disabilities, ultimately fostering a more inclusive and accessible environment.

Access for All – Legal and Policy Framework

Shri T.D. Dhariyal, former Executive Director of the Centre for Accessibility in Built Environment Foundation, Dy. Chief Commissioner for Persons with Disabilities, Government of India, and State Commissioner for PwDs, Delhi, comprehensively outlined the legal and policy framework for "Access for All". He delineated the foundational provisions of the Constitution of India, the landmark legal provision through Rights of Persons with Disabilities Act 2016, and the National Policy, highlighting their collective significance in promoting inclusivity. Furthermore, he elaborated on India's commitment to the UN Convention on the Rights of Persons with Disabilities, (UNCRPD) underscoring the nation's dedication to upholding the rights and dignity of persons with disabilities. Through his expertise, Shri Dhariyal underscored the robust framework established to ensure accessibility and equal opportunities for all.

Introduction to BIS(Bureau of Indian Standards)National Building Code of India 2016, Applicability, Scope, Terminology

Shri Subhash Chandra Vashishth, delivered an insightful introduction to the National Building Code of India 2016, elucidating its applicability, scope, and terminology with a focus on Universal Design. He expounded on the concept of Universal Design, highlighting its significance in creating inclusive environments that cater to diverse user needs. Shri Vashishth also explored the impact of various disabilities on architecture and design, delving into anthropometrics and the importance of understanding user perspectives. Furthermore, he identified common barriers and presented space standards that prioritize accessibility, ensuring that built environments are navigable and usable by all. Through his expertise, Shri Vashishth provided a comprehensive understanding of the National Building Code's provisions for creating inclusive and accessible spaces.

Accessible Parking, Approach to the building & Building Entrances

Shri Subhash Chandra Vashishth, presented a detailed overview of accessible parking and building entrance design. He outlined the essential specifications for accessible parking, including designated spaces and signage. Shri Vashishth also discussed the importance of designing drop-off points, approach routes to buildings, and entrances that facilitate easy access. He elaborated on the critical design elements of pathways and access aisles,

ensuring seamless navigation. Furthermore, he highlighted key considerations for entrance doors and hardware, including width, thresholds, and user- friendly handles. By sharing his expertise, Shri Vashishth equipped participants with the knowledge to create barrier-free access points, enabling individuals with disabilities to navigate buildings with ease and independence.

Internal Circulation – Universal Design Considerations

SmtMadhurimaMadhav, Scientist 'E' and Director (Civil Engineering) at the Bureau of Indian Standards, presented a comprehensive overview of internal circulation and universal design considerations. She discussed the importance of accessible reception counters, circulation spaces, and flooring, highlighting the need for seamless navigation. SmtMadhav also addressed level changes and vertical circulation, elaborating on the design of stairs and ramps, including handrail specifications. Additionally, she emphasized the crucial design considerations for access elevators/lifts, Lifts should have a minimum size of 1.5m x 2m, 90cm wide doors, and control panels at 0.9-1.2m height with tactile markings and Braille signage. Additional features include mirrors, handrails, non-slip flooring, and two-way communication systems to ensure accessibility and safety for all users, including people with disabilities. Ensuring equitable access to all building occupants. By sharing her expertise, SmtMadhav provided valuable insights into creating inclusive and barrier-free internal circulation systems, promoting independence and safety for individuals with disabilities.

Sanitary Facilities

Shri Subhash Chandra Vashishth, presented a detailed examination of sanitary facilities, prioritizing inclusivity and accessibility. He outlined the essential design considerations for unisex toilets, ensuring equitable access for all users. Shri Vashishth also discussed the specific needs of ambulant disabled and wheelchair users, highlighting the importance of adaptable urinals and toilets. Furthermore, he addressed the design requirements for bathrooms and changing rooms, emphasizing the need for safety, privacy, and comfort. By sharing his expertise, Shri Vashishth provided valuable insights into creating sanitary facilities that cater to diverse user needs, promoting dignity and independence for individuals with disabilities.

TGSIs- Way Finding and TGSIs

Shri Subhash Chandra Vashishth, highlighted the significance of Tactile Ground Surface Indicators (TGSIs) and universal signage in facilitating wayfinding for diverse users. He emphasized the importance of standardized signage, encompassing visual, auditory, and tactile elements, to ensure seamless navigation. Shri Vashishth elaborated on the various types of TGSIs and signage, including raised letters, Braille, and pictograms, and discussed their standard specifications. By sharing his expertise, he underscored the crucial role of inclusive signage in creating accessible and user-friendly environments,

enabling individuals with visual impairments and other disabilities to navigate independently and confidently.

Retrofitting in Existing Buildings

Shri Subhash Chandra Vashishth, presented a comprehensive approach to retrofitting existing buildings for accessibility. He highlighted the challenges and opportunities in modifying existing structures to meet universal design standards. Shri Vashishth outlined practical strategies for retrofitting, including assessing existing barriers, prioritizing modifications, and implementing cost-effective solutions. He emphasized the importance of minimizing disruptions while maximizing accessibility features, such as ramps, lifts, and adaptable restrooms. By sharing his expertise, Shri Vashishth demonstrated how retrofitting can transform existing buildings into inclusive and accessible spaces, enhancing usability and dignity for all occupants.

What Nodal Officers learned?

As a Nodal Officer for Accessibility, I attended a transformative training program at the Bureau of Indian Standards (NITS, Noida) on August 22-23, 2024. Renowned experts led the session, imparting valuable knowledge on creating inclusive built environments. I gained a deeper understanding of the National Building Code of India 2016 and its application in designing accessible spaces. The program's interactive sessions and presentations equipped me with practical skills to implement universal design principles, identify barriers, and develop effective solutions. I now possess a comprehensive understanding of accessibility audits, inclusive signage, and emergency evacuation procedures. With my newfound knowledge and skills, I feel empowered to make a positive impact on our organization's accessibility journey. I'm excited to contribute to creating a more inclusive environment, where everyone can thrive. I'm looking forward to collaborating with our team to implement accessibility initiatives, ensure compliance, and cultivate a culture of inclusivity that benefits everyone.

What is the relevance of this workshop to ICMR and the community we live in?

The ICMR Nodal Officers' training program holds immense relevance to our organization and the community we serve. By emphasizing universal design and accessibility, this program aligns perfectly with ICMR's mission to promote health equity, reduce disparities, and foster inclusive excellence. As Nodal Officers, your role is crucial in enhancing the accessibility of our research facilities, institutes, and offices, thereby fostering an inclusive environment that offers equal opportunities for participation, contribution, and growth. This includes ensuring unfettered access to research, healthcare, and scientific collaboration for individuals with disabilities. By prioritizing accessibility, we can cultivate a diverse and inclusive team, drive innovations, improve research outcomes, and amplify our impact on public health. Through this program, we

aim to champion social inclusion, human rights, and inspire a broader movement towards a more equitable society. Your active participation and leadership will be instrumental in creating a transformative impact and realizing a vision of a more just, equitable, and healthy world for all.

Implementation and Sustainability

ICMR is committed to implementing the recommendations from the accessibility audit report and monitoring progress regularly. A system will be put in place to ensure that accessibility features are maintained and updated regularly. ICMR aims to make accessibility a sustainable and scalable part of its culture, integrating accessibility into all aspects of its work, including research, training, and employment practices.

List of meetings

1. ICMR Committee on Disability: Constituted on August 11, 2021
2. Subcommittee Formation: Formulation of a subcommittee on 'ICMR Policy on Disability, Habilitation, Rehabilitation, and Assistive Care' on December 15, 2021
3. Subcommittee Meeting: Meeting held to discuss 'ICMR Policy on Disability, Habilitation, Rehabilitation, and Assistive Care'
4. Expert Group Meeting: Meeting held on January 5, 2022, to discuss 'ICMR Policy on Disability, Habilitation, Rehabilitation, and Assistive Care'
5. Policy Finalization Meeting: Scheduled for December 15, 2023, to finalize the ICMR policy on Accessibility, Habilitation, Rehabilitation, and Assistive Care
6. Accessibility Audit: Expert committee constituted to carry out accessibility audit of ICMR institutions, with an introductory meeting held on May 22, 2024
7. Expert Group Meeting: Third meeting held on June 28, 2024, at ICMR-NIMS
8. Upcoming Meeting: Expert Group meeting scheduled for July 25, 2025, to discuss 'ICMR Policy on Disability, Habilitation, Rehabilitation, and Assistive Care'

Annexure: I

List of Nodal officers of ICMR and Its institution

S.No	Name of the Institute	Name of the Nodal officer	Designation
1.	ICMR-NJILOMD, Agra	Dr Raj Kamal	Scientist- F
2.	ICMR-NIOH, Ahmedabad	Dr. Sukhdev Mishra	Scientist -D
3.	ICMR-NCDIR, Bengaluru	Dr. H Deepadarshan, ICMR-NCDIR, Bengaluru	Scientist-C,
4.	ICMR-BMHRC, Bhopal	Shri Aslam Jamali	Supervisor (physiotherapy)
5.	ICMR-NIREH, Bhopal	Dr Dharmaraj,	Scientist B
6.	ICMR-NIE, Chennai	Mr. A. Elangovan,	Scientist-G
7.	ICMR-NIRT, Chennai	Dr. N. Karikalan	Scientist 'C
8.	ICMR-NIRTH, Jabalpur	Dr. Dinesh Kumar,	Scientist-E
9.	ICMR-NIN, Hyderabad	Dr.D.Subrahmanyam Mr.J.Ravi Prakash,	Scientist-C Technical Assistant
10.	ICMR-NARFBR, Hyderabad	Dr. Thirumala M,	Scientist-C
11.	ICMR-NICED, Kolkata	Mr. Ananda Pal,	Technical Officer-C
12.	ICMR-NIRRH, Mumbai	Mrs. Swati D. Gaikwad	Senior Administrative Officer
13.	ICMR-NIIH, Mumbai	Dr.Vandana Pradha	Scientist- D
14.	ICMR-NIMR, New Delhi	Dr Tarun Kumar Vats,	Scientist- B
15.	ICMR-NIP, New Delhi	Shri Dinesh Kumar	Tech. Officer -A
16.	ICMR-NIMS, New Delhi	Jitendra Yadav	Tech. Officer -A

17.	ICMR-NICPR, Noida	Mr Himanshu Rohilla,	Tech. Officer -B
18.	ICMR-RMRIMS, Patna	Dr. Kavita Bharati Scientist-C.	Scientist-C
19.	ICMR-VCRC, Puducherry	Dr. Vijesh Sreedhar Kuttiatt	Scientist – F (Medical)
20.	ICMR-NIV, Pune	Mr. Amit K Kasar	Technical Officer - B (Engineer)
21.	ICMR-NARI, Pune	Dr. Abdul Arif Khan	Scientist E
22.	ICMR-NITM, Belagavi	Mr. Ravikumar BS	Scientist-B
23.	ICMR-RMRC, Bhubaneswar	Dr. Nityananda Mandal	Principal Tech. Officer
24.	ICMR-RMRC, Dibrugarh	Sh. Mrinmoy Chetia	Sr. Tech. Officer (II)
25.	ICMR-RMRC, Gorakhpur	Dr Ashok Kumar Pandey	Scientist D
26.	ICMR-NIIRNCD, Jodhpur	Dr. S.S. Mohanty	Scientist-F
27.	ICMR-RMRC, Port Blair	Dr.Rehnuma Parvez	Scientist- D

ICMR Headquarters New Delhi

1.	Dr. R. Lakshminaraynan
2.	Dr. Ravinder Singh
3.	Dr. Ashoo Grover
4.	Ms. Seema Verma
5.	Mr. Javed Akhtar
6.	Mr. Mukesh Amanta
7.	Mr. Akash

Annexure: II

UNDERSTANDING DISABILITY

What is Disability?

The Rights of Persons with Disabilities Act (RPWD Act) 2016 was enacted by Parliament in December, 2016. According to this act “person with disability means” a person with long term physical, mental, intellectual or sensory impairment which, in interaction with barriers hinders full and effective participation in society equally with others.

Types of Disabilities
The RPwD Act 2016 recognizes 21 conditions as disabilities that are as following:

1. Locomotor
2. Leprosy Cured
3. Cerebral Palsy
4. Dwarfism
5. Muscular Dystrophy
6. Acid Attack
7. Blindness
8. Low-vision
9. Deaf
10. Hard of Hearing
11. Speech and Language Disability
12. Intellectual Disability
13. Specific Learning Disabilities
14. Autism Spectrum Disorder
15. Mental Illness
16. Multiple Sclerosis
17. Parkinson's Disease
18. Haemophilia
19. Thalassemia
20. Sickle Cell Disease

21. Multiple Disabilities

Let us discuss about these disabilities in brief

1. **Locomotor Disability?**

Introduction

In locomotor disability a person is not able to execute some activities that are related to moving self or moving things. This condition may result from affection of bones, joints, muscles or nerves. We often see people having difficulty in moving from one place to other place or holding things with hands. In simple words this condition is called locomotor disability. Meaning the term locomotor is derived from the Latin words Loco that means – "from a place" and motives that means – "causing motion". Therefore locomotor means movement from one place to another.

Thus Locomotor disability means hampered movement form one place to another place.

Rights of Persons with Disabilities Act, 2016 defines locomotor disability as – a person's inability to executre distinctive activities associated with movement of self and object resulting from affliction of musculoskeletal or nervous system or both, including Leprosy Cured, Cerebral Palsy, Dwarfism,

Muscular dystrophy and acid attack victims.

Symptoms

Persons having locomotor disability may have following symptoms

Difficulty in body movement control

Difficulty in movement of upper or lower limbs

Stiffness or tension in muscles

Absence of Legs/Leg/Hand/Hands/foot/feet or deformity in these parts

Difficulty in holding or picking objects.

Difficulty in walking, standing or sitting.

Weakness in muscles or imbalance in muscles.

Problems in bladder or bowel problems.

There may be sensory loss.

The person may not be able to walk on linear path.

Deformity in body parts

Delayed milestones

2. **Leprosy Cured**

Introduction

In earlier times leprosy was treated as a highly contagious and spreadable disease. People affected by it were treated as untouchables and no one used to come near them. There were only few people who used to communicate with them, even the residential areas were built for them separately. Nowadays leprosy is a curable disease but still stigma is attached with it.

Leprosy cured persons means a person who has been cured of leprosy but is suffering from loss of sensation in hands or feet as well as loss of sensation and partial deficit in the eye and eye-lid but with

no manifest deformity.
Meaning
The term leprosy has derived from ancient Greek that says ‘A disease which makes skin scaly.
Leprosy is also called Hansen’s Disease as it is named after the Physician Gerhard Armauer Hansen.
As per RPwD Act, 2016 leprosy cured is defined as:
"leprosy cured person" means a person who has been cured of leprosy but is suffering from—

(i) loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifest deformity;

(ii) manifest deformity and paresis but having sufficient mobility in their hands and feet to enable them to engage in normal economic activity;

(iii) extreme physical deformity as well as advanced age which prevents him/her from undertaking any gainful occupation, and the expression & quot;leprosy cured" shall construed accordingly.

Symptoms

Persons having leprosy may have following symptoms
Development of pale and pinkish patches on skin

Affected areas of skin may be insensitive to temperature or pain
Person may suffer from tissue loss, because of that fingers and toes may be deformed or shortened

Infection can cause severe nerve damage causing crippling of hands and feet, paralytics and blindness.
Muscle weakness
Disfigurement of body

3. **Cerebral Palsy**
Introduction
A person with cerebral palsy has difficulty in motor functions, coordination of body and mind related activities, posture difficulty etc. This condition may result from abnormal development or damage to the parts of the brain that control movement, balance, and posture. Cerebral Palsy is a group of movement disorders that appear in early childhood and its signs and symptoms vary among people and over time but usually include poor coordination, stiff and weak muscles, tremers etc.

Meaning
The term cerebral palsy is made of two words- Cerebral that means concerning the brain and palsy that means paralysis or inability to move. Cerebral palsy basically occurs due to damage to the brain. It is a disorder of control of muscles that causes difficulty in coordination, movement and positioning of body. The damage caused to the brain is non-progressive but is cannot recover or cured.

The effect of cerebral palsy is different in each individual and it depends on the part of brain that is damaged. Some children are affected mildly whereas others may be affected severely and may have difficulty in holding, sitting, walking etc.

Rights of Persons with Disabilities Act, 2016 defines cerebral palsy as "group of non-progressive neurological condition affecting body movements and muscle coordination, caused by damage to one or more specific areas of the brain, usually occurring before, during or shortly after birth."

Symptoms
Persons having cerebral palsy may have following symptoms
Stiff muscles
Spasticity
Lack of muscle coordination
Involuntary movement of muscles or tremors
Delay in fine motor and gross motor activities
Wrong body posture
Breathing difficulties
Excessive drooling
Difficulty in swallowing
Difficulty in body movement control
Difficulty in movement of upper or lower limbs
Stiffness or tension in muscles
Difficulty in holding or picking objects.
Difficulty in walking, standing or sitting.
Weakness in muscles or imbalance in muscles.
Problems in bladder or bowel problems.
There may be sensory loss.
The person may not be able to walk on linear path.
Deformity in body parts
Delayed milestones

4. **Dwarfism**
Introduction
When a person is too short in height then it is called dwarfism. It can result due to genetic or medical condition. In general the height below 4 feet 10 inches is considered as dwarfism. Because of their short height they face lots of problem in accessing the building, transport facilities, market places, hospitals etc. people in community make jokes on their stature and they are not taken seriously.

Meaning
Dwarfism is characterised by short stature caused by changes in bones and cartilage growth. It is not a disease and there is no single medical condition responsible for it however there might be various causes for this.

Rights of Persons with Disabilities Act, 2016 says "Dwarfism means a medical or genetic condition

resulting in an adult height of 4 feet 10 inch (147cms) or less.

Dwarfism can be categorised into two categories- disproportionate and proportionate. In disproportionate dwarfism the proportion of body parts is not equal, either the hands will be bigger or average and arms and legs will be shorter or trunk will be short with longer limbs. In proportionate dwarfism the body parts are in proportion to the height of body of the individual.

Symptoms
Persons having dwarfism may have following symptoms
Very short arm and legs that may cause difficulty in daily life activities
Large forehead
Sometimes difficulty in breathing
Narrowing in the spine
Poorly developed ridge case
There may be spine and hip related problems
May have difficulty in movement
May have deformity in body parts
May have delayed milestones
Foot deformities may be present
Cleft palate may be present

Facial bones may look flat
Joint pain and mobility issues may occur
Scoliosis, clubfoot or moving difficulty may be present
Limited elbow mobility
Head is disproportionately large
Neck bones may be unstable
Twisted feet
Bowed legs
Slower growth rate
Delayed or no sexual development during teenage
Short fingers and often a wide separation is there between middle and ring fingers

5. **Muscular Dystrophy**
Introduction
Muscular dystrophy is a hereditary genetic muscle disease that weakens the muscles that move the human body. Muscular dystrophy can run in families, or a person can be the first in their family to have a muscular dystrophy. There may be several different genetic types within each kind of muscular dystrophy, and people with the same kind of muscular dystrophy may experience different symptoms and affects the stamina, strength and functions of the body.

Meaning
Muscular dystrophies are a group of muscle diseases caused by mutations in a person's genes. Over time,

muscle weakness decreases mobility, making everyday tasks difficult. There are many kinds of muscular dystrophy, each affecting specific muscle groups, with signs and symptoms appearing at different ages, and varying in severity.

Rights of Persons with Disabilities Act, 2016 says – & quot;muscular dystrophy & quot; means a group of hereditary genetic muscle disease that weakens the muscles that move the human body and persons with multiple dystrophy have incorrect and missing information in their genes, which prevents them from making the proteins they need for healthy muscles. It is characterised by progressive skeletal muscle weakness, defects in muscle proteins, and the death of muscle cells and tissue."

Symptoms
Persons having muscular dystrophy may have following symptoms
Difficulty in body movement
Difficulty in swallowing
Enlarged calf muscles
Curved spine
Breathing problem
Heart problems
Stiff or loose joints
Frequent falls

Difficulty rising from a lying or sitting position
Trouble running and jumping
Waddling gait
Walking on the toes
Muscle pain and stiffness
Learning disabilities
Delayed growth

6. **Acid Attack**

Introduction
Acid attack survivors have been brought under the ambit of disability after the enactment of Rights of Persons with Disabilities Act 2016.An acid attack survivor refers to a person who has suffered a violent assault as a result of acid or a similar corrosive substance being thrown at them. In most cases, acids or corrosive chemicals are thrown at the face resulting in the skin burning, damage to skin tissue, and even dissolving of bones in some severe attacks.

Meaning
Acid attack means throwing acid or similar type of substance on the body of other person with the intension of taking revenge and disfigures them. It is mostly done against women and the upper part of body is affected in most cases.

Rights of Persons with Disabilities Act, 2016 says “Acid attack victims means a person disfigured due to violent assaults by throwing of acid or similar corrosive substance.”

Symptoms
Persons having acid attack may have following symptoms
Deformity in skull and other body parts
Loss of hair
Damage in ear cartilage
Deafness may occur
Damage and deformity in eyes that can lead to blindness
Nose can be deformed
Scars on body
Limitation of body movements
Loss of ability to communicate and eat
Respiratory problems
Social difficulties
Psychological difficulties
Economic difficulties
Shrinking of neck and chin area
Nostrils may be damaged
Possibilities of other health related problems due to damage in the various organs

Mental health issues
Lower self esteem
Poor self consciousness
Acid attack may lead to physical disability

7. **Blindness**
Introduction
Blindness is a condition in which an individual’s capacity to see things is affected. This means that the function of the eye for numerous reasons may become limited. The person having blindness may have perception of light that means she or he may be able to differentiate between light and dark.

Meaning
A person may be considered having blindness if the field of vision is totally restricted. As per Rights of Persons with Disabilities Act, 2016 visual impairment includes blindness and low vision. We will be discussing about both separately.

Rights of Persons with Disabilities Act, 2016 says "blindness" means a condition where a person has any of the following conditions, after best correction—

(i) Total absence of sight; or
(ii) visual acuity less than 3/60 or less than 10/200 (Snellen) in the better eye with best possible correction; or

(iii) Limitation of the field of vision subtending an angle of less than 10 degree

Symptoms
Persons having blindness may have following symptoms
Total loss of sight
Excessive rubbing of eyes
Poor eye hand coordination
Difficulty in moving things
Difficulty in tracking
Squinting or blinking of eyes while looking an object
Difficulty in reading
Watering eyes
Redness in eyes
Loss of peripheral vision
Albinism
Difficulty in self help skills Delay in concept development
Problem in language development
Lack of eye contact

8. **Low Vision**
Introduction
In low vision the capacity of individual to see things is affected. This means that the function of the eye for numerous reasons may become limited. In low vision the person will have difficulty is seeing things despite using the glasses. With the help of glasses and magnifiers they are able to carry out their daily living activities.

Meaning
A person may be considered having low vision if the field of vision is still limited after having glasses.

With the help of large prints and magnifying devices they are able to read and write.
Rights of Persons with Disabilities Act, 2016 says & quot;low-vision & quot; means a condition where a person has any of the following conditions, namely:— (i) visual acuity not exceeding 6/18 or less than 20/60 upto 3/60 or upto 10/200 (Snellen) in the better eye with best possible corrections; or (ii) limitation of the field of vision subtending an angle of less than 40 degree up to 10 degree.

Symptoms
Persons having low vision may have following symptoms
Tilting of head and blocking one eye while looking an object
Delay in concept development
Problem in language development
Lack of eye contact
Unable to see things clearly from a little distance
Difficulty in identifying a finger from a little distance
Excessive rubbing of eyes

Poor eye hand coordination
Difficulty in moving things
Difficulty in tracking
Squinting or blinking of eyes while looking an object
Difficulty in reading
Blurred vision may be there
Double vision may be there
Watering eyes
Redness in eyes
Loss of peripheral vision
Difficulty in self-help skills

9. **Deaf**

Introduction

Hearing is an important sensory channel that allows the detection, discrimination, recognition and comprehension of auditory stimulus. Hearing helps to detect and localize even soft environmental sound and to acquire speech and language for communication or exchange of feelings, thoughts and ideas. If a person has total hearing loss then communication will not be possible.

Deafness is an auditory problem experienced by the individual. It reduces the functional potential and restricts the performance level of the individual.

Meaning

Deafness is the total inability to hear sounds .This may be due to lack of development, damage or disease in any part of the ear. It can be by birth or can occur after birth too. This is invisible disability therefore the people suffering from deafness face more challenges in society.
Rights of Persons with Disabilities Act, 2016 says "deaf" means persons having 70 DB hearing loss in speech frequencies in both ears;

Symptoms

Persons having deafness may have following symptoms
Unable to hear sounds
Difficulty in following directions
Focuses on the lip movement of speaker
Avoid participation in group discussions
May have ear discharge
Lack of attention in the classroom
Difficulty in comprehending language
Poor reading and writing skills
Poor speech and language development
Lack of coordination between hearing and seeing capabilities
Total loss of hearing ability
Difficulty in self help skills
Delay in concept development

10. **Hard of Hearing**

Introduction

There are some people who are not able to hear the sounds as others or they find it difficult to hear when more than two people are talking. It happens because of hearing loss that can be mild to severe level. Because of hearing loss they are not able to perform at par with others. It reduces their functional potential and restricts the performance level.

Meaning

Hard of hearing is a term that refers to someone having mild-to-severe hearing loss. In these individuals, some hearing capability is still present. These individuals can be benefitted with of hearing aids Rights of Persons with Disabilities Act, 2016 says "hard of hearing" means person having 60 DB to 70 DB hearing loss in speech frequencies in both ears.

Symptoms

Hard of hearing people may have following symptoms
Feeling like speech and other sounds are quiet or unclear
Having trouble hearing other people, particularly in noisy surroundings
Unable to comprehend when more than one person is speaking
Frequently needing to ask others to repeat themselves or to speak more loudly or slowly
Having to turn the volume up on your TV or headphones
Difficulty in following directions
Focuses on the lip movement of speaker
Avoid participation in group discussions
May have ear discharge
Lack of attention in the classroom
Difficulty in comprehending language
Poor reading and writing skills
Poor speech and language development
Lack of coordination between hearing and seeing capabilities
Total loss of hearing ability
Difficulty in self help skills
Delay in concept development

11. **Speech and Language Disability**

Introduction

Speech and Language disability is a form of communication disability. Therefore delay in development of speech and language milestones is an indication of communication disability. Broadly speaking individual with speech and language disability are those who are unable to communicate effectively through spoken mode.

Meaning

In speech and language disability the hearing, speech, language and fluency is affected and because of this the overall quality of communication is poor. The individual affected by this may have difficulty in

articulation or they may have other speech disorders.

Rights of Persons with Disabilities Act, 2016 says & quot;speech and language disability" means a permanent disability arising out of conditions such as laryngectomy or aphasia affecting one or more components of speech and language due to organic or neurological causes.

Symptoms
Persons having speech and language disability may have following symptoms

Problems in language comprehension
Inappropriate responses.
Failure to understand instruction.
Limited language expression
Problem in learning speech
Linguistic non-fluency
Revision of utterances
Problem in articulation
Short span of attention.
Limited social interaction.
Lack of functional writing skills.
Problems in learning words.

12. **Intellectual Disabilities**

Introduction
Persons with intellectual disability have significant limitations in intellectual functioning as well as in adaptive behaviors. They are not able to generalize the things that are told to them in one situation.

Therefore they have problems in conceptual, social and practical skills in adapting things. They need to be told things in simple and clear words that need to be repeated again and again.

Meaning
Intellectual Disability means a person having below average intelligence. Some time we see a person with intellectual disability who is not able to understand the instructions given by family or friends and s/he is not able to adapt the behavior appropriately. You might have heard people saying around you that so and so has low IQ or s/he does not understand the things that are told to them. Basically in intellectual disability the person has limited mental functioning, understanding, following instructions,

Recall of memory, communications skills and social skills because of these issues the person may be less capable of self-care or require the help of others for their living skills. They may learn the skills but require continuous practice and may forget if they are not practicing it.
As per Rights of Persons with Disabilities Act, 2016 intellectual disability is defined as " a condition characterized by significant limitation both in intellectual functioning (reasoning, learning,

problem solving) and in adaptive behavior which covers a range of every day, social and practical skills”

Symptoms
Persons having intellectual disability may have following symptom
Poor intellectual functioning
Difficulty in adaptive behavior
Difficulty in learning concepts
Difficulty in social skills
Difficulty in communication

Difficulty in self-care and home living
Social and interpersonal skills
Poor memory
Delay in developmental milestones
Difficulty in grasping social rules
Limitation in cognitive functions like understanding the reason of a particular problem
Difficulty in logical thinking
Low attention span
Difficulty in grooming skills
Difficulty in personal care skills
Self-concept is poor
Lack of social emotional skills
Lack of motivation
Lack of attention
Maladaptive behavior
Poor gross motor and fine motor skills
Difficulty in recognizing common shapes like square, rounds, straight line etc.
Slow in physical and mental activities
Unable to attend group activities
Like the company of children of younger age
Feeling shy in group activities

13 **Specific Learning Disabilities**
Introduction
Specific learning disability is a brain-based disorder that affects how one processes language, math, or other skills. Usually learning disabilities is defined as a neurological condition, which manifest as the “inability” to listen, speak, read, spell, write and do mathematical calculation.

Meaning
Specific learning disabilities are a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning and mathematical abilities. As per Rights of Persons with Disabilities Act, 2016 "specific learning disabilities " means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write,

spell, or to do mathematical calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia;

In brief the types of specific learning disabilities are as following:
Dyslexia is the specific learning disability in reading. Children affected with dyslexia find it very difficult to read. It occurs in children with normal vision and intelligence.
Dysgraphia is a specific learning disability that affects written expression, for example difficulties with spelling, poor handwriting and trouble putting thoughts on paper.

Dyscalculia is a specific learn disability that causes difficulty in learning arithmetic, understanding numbers and doing mathematical calculations. About 3 to 6% of population is affected with some degree of dyscalculia.

Dyspraxia, is a condition affecting physical co-ordination. It causes a child to perform less well than expected in daily activities for their age, and appear to move clumsily.

Symptoms
Persons having specific learning disabilities may have following symptoms
Common Symptoms
Disorders of attention
Perceptual impairment
Deficit in motor coordination
Disorder of memory and thinking
Disorder of language
Disorder of listening
Social and interpersonal characteristics
Specific symptoms
Dyslexia
Reading skills below the expected level for age
Erratic rate of reading due to repetition of words
Problems remembering the sequences
Difficulty in seeing similarities and differences in letters and words
Difficulty in spelling words
Avoiding activities that involve reading
Distracting the teacher
Lateral head movement
Omission of word
Substituting one word for another
Mispronouncing of word
Reading words sentences in wrong order
Difficulty in quick recognition of words
Difficulty in combining sound into words
Very poor memory
Difficulty in appropriate grouping of words

Dysgraphia:
Very poor writing
Too irregular writing,
Too wide spacing between two words.
Absence of prewriting skills and pre-requisite skills for fine motor control
Poor visual memory and poor visual translation
Poor attention span confusion in direction
Not able to begin the letter and continue
Loss of fluency in writing
Lack of uniformity in writing.
Dyscalculia
Poor reasoning
Difficulty in perception
Difficulty in language and motor functioning
Difficulties in grasping the difference between up and down, high and low and far and near.
Difficulties in understanding size or quantity relationship
Difficulties in discriminating between left and right.
Problem in understanding number sequence.
General difficulty with learning math symbols.
Inability to count on fingers.
Problems with subtraction and division
Confusion regarding place value
Problem in sequencing.
Poor memory.
Dyspraxia
Difficulty in planning and executing tasks involving fine motor skills.

14. **Autism Spectrum Disorder**

Introduction

Autism Spectrum Disorder (ASD) is a complex developmental disability that typically appears during the first three years of life. It affects the normal functioning of the brain, impacting development in the area of social interaction and communication skills. Both children and adults with ASD typically show difficulties in verbal and non verbal communication, social interactions and leisure or play activities.

The children with ASD have difficulties in social skills. They may not make eye contact or initiate and maintain interaction. With proper intervention the children with autism can be taught appropriate educational skills and the strategies for adjustment in family and society so that they can be independent as far as possible.

Definition

According to the Rights of Persons with Disabilities Act (2016): “Autism Spectrum Disorder means a neuro-developmental condition typically appearing in the first three years of life that significantly affects a person’s ability to communicate, understand, relationships and relate to others, and is

frequently associated with unusual or stereo typical rituals or behaviors".

Symptoms
Persons having ASD may have following symptoms:
May avoid eye contact
May appear unresponsive to people around them
Avoid physical contact; may dislike being hugged or cuddled
Difficulty in reading and interpreting social cues from others
Difficulties in language development
May avoid playing and interacting with others
May engage in self-stimulating behaviors such as swaying, rocking, spinning etc.
May speak only to express their needs.
May also have intellectual disability
May show excellent memory
Like to follow fix routines
May have difficulty in personal care skills

15 **Mental Illness**
Introduction
Mental illness refers to the condition that results in disruption of a person's thinking, feeling, and mood and ability to relate to others caused by social, psychological, genetic, biochemical and other factors like trauma, infection etc. Major mental illness includes Depressive Disorders. Bipolar Disorders,

Schizophrenia, Personality Disorders, Substance Use Disorders, Disruptive Behavior Disorders and Dementia etc.

Meaning
Mental illness is a state of Balance between the individual and the surrounding world, a state of harmony between oneself and others, co-existence between the real, self and that of other people and environment.

The term mental illness refers to different type of mental disorders that includes disorder of thought, mood or behavior that cause distress and result in reduced ability to function, psychologically, socially, occupationally or interpersonally. Those having mental illness might have difficulty in handling daily activities, family responsibilities and relationship, workplace responsibilities etc.

As per Rights of Persons with Disabilities Act, 2016 "mental illness" means a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, but does not include retardation which is a conditon of arrested or incomplete development of mind of a person, specially characterised by subnormality of intelligence.

Symptoms
Persons having mental illness may have following symptom

Always feeling low and sad
Confused thinking or reduced ability to concentrate
Excessive fears or worries, or extreme feelings of guilt
Extreme mood changes of highs and lows
Withdrawal from friends and activities
Significant tiredness, low energy or problems sleeping
Detachment from reality (delusions), paranoia or hallucinations
Inability to cope with daily problems or stress
Trouble understanding and relating to situations and to people
Problems with alcohol or drug use
Major changes in eating habits
Sex drive changes
Excessive anger, hostility or violence
Suicidal thinking
Physical problems, such as stomach and back pain, headaches, or other unexplained aches and pains.

16. **Multiple Sclerosis**

Introduction

Multiple sclerosis is a disease that affects central nervous system. The immune system attacks the myelin, the protective layer around nerve fibers and causes Inflammation and lesions. This makes it difficult for the brain to send signals to rest of the body.

Meaning

Multiple sclerosis is an auto immune disease that causes damage to nerve fibers in the central nervous system. Over time, it can lead to vision problems, muscle weakness, loss of balance or numbness.
Several drug therapies can limit nerve damage and slow the disease's progression.
Rights of Persons with Disabilities Act, 2016 says "multiple sclerosis" means an inflammatory, nervous system disease in which the myelin sheaths around the axons of nerve cells of the brain and spinal cord are damaged, leading to demyelination and affecting the ability of nerve cells in the brain and spinal cord to communicate with each other

Symptoms

Persons having multiple sclerosis may have following symptoms
Muscle Weakness.
One of the earlier symptoms of muscular sclerosis is needle type sensation which affects the face, body or arms and legs.
Sensation like an electronic shock when moving the neck.
Bowel and bladder control problem.
Fatigue restricts the functional ability of a person at home or at work.
Dizziness and Vertigo
Spasticity and Muscle Spasms Multiple sclerosis changes the walking style of the people due to muscle weakness
Have problems with balance of body and fatigue.

Many types of pain occur due to weakness or stiffness of muscles.
Learning and Memory Problems.

Emotional Changes and Depression
Headache
Hearing loss
Itching
Breathing problems
Speech disorders
Swallowing problems
Sexual difficulties
Seizures

17 **Parkinson's Disease**
Introduction
Parkinson's disease or disability is a neurological movement disorder. In this the nervous system is affected that hampers the ability to control body movements. If an individual is affected by Parkinsons/he may shake, have muscle stiffness and have problem in walking and maintaining the balance of the body.

Meaning
Parkinson' disease is a progressive disorder that affects the nervous system and the parts of the body controlled by the nerves. The symptoms start slowly initially it may be a barely noticeable tremor in just one hand. Tremors are common, but the disorder may also cause stiffness or slowing of movement.

In the early stages of Parkinson's disease the face may show little or no expression and arms may not swing while walking or speech may become soft or slurred. Gradually the person have trouble in talking, sleeping, having mental and memory problems, sometimes experience behavioural changes along with the other symptoms.

Rights of Persons with Disabilities Act, 2016 says "parkinson's disease" means a progressive disease of the nervous system marked by tremor, muscular rigidity, and slow, imprecise movement, chiefly affecting middle-aged and elderly people associated with degeneration of the basal ganglia of the brain and a deficiency of the neurotransmitter dopamine

Symptoms
Persons having parkinson's disease may have following symptoms
Tremor starts with the hands and arm.
Tremors in jaw and foot. Gradually the tremor become more wide spread and become worst with tension and stress.
Often tremor disappear during movement and during sleep.
Rigid and stiff muscles
Sometimes aches and pains also experienced in the affected muscles

Slowness of movement
Coordination problem
Unsteady walk and balance problem.

The person may take short stuffing steps and feel difficulty in starting walk and also difficulty in stopping walk.
Some person may feel that feet are stuck to the floor while trying to take steps.
Twisting of muscles
Spasms or camps
Decreased facial expressions
Speech may become slurred
Changes in handwritingas it become smaller and very difficult to read
Depression and anxiety problems,
Chewing and swallowing problems
Urinary problems,
Difficulties in thought process,
Halt urinations delusions etc.

18 **Haemophilia**
Introduction
Haemophilia is a Disorder of Blood Coagulation wherein the blood does not clot due to insufficient clotting factors. Because of this excessive and spontaneous bleeding occurs that may become life threatening.

Meaning
Haemophillia is a medical condition in which the ability of the blood to clot is severely reduced, causing the sufferer to bleed severely from even a slight injury. The condition is typically caused by a hereditary lack of a coagulation factor, As per RPwD Act, 2016 "haemophilia" means an inheritable disease, usually affecting only male but transmitted by women to their male children, characterised by loss or impairment of the normal clotting ability of blood so that a minor would may result in fatal bleeding.

Symptoms
Persons having haemophilia have following symptoms
Excessive bleeding from cuts or injuries or after dental work or surgery.
Many large or deep bruises
Pain, swelling or tightness in joints
It often affects the knees, elbow and ankles.
Bleeding of the mouth and gums that becomes difficult to stop after loosing a tooth.
Bleeding after having shots such as vaccinations.
Bleeding in the head of the infant after a difficult delivery.
Blood in the urine or stool.
Frequent and hard to stop nose bleeds.

Severe anemia
Painful, prolonged headache
Repeated vomiting

Sleepiness or lethargy
Double vision
Sudden weakness or clumsiness
Convulsions or seizures
Person may get frequent infections.
Delayed development
Jaundice may occur
Overall health may be poor

19. **Thalassemia**

Introduction

Thalassemia is an inherited blood disorder that causes the body to have lesser quantity of hemoglobin than the normal. It is transmited through gene of parents to children. This disorder do not spread by blood, air, water, malnutrition or any other disease.

Meaning

Thalassemia is an inherited blood disorder that causes the body to have lesser quantity of hemoglobin than the normal. The person affected by thalassemia need frequent blood transfusions.

As per RPwD Act, 2016 "thalassemia" means a group of inherited disorders characterised by reduced or absent amounts of haemoglobin.

Symptoms

Persons having thalassemia have following symptoms
Fatigue
Weakness
Pale or yellowish skin
Facial bone deformities
Slow growth
Abnormal swelling
Dark urine
Severe anemia
Person may get frequent infections.
Delayed development
Overall health may be poor

20. **Sickle Cell Disease**

Introduction

Sickle cell disorder is an inherited blood disorder where red blood cells become sickle/crescent shaped that leads to frequent infections, swelling in the hands and legs, pain, severe tiredness, and delayed growth or puberty. Sickle cell disease usually begins in early childhood. The severity of symptoms can vary from person to person. It may lead to various acute and chronic complications.

Meaning

Sickle cell disease is an inherited blood disorder that affects hemoglobin, the protein that carries oxygen through the body. The normal red blood cells are disc-shaped and flexible enough to move easily through the blood vessels but in case of sickle cell disease, red blood cells are crescent- or “sickle”-shaped. These cells do not bend or move easily and can block blood flow to the rest of the body.The blocked blood flow through the body can lead to serious problems, including chances of stroke, eye problems, infections and pain.

As per RPwD Act, 2016 "sickle cell disease" means a hemolytic disorder characterised by chronic anemia, painful events, and various complications due to associated tissue and organ damage; "hemolytic" refers to the destruction of the cell membrane of red blood cells resulting in the release of hemoglobin.

Symptoms

Persons having sickle cell disease have following symptoms

Severe anemia

Painfull events

Pain and swelling of hands and feet.

Person may get frequent infections.

Damage to retina and vision problem

Delayed development

Jaundice may occur

Overall health may be poor

21. **Multiple Disabilities**

Introduction

Multiple disabilities are a condition where a person has a combination of two or more disabilities at the same time. The person with multiple disabilities may have visual impairment or hearing impairment similarly the person with blindness may also have problems in hearing. The most common in multiple disabilities is deaf blindness where the person has difficulty in hearing as well as seeing, because of this condition they are dependent on others or need extensive support for their daily living skills. There may be many difficulties for completing a simple task that can be done easily by others. With appropriate training these individuals can learn daily living skills and communicate effectively with their care givers and perform certain tasks.

Meaning

Multiple disabilities mean a combination of two or more disabilities. In simple words the term

multiples disabilities means existence of more than one disability at a time. It may be cerebral palsy and hearing impairment or intellectual disability and blindness or deaf blindness.

The rights of persons with disabilities act, 2016 defines multiple disabilities as – "multiple disabilities (more than one of the specified disabilities) including deaf blindness which means a condition in which a person may have combination of hearing and visual impairments resulting in severe communication, developmental and educational problems"

Symptoms
Persons having multiple disabilities may have following symptoms
Difficulty in speech and communication
Difficulty in mobility
Limited ability to generalizing skills from one situation to another
Need support for daily living activities
Limited visual ability
Delayed language development
Limited social skills
Difficulty in socialization
Difficulty in following the instructions
Difficulty in expressing emotions
May have anxiety or aggressive behaviour
May have self-destructive behaviour
Difficulty in Hearing words
May have difficulty in motor skills
May have difficulty in focusing on certain task
Short attention span
Poor concentration

USE OF APPROPRIATE TERMINOLOGIES

It is very important to use the appropriate language while talking to others. Every individual need respect from others. We need to use the appropriate language in our interactions. In case of interaction with persons with disabilities it is very important and necessary to use the appropriate terminologies. We need to remember that just as we would like to be addressed respectfully, so do the persons with disabilities. We need to use the person first language while talking to them. Disrespectful language and words for describing person with disabilities goes against the human rights of persons with disabilities and makes them feel humiliated, excluded, and becomes a barrier to full participation. To work towards an inclusive society we need to make sure that inappropriate language should not be a part of our interactions with each other. Some examples of the terminologies used for persons with disabilities and the correct terminologies to be used are elaborated in the following table:
Inappropriate Terminologies Appropriate Terminologies
Able bodied does not have disability, non-disabled

Afflicted with ---- Has ----
Differently abled Persons with Disabilities
Disabled friendly environment Barrier free environment/Accessible

Environment

Birth defect Congenital disability/born with a

Disability/disability since birth

Low Visioned Person with low vision/person having partial

sight

Brain Damaged Person with brain injury
Cerebral Palsy Victim/Cerebral
Palsied/Spastic

Person with Cerebral Palsy

Wheel chair bound/Confined to a wheel chair Wheel chair user/person who uses a wheel

chair

Crippled Persons with locomotor disability
Down syndrome person/Mongoloid Person with Down syndrome
Handicapped Person with disability
Slow learner Person with a learning disability
Mentally Retarded/ Mental Disability Person with intellectual disability
Mentally Ill/Mental Person having mental illness
Physically challenged Person with locomotor disability
Polio Victim Person with post-polio syndrome
Psychotic/Neurotic Person with psychiatric disability/psychiatric

Illness
Vegetative state Non-responsive
Differently abled Person with disability

HOW TO INTERACT WITH PERSONS WITH DISABILITIES

Greet them appropriately
Make them comfortable by asking for sitting (if possible)
Listen to them carefully
Do not ask questions about their disability
Do not sympathise with them because they are having disability instead of it empathise with them
Do not underestimate them.
Provide appropriate information that they are asking.
Do not play with their assistive devices i.e. wheelchair, crutches etc.
Do not ridicule them.
Speak to them in clear language
Provide them correct information.
Have patience while interacting with these as it may be difficult for them to understand things quickly because of hearing loss.
Speak to them in clear and slow language or give information in written form
One person should speak at one time so that they can understand it.
Tell your name and give your introduction to them in writing

Annexure: III

ICMR Committee on Disability: Constituted on August 11, 2021

List of Experts:

- Dr. Sanghamitra Pati, Additional Director General, ICMR – *Chairperson*
- Dr. Hemlata Director National Centre for Disability Studies IGNOU
- Mr. Gurusharan Singh Secretary General Paralympics committee of India
- Dr. Arun Sharma President. National Association for Blind Mt. Abu Rajasthan
- Dr. Avinash Wachasundar Managing Trustee of Cochlea Pune for hearing and speech
- Dr. Dipendra Manocha Vice president. National Association for Blind, founder of DAISY CONSORTIUM
- Dr. Amik Garg Director KIET Group of Institutions
- Dr. sangeeta Abrol, poof XMMC & SJH
- Dr.. Sanjay wadhwa, HOD, PMR, AlIMS N. Dethi
- Mr. Ashok Bedi, Addl seey, (PCI)
- Mr. Subhash C. Vashishth, Bureau of Indian Standards (BIS)
- Mr. Bhupinder Singh, Swayam (NGO)
- Dr. Jitesh Kumar, Scientist 'D', AIMTZ, Visakhapatnam
- Mr. Jagjit Singh, Founder, JS Design
- Dr. Navjit Gourav Asst. prof IITRoorkee
- Dr. Nekram Upadhyay, i-CREATE

ICMR Secretariat

- Dr. R. Lakshminaraynan DDG (Admn.)ICMR
- Dr. Ravinder Singh, Scientist 'D', ICMR
- Mrs. Seema Verma, Senior Technical Officer, ICMR
- Mr. Akash, Project Administrative Assistant, ICMR

Annexure: IV

Minutes of all meetings, duly approved by the Chairman of the Committee, are placed:

Minutes of meeting "Creating Accessible environment at ICMR HQRS and it's institution" on 11.08.2021at A.S. Paintal Hall, ICMR Hqrs. New Delhi.

- **Member present:**
- Mr. Rajeev Roy Sr. DDG (A) Chairperson
- Dr. Harpreet Sandhu Sc-F
- Dr. Harpreet Singh Sc-F (Spl. invitee)
- DDG/ADG (A)
- Dr. Ravinder Singh Scientist NCD
- Dr. Priyanka Gupta Bansal Sc. C RBMH&CH& Nutrition
- Exec. Eng. Mr.Pant and Team
- Ms. Manpreet kaur TA-C(NIMR) (PH.)
- Mr. Pratap singh (PH.)
- Mrs Seema verma(member secretary)

Welcome & Introduction Dr. Ravinder Singh welcomed the members of group on behalf of DG ICMR. Dr. Ravinder Singh stated that Inclusive growth is must to achieve Sustainable Development Goals (SDGs) Provision of equal opportunities to Physical Able and Persons with disabilities (PwDs) is the responsibility of everybody including families, communities and governments. To fulfill this responsibility, Government of India enacted Rights of Persons with Disabilities Act 2016 (RPwD Act 2016). The RPwD Act 2016 envisages non-discrimination of PwDs in transport and community environments. This requires universal accessibility, which is defined as the accessible websites, buildings, roads and habitat. Various actions are required to ensure universal accessibility in the buildings to be used by PwDs, like adequate lighting, anti-slippery floors, hand-rails, ramps, wheel chairs, Braille/voice enabled lifts, adaptation/modification of toilets etc. As per RPwD Act, all public places are supposed to be accessible by June 2022.

Discussion

Dr. Sandhu advice about the availability of wheel chair at the entrance of ICMR and basic pharmacy and a medical officer must be available with basic instruments.

DDG (A) suggest about the fixing of wall handles in corridors, stairs and in common areas

Dr. Harpreet singh assured about the accessibility of ICMR website as per the Guidelines For Indian Government Websites

Mr. Pratap Singh suggested about the barrier free workplace, passage and rest rooms.

Dr. Lakshminarayanan explain the ICMR's initiative in this important area and prepare a road map about essential facilities for PwD staff/ students to be provided in phase manner.

In first phase: Accessibility barrier free workplace

1. **Building:** lift, ramp, Adequate lighting, floor markings, accessible rest rooms, dedicated parking, waiting area for attendants

2. **Mobility:** wheelchair, low floor vehicles

3. **Work place adjustments:** timing , nature of job, accessible workplace, support at workplace, grievance redressal mechanism, preferences in Govt. accommodation, career growth, training in their respective field, suitable furniture, job specific apparatus, equal opportunity and inclusive approach

Dr. R. Singh & Mrs. Seema Verma Thanked to the members for attending meeting and provide their guidance to achieved targets

Recommendations

1. The Group recommended that ICMR may take urgent steps to enhance accessibility at Headquarters and all ICMR Institutes.

(Action: Engineering Section, BMI)

2. The Group recommended that the scope of committee may be broadened with addition of an expert from Department for Empowerment of Persons with Disabilities and a caregiver with first-hand experience in managing barriers and providing care to PwDs.

(Action: Mrs. Seema Verma, NCD)

3. The Group recommended that the upgradation of the buildings may be categorised into immediate, urgent, and required but can be taken up later.

(Action: Dr. Lakshminarayan and Engineering Section)

4. The Group recommended that a dedicated parking space may be earmarked near to the entrance of the main building.

(Action: Maintenance)

5. The Group recommended that the railing may be installed in the corridors for the easy movement of persons with physical (locomotor) disabilities.

(Action: Maintenance/Engineering)

6. The Group recommended that sensitisation and awareness workshops/programmes may be initiated for the employees of all ICMR Institutes. It was also suggested that a course material may be prepared in form of a booklet.

(Action: Mrs. Seema Verma, NCD)

7. The Group recommended that an ICMR Disability Policy document may be prepared.

(Action: Mrs. Seema Verma, NCD)

8. The Group recommended that all ICMR Institutes may be requested to submit details in structured format. A matrix will be prepared by Division of BMI for checking the compliance of Institutes.

(Action: Division of BMI)

9. Division of BMI will carry out audit and ensure the accessibility of ICMR Headquarters website and all websites of ICMR Institutes.

(Action: Division of BMI)

Minutes of the Expert Group meeting to discuss draft "ICMR Policy on Disability, Habilitation, Rehabilitation and Assistive Care", held on December 15, 2021 at Conference Hall, ICMR Hqrs., New Delhi (Through ZOOM)

Members

Dr. Dipendra Manocha, Founder Saksham

Dr. Hemlata, Director NCDS, IGNOU

Dr. Ravinder Singh, Scientist NCD, ICMR

Ms. Seema Verma, STO, Member Secretary

Dr. Ravinder Singh welcomed the members and introduced the agenda for the meeting. In the previous meeting held on December 01, 2021, all members appreciated ICMR for taking steps to frame Policy Document and it was felt that Policy Document is an important initiative and must be prepared with utmost care covering all the work areas under it. The Document placed before the Committee was appreciated, but it was commented that present document is not Policy but a Guidance Document to give directions under which the Policy Document may be prepared. A systematic analysis may be carried out to find out similar documents within the country and across the globe. Preparation of the document will require constant and continued support of the members during this exercise. As the members of apex committee are extremely busy officials, a sub-committee with select members may be constituted. The sub-committee may undertake systematic analysis, of Harmonised Guidelines, UGC Guidelines and IPC-Accessibility Guidelines. The sub-committee may also deliberate on the need of content writer for the Policy Document with inputs from Harmonised Guidelines, UGC Guidelines and IPC-Accessibility Guidelines. The Group agreed for such committee and present meeting is being held to initiate the process.

The objective of present meeting was to prepare a frame work of the "ICMR Policy on Disability, Habilitation, Rehabilitation, and Assistive Care". Dr. Dipendra Manocha informed that there were delays in preparation of UGC Document, which was discussed in the last meeting. We may have to wait For UGC document so that ICMR may start the work beyond that document

Dr. Hemlata informed that a lot of work has already been done by different agencies. In view of availability of similar documents, she suggested ICMR to go through already available literature. This will help us in starting the work from the next level.

It was suggested that ICMR may involve a content writer, who will go through literature and take out important contents. Based on the available understanding, we may then prepare our Policy.

During discussions, it was agreed that there is need to expand the sub-committee with experts from different domains. The names of Dr. Sangeeta Abrol, Dr. Sanjay Wadhwa & Mr. Ashok Bedi were suggested. It was also agreed that a content writer would be helpful, as he/she will come to ICMR and collect all the relevant information.

The meeting ended with vote of thanks to all members.

Recommendations:

1. The Committee recommended to include more members and suggested following names from the relevant fields:
   - Dr. Sangeeta Abrol, Prof. Deptt. of Ophthalmology, VMMC & SJH
   - Dr. Sanjay Wadhwa, HOD Deptt. of PMR, AIIMS, Delhi
   - Mr. Ashok Bedi, Addl Secy. Paralympics Committee of India (PCI)

2. Dr. Dipendra Manocha may share Harmonised Guidelines, UGC Guidelines and IPC-Accessibility Guidelines.

3. The committee recommended to engage a Content writer (Miss Saksham Verma, whose name was suggested by the Group, based on her track record in writing excellent document), who will carry out literature review and take out inputs from Harmonised Guidelines, UGC Guidelines and IPC-Accessibility Guidelines.

4. The next Sub-committee meeting may be scheduled on Monday 5th Jan2022.

Minutes of the Expert Group meeting to discuss draft "ICMR Policy on Disability, Habilitation, Rehabilitation and Assistive Care" held on January 05, 2022, at ICMR-AIIMS Computational Genomic Centre, Fifth Floor, Convergence Block, AIIMS, New Delhi

Members:

- Dr. Sangeeta Abrol, Prof. Dept of Ophthalmology, VMMC and SJH - Chairperson
- Dr. Dipender Manocha, Founder Saksham, New Delhi
- Dr. Sanjay Wadhwa, HOD Dept of PMR, AIIMS Delhi
- Dr. Hemlata, Director NCDS, IGNOU
- Dr. Ravinder Singh, Scientist NCD, ICMR
- Ms. Saksham Verma, Consultant Content Writer
- Mrs. Seema Verma, Senior Technical Officer, ICMR – Member Secretary

Dr. Ravinder Singh welcomed the members on behalf of Head, NCD and DG-ICMR. Dr. Singh briefed the members about objectives of the meeting. DG-ICMR constituted a Committee to draft a framework for "ICMR Policy on Disability, Habilitation, Rehabilitation and Assistive Care". During the preliminary meeting of the Empowered Committee, it was felt that a Drafting Committee may be constituted to support the Empowered Committee. Dr. Singh request Dr. Sangeeta Abrol to Chair the meeting. Dr. Sangeeta Abrol thanked Dr. Ravinder Singh and initiated the discussions. She requested Mrs. Seema Verma to share the background of the work done till date.

Mrs. Seema Verma shared with the members that a draft outline of the Policy was shared during previous meeting. The members had felt that finer details of the Policy needs to be mentioned in the document. The draft outline was considered to be baseline for further work. She presented the sections, heads, and sub-heads of the Policy.

All members appreciated ICMR for taking steps to frame Policy Document and it was felt that Policy Document is an important initiative and must be prepared with utmost care covering all the work areas under it. A fruitful discussion was held on making various resources accessible, challenges faced in doing so and guidelines currently available. Challenges faced by persons with functional limitations or impairments. Recently, most of the activities have shifted to an online mode, but still the mobility remains challenge for those who have functional limitations or impairments. The Policy should be able to provide steps as how to make accessibility easier for those who need it. Ground realities and further work needed was also discussed in a robust manner by Dr. Sanjay Wadhwa. Dr Wadhwa also bought to the sub-committees attention that most discussions held for persons with functional limitations or impairments are urban centric. The persons living in semi-urban and rural areas are left out of accessibility planning. The concept of 4 A's was also introduced, namely, 'Availability', 'Affordability', 'Accessibility', 'Awareness'. Dr. Sangeeta Abrol introduced a model of inclusivity that would focus primarily on awareness generation. Awareness also includes where to find the resources needed, whom to ask among various other crucial aspects.

Discussing further, Dr. Ravinder Singh highlighted three major aspects for accessibility, namely, Built environment, transport, and ICT. Each of these are crucial for enhancing the quality of life as mentioned by Dr Singh. He also mentioned the inadequacies that our health system faces such as a budget crunch (the health sector only had a meager 1.8% of GDP in 2020-21 as compared to 9.7% in US in 2020-21), and core focus being on prevention and care. Dr. Singh mentioned that it also needs to include Rehabilitation and Assistive care and technology.

Dr. Dipender Manocha, founder of 'Saksham' advised the sub-committee that our efforts as a team need to be complimentary to efforts being made all over India and globally. He shared his experiences of working with similar initiative by the University Grants Commission. Dr. Manocha also highlighted the need of sensitization of general population and an extensive coverage to get that last mile delivery of the ongoing efforts.

The meeting ended with a vote of Thanks to all members participating and providing their valuable input to make this policy as holistic and inclusive as possible.

Recommendations:

- The Sub-Committee appreciated the ICMR for initiating policy document in this important area.

- The Sub-Committee suggested that various guidelines such as "WHO-Vision 2030", "WHO-Rehabilitation 2030", International Paralympic Committee (IPC) Accessibility Guidelines, UGC Guidelines, RPwD Act-2016 may be referred for preparation of ICMR Policy Document.

- The Sub-Committee suggested to convene next meeting on 9th March 2022. 11:30am at ICMR Hqrs.

Minutes of the Expert Group meeting to discuss draft "ICMR Policy on Disability, Habilitation, Rehabilitation and Assistive Care" held on March 9th, 2022, at ICMR-NIMS Conference Hall, New Delhi

Members:

- Dr. Sangeeta Abrol, Prof. Dept of Ophthalmology, VMMC and SJH - Chairperson
- Dr. Dipender Manocha, Founder Saksham, New Delhi
- Dr. Sanjay Wadhwa, HOD Dept of PMR, AIIMS Delhi
- Dr. Hemlata, Director NCDS, IGNOU
- Dr. Ravinder Singh, Scientist NCD, ICMR
- Ms. Saksham Verma, Consultant Content Writer
- Mrs. Seema Verma, Senior Technical Officer, ICMR – Member Secretary

DG-ICMR has constituted a Committee to draft a framework for "ICMR Policy on Disability, Habilitation, Rehabilitation and Assistive Care". The 3rd meeting of the said committee began with Dr. Ravinder Singh welcoming the members along with a token of gratitude for their valuable time. Dr. Sangeeta Abrol who was requested to chair the meeting by Dr. Singh thanked the committee members and initiated the discussion. Dr Singh listed out the objectives for the meeting and a brief recap was held to bring everyone to the same page. Dr Singh shared a model with the committee members and invited comments from the members.

Dr Abrol kindly pointed out that Functional impairments vastly vary in numerous branches such as the time period of the impairment (temporary or permanent), and the gravity of the impairment among various other branches. Dr Manocha pointed out that India is a growing hub of technology. We need the last mile delivery of assistive devices. Technology and affordability need to go hand in hand if assistive devices are to be bought into the mainstream. Dr Singh gave an estimate of 30%. These are the people in our country that face functional impairments which hinder their development and contribution to the society. Dr Manocha also pointed to the fact that linguistic barriers which are often ignored also contribute to inaccessibility and further tilts the resources towards the majority while a large chunk of the population gets left behind. He gave the example of accessibility of information on websites. Linguistic barriers allow a handful of Indian population to be able to access the websites.

Dr. Hemlata guided the committee to the fact that only a handful of people get access to life improving devices. While some beneficiaries are given assistive devices even when there is no need for the additional units, many beneficiaries get left behind. The committee agreed that Aadhar should be used to identify beneficiaries and allocate resources more equitably. "Incremental cost effective ratio", a term introduced by Dr Abrol to the committee stands for representing the economic value of an intervention, compared with an alternative. The committee stressed upon the fact that accessibility goes hand in hand with affordability. Missions such as "Make in India, Accessible India

campaign also known as Sugamya Bharat Abhiyan" need to be tapped into to fully unfurl assistive devices in India. Dr Manocha laid down 6 pointers that shall be made into chapters and sub chapters into the policy, namely: Preamble, Accessibility of infrastructure physical infrastructure and built environment, accessibility of ICT infrastructure including websites and digital content, accessibility of publications and official documents, inclusion of persons disability in icmr work force and research related to habitation and rehabilitation.

Dr Manocha, along with Dr Abrol volunteered for sensitization of the workforce through various workshops. They agreed that to truly integrate people with functional impairments in the mainstream life, sensitization of the general public needs to be done to get rid of the stigma and hesitance. The committee introduced the 4 I's- Idea-innovation-industry-individual. This chain if followed, has the potential to make assistive devices accessible and affordable for every individual that needs them. The committee members then assessed the policy framework and the progress made, along with scope of improvement. Various points were listed down that would further enhance the policy and make it on par with the best institutions ion the world.

The meeting ended with a vote of Thanks to all members participating and providing their valuable input to make this policy as holistic and inclusive as possible.

Recommendations

- The Sub-Committee appreciated the ICMR for initiating policy document in this important area.

- The Sub-Committee suggested that various guidelines such as "WHO-Vision 2030", "WHO-Rehabilitation 2030", International Paralympic Committee (IPC) Accessibility Guidelines, UGC Guidelines, RPwD Act-2016 may be referred for preparation of ICMR Policy Document.

- The Sub-Committee suggested to convene next meeting on …….. 2022.

Minutes of the Expert Group meeting to discuss "Creating accessible environment at ICMR HQRS and its Institutions" held on 20th june 2024 11.am to 1.00 pm ICMR National Institute for Research in Digital Health and Data Science (NIMS) Board Room ground floor.(ICMR Headquarter campus)The following expert group attended meeting

1. Dr. Lakshminarayanan DDG(Admn.) ICMR Chair person
2. Dr. Hem Lata Addl. Director National Centre for Disability Studies (IGNOU)
3. Dr. Nek Ram Upadhyay Director, International Centre for Asistive Technology& Accessibility (I CTeAT) Delhi
4. Mr. Jagjit Singh Founder JS design
5. Mr. Bhupinder Singh Swayam NGO
6. Dr. Jitesh Kumar Scientist 'D' AIMTZ Vishakhapatnam (attended online)

ICMR secretariat

1. Dr. Ravinder Singh Sc. D
2. Dr. Manjeet singh Chalga Sc-E
3. Mr. Javed Akhtar Sr. Tech. officer
4. Mr. Mukesh Amanta Tech. officer
5. Mrs. Seema Verma Sr. Tech. officer (member secretary)
6. Mr. Shubhendu Project Admin Assistant
7. Mr. Akash. Project Admin Assistant

DDG, (ICMR), offered a warm welcome to the expert group, assembled to review the accessibility of ICMR buildings, websites and transport facilities. He began by providing an overview of the current accessibility landscape within ICMR institutions.

Discussion:

After DDG, (ICMR), opening remarks, the expert group discussed various strategies and action to achieve the objectives of present initiatives. Development of training modules for master Trainers and modules for Nodal officials. Dr. Ravinder inform the group about the deadlines of RPWD Act 2016 and define the gaps to achieve the targets. Dr. Jitesh explain about the development and Implementation of Training Programs at AMTZ will spearhead the creation of a two-day training program for master trainers and nodal officers/teams. This training will include simulation exercises,

sensitization activities, and role-playing scenarios to equip practical exercises,all the expenses of this training will bear by ICMR participants with the skills to identify and address accessibility barriers. The training will focus on conducting a basic audit of ICMR institutions in Delhi, including guest houses, to identify accessibility needs, Dr. Jitesh, a wheelchair user, along with three Junior Engineers/Executive Engineers, will lead the audit, to be conducted by June 28th. Dr. Hemlata will deliver a sensitization lecture on July 3rd to an estimated audience of 6000. She also proposed creating a model accessible bus stop in collaboration with ICMR PWD & Swayam. An access audit checklist will be developed in a simple Yes/No format, covering buildings, signage, behavior, and observations. The accessibility of ICMR websites will be discussed, and Dr. LN suggested watching sensitization videos for APAR linking. Disabled parking spaces with proper signage and enforcement will be implemented near main entrances. Funding for these initiatives will be allocated from PM ABHIM for capacity building. Dr. LN will appoint nodal officers from all ICMR institutions within two days, followed by a virtual conference. Additionally, 3% of the total budget will be allocated for Persons with Disabilities (PWDs).

- **Training Approach:**
    - Dr. LN proposed a phased approach:
        - Initial training for 30 people.
        - Basic accessibility audit of ICMR institutions in Delhi (including guesthouses) to identify needs.
        - Refine training based on audit findings.
    - This approach allows for tailoring the training to specific requirements.
- **Accessibility Audit:**
    - Agreed to conduct a preliminary audit with a team including a person with a locomotive disability (Dr. Jitesh is invited to participate).
    - The audit will focus on ICMR institutions in Delhi NCR.
- **Funding:**
    - ICMR will use PM-ABIM (Prime Minister's Accessible India Mission) provisions for capacity building to fund the training.
- **Communication:**
    - Dr. LN will email all ICMR institutions within two days to appoint nodal officers for accessibility. A virtual conference will be held after the appointments are made.
- **Budget for PWDs (Persons with Disabilities):**
    - 3% of the total budget should be allocated for PWDs.
- **Training Module Development:**
    - SWAYAM is currently preparing the training module. Once completed, ICMR will share it with AMTZ.
- **Parallel Work:**
    - Dr. Jitesh suggested working on the physical audit, training development, and implementation concurrently.

Recommendation:

1. DDG will send an email to all Directors ICMR institutions by June 20th, 2024) requesting them to appoint nodal officers for accessibility on an emergency basis. **The** designated nodal officer in each ICMR institution who will be responsible for accessibility initiatives. After the nodal officers are appointed, Dr. LN will likely organize a virtual conference (VC) for them to discuss accessibility strategies and next steps.

2. DDG Requested to Dr. Hemlata Addl. Director National Centre for Disability Studies (IGNOU) deliver a sensitization lecture, connected with all ICMR institutions. She agreed it to on 3rd july 2024 around 6000 ICMR employee will join this

3. A preliminary Audit conducting in ICMR institutions in Delhi & guesthouse building to identify how many shortfalls is there. Team including a locomotive challenged. Expert group agreed on 28/6/24.

4. **Training Program Schedule:** The final training program for 30 nodal officers will be held in the last week of July (July 27-28, 2024). It will include a two-day training session and a site visit, possibly combined with a city tour at AMTZ Vishkapatnam.

5. Expert group will developed the training module, and once completed, ICMR will share it with AMTZ

Indian Council of Medical Research, New Delhi

Minutes of the Expert Group meeting

Minutes of The Expert Group meeting convened to discuss "Creating accessible environment at ICMR HQRS and its Institutions" on 28th June 2024 11.am to 3.00 pm at ICMR National Institute for Research in Digital Health and Data Science (NIMS) Board Room Ground floor.(ICMR Headquarter campus).The following experts attended meeting

1. Dr. R. Lakshminarayanan DDG(Admn.) ICMR Chair person

2. Dr. Hem Lata Addl. Director National Centre for Disability Studies (IGNOU)

3. Dr. Nek Ram Upadhyay Director, International Centre for Assistive Technology& Accessibility(I CTeAT) Delhi

4. Mr. Jagjit Singh Founder JS design

5. Mr. Bhupinder Singh Swayam NGO

6. Mr. Jitesh Kumar Scientist 'D' AIMTZ Vishakhapatnam

ICMR secretariat

1. Mr. Javed Akhtar Sr. Tech. officer
2. Mr. Mukesh Amanta Tech. officer
3. Mrs. Seema Verma Sr. Tech. officer (member secretary)
4. Mr. Akash. Project Admin Assistant

DDG, (ICMR), offered a warm welcome to the expert group, assembled to review the accessibility of ICMR buildings, websites and transport facilities. He provided an overview of the current accessibility landscape within ICMR institutions. DDG, (ICMR), invited expert members to carryout preliminary physical Audit for accessibility at ICMR National Institute for Research in Digital Health and Data Science (NIMS) and ICMR Hqrs campus Building. Expert group agreed to conduct preliminary physical audit before any discussion.

A checklist prepared by Ms. Seema Verma was shared with Expert group. After scrutiny each question in the said checklist, the Expert members agreed to use it for accessibility audit. The Expert members also agreed to use it for pilot testing. One questionnaire was used to fill the details of facilities available within ICMR Campus.

Access Audit checklist

I) Site Location and Approach Road			
S. No.	**Criteria**	**Yes/No**	**Recommendations**
1	Is the building located within a convenient distance of a road or highway?	**yes**	
2	Is the building located within a convenient distance of public transport?	**yes**	
3	Is the entry route to the building leveled and obstruction-free?	**yes**	
4	If the route is not free of kerbs, is there a kerb ramp provided?	**yes**	**1:12 gradient**
5	Are there suitable lighting arrangements throughout the building campus?	**yes**	
6	Is there at least one accessible route connecting to the building?	**yes**	

7	Is the approach to the building free from obstacles such as bollards, litter bins, outward-opening windows and doors, or overhanging projections?	**yes**	
8	Is there tactile guidance from the approach road to the reception counter on the campus?	NO	Tactile
II) Signage and Way finding			
1	Is there accessible directional signage on the approach road?	no	Need Signage
2	Can the directional signage be viewed from a distance?	no	Need Signage
3	Is signage strategically placed at the main entrance to assist visitors throughout their visit?	no	Need Signage As per the recommendation
4	Are there signs in three languages?	no	Need Signage
5	Does the signage have clear contrast for accessibility, such as backlit and color-contrasting features?	no	Need Signage
6	Are there audible or tactile directional cues for visually impaired visitors?	no	Need Signage
7	Are emergency assembly points clearly marked with accessible signage?	no	Need Signage
III) Parking			
1	Are there designated accessible parking provided and clearly marked for people with reduced mobility?	yes	Identified space to marked
2	Are there enough accessible parking spaces available?	yes	
3	Are accessible parking spaces located as close to the entrance as possible?	yes	

4	Is there signage directing to accessible parking spaces?	yes	Followed as per recommendation
5	Are accessible parking spaces marked with the International Symbol of Accessibility?	yes	Followed as per recommendation
6	Is there a designated and marked transfer bay available?	yes	Followed as per recommendation
7	Is there a system for reserving accessible parking spaces for visitors and staff?		Followed as per recommendation
IV) Entrance			
1	Is there tactile guidance from the accessible parking to the entrance?	No	Yes tactile is needed
2	Is the accessible entrance clearly signposted and easy to locate by visitors?	No	
3	Is there a designated drop-off zone?	yes	
4	Is access to the main entrance step-free and accessible for all visitors?	yes	
5	If the main entrance has steps, is there an alternative smooth gradient ramp provided?	No	Followed recommendation
6	Are there handrails provided on both sides of steps or ramps at the entrance?	No	Recommendation-curved nail
7	Is there an accessible building layout plan displayed at the main entrance?	No	Recommended
8	Does the accessible entrance proivde access to a conveniently located elevator?	Yes	Recommended
9	Are there directional signs at the entrance guiding visitors to facilities within the building?	No	Recommended
V) Information Counter/ Reception Area			

1	Is the counter suitable for approach and use from both sides by people in standing and seated positions (i.e., two-level desk and knee space)?	No	Recommended two level approach desk
2	Is appropriate signage provided for the information counter/reception area?	No	
3	Is there a tactile path leading to the reception/enquiry counter?	No	
4	Is there a clearly marked accessible pathway with a width of at least 1800 mm?	Yes	
5	Are there adequate seating facilities available for visitors?	No	Position rearrangements required
6	Are communication tools available for visitors with hearing impairments (e.g., induction loops)?		Prepare a database
7	Is there a digital kiosk or touch screen for accessing information independently?	No	Tab required
VI) Circulation within the Building and Flooring			
1	Are door mats recessed and securely fixed to prevent tripping hazards?	Not required	
2	Are internal doors wide enough for easy entry?	yes	
3	Are internal floor surfaces made of materials that do not impede the movement of wheelchair users and are slip-resistant?	Yes	
4	Is there any threshold or groove at door openings?	yes	
5	If a raised threshold is present, is it beveled to facilitate smooth wheelchair mobility and is it no higher than 5 mm?	no	2 kg of weight, equivalent force required
6	Are doors easy to operate, requiring no more than 22 N of force?	No	

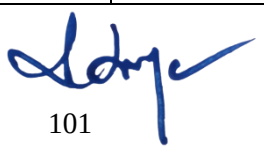
7	Is the floor inside the building non-glary and free from complex patterns?	No	
8	Is the corridor free of obstructions, providing a two-way walking width of at least 1800 mm?	yes	
9	Are resting areas with seating provided along long corridors?	yes	
10	Are there accessible water fountains with adjustable heights?	No	
VII) Door Handles			
1	Are door handles of the lever type (as doorknobs are not recommended due to difficulty in grasping)?	No	
2	Are automatic door openers available where feasible?	yes	
VIII) Stairs and Handrails			
1	Is the height and depth of each step consistent throughout the staircase, with a riser height of 150 mm and a tread depth of 300 mm?	No	
2	Is there appropriate color contrast between the landings and the steps?	No	
3	Are the stairs connecting different floors either straight or with a 90-degree angle, with landings provided between flights (maximum 12 steps per flight)?	No	
4	Are there two-level handrails available on both sides of the staircase, continuous at landings?	No	
5	Are the handrails slip-resistant, with round ends and a circular section diameter between 38-45 mm?	No	

6	Is the staircase appropriately illuminated?	No	
7	Are stair nosing's contrasted with the tread color for better visibility?	No	
8	Are stairway lighting and emergency lighting synchronized?	No	
X) Lift			
1	Are there appropriate directional signs guiding residents to the elevator from all entrances of the building?	No	Followed recommendation
2	Does the lift have a wide door (minimum 900 mm) to allow comfortable entry for wheelchairs?	Yes/no for NIMS	Followed recommendation
3	Is the minimum size of the lift at least 1500 mm wide by 1500 mm deep to ensure easy maneuverability for wheelchair users?	Yes/no for NIMS	Followed recommendation
4	Is the call button and control panel positioned at a reachable height (between 800 mm and 1000 mm)?	No	Followed recommendation
5	Are handrails available on both sides and at the rear of the lift?	yes	
6	Does the lift have a mirror at the rear side?	No	Followed recommendation
7	Does the lift feature a voice announcement system (50 dB) and a visual display indicating floor levels and the status of the doors (open or closed)?	No	Followed recommendation
8	Is there a power back-up system for emergency use?	No	Followed recommendation
9	Are lift interiors designed to accommodate service animals?	No	Followed recommendation
XII) Restroom /Toilet			
1	Is there signage indicating the presence of	No	

	an accessible toilet (Unisex Accessible Toilet)?		
2	Is there at least one wheelchair-accessible unisex toilet available separately for persons with disabilities?	Yes	
3	Does the toilet have provision of grab bars (L-shaped or foldable)?	Yes	
4	Is the door of the toilet wide enough for wheelchair entry (minimum 900 mm)?	Partially yes	
5	Is the toilet door of the sliding or outward-opening type?	No	
6	Is there an emergency alarm bell or cord available within the toilet facility?	No	
7	Is the toilet cubicle equipped with an audio and visual emergency alarm?	No	
8	Are sanitary bins accessible and appropriately positioned?	No	
9	Are there accessible changing facilities for individuals requiring assistance?	No	
XIV) Canteen and eating area			
1	Is the entry door wide enough for wheelchair entry (minimum 900 mm)?	Yes	
2	Are tables provided have minimum clear knee space of 700 mm high?	Yes	
3	Do tables and seats have sufficient visual contrast with surrounding surfaces for clear identification?	Yes	
4	Is there a circulation path in front of the stalls with a minimum clearance of 1200 mm wide?	Yes	

5	Is there an accessible route with a minimum clear width of 900 mm from the circulation path to tables intended for persons with disabilities?	Yes	
6	Are tray slides and counters mounted at 800 mm from the floor for wheelchair users in self-service counters?	No	
7	Are food shelves mounted at a maximum height of 1200 mm?	No	
8	Is there a varied menu with consideration for dietary restrictions?	No	
XIV) Conference hall, Board Room			
1	Does the stage have accessible approach?	Partially yes	
2	Is the height of the podium sufficient to accommodate wheelchair users?	No	
3	Is there any dedicated accessible seating provided?	No	
4	Do the tables provide a minimum clear knee space of 700 mm high?	No	
5	Is there a hearing enhancement system provided, including on the stage/platform?	No	
6	Are presentation materials available in accessible formats (e.g., large print, Braille)?	No	
7	Are remote participation options available for virtual attendees?	yes	
XIII) Billing Counter			
1	Is there a billing counter available at an accessible height, specifically between 700 mm and 900 mm above the floor level?	yes	

2	Is the counter designed for easy approach and transaction for all users?		
3	Are there alternative billing methods available (e.g., online payment, accessible terminals)?		
XIV) Emergency and Evacuations			
1	Are emergency exits and refuge areas clearly marked and signposted?	yes	
2	Are emergency alarms available, including both audio (hooter type) and visual (flashing bulb), located throughout the premises, including inside toilets?	Partially yes	
3	Is there a first aid box and evacuation chair available for emergencies?	yes	
4	Are instructions on how to act during emergencies displayed at strategic locations within the premises?	yes	
5	Are evacuation routes accessible and marked with tactile signage?	no	
6	Are emergency drills conducted regularly with consideration for accessibility needs?	no	
XV) Transportation			
1	Are shuttle services accessible and equipped with ramps or lifts?	no	
2	Is there an accessible drop-off and pick-up area for shuttle services?	no	
3	Are transportation schedules and information available in accessible formats?	no	



4	Is there a designated accessible transportation coordinator or contact for inquiries?	no	

XVI) Information and Communications Technology			
1	1. Are ICT services provided by the organization as per the latest WCA guidelines?	**New accessible website as per ICT norms ready to launch**	This will be audited separately.
2	Is campus information accessible through digital platforms (e.g., apps, websites)?		
3	Are assistive technologies available for use in public computer labs and kiosks?		
4	Are computers and peripherals (keyboards, mice) accessible for all users?		
5	Are software applications and learning management systems (LMS) accessible?		
6	Is Wi-Fi available throughout the campus and easy to connect to?		
7	Are digital learning materials provided in accessible formats (e.g., PDFs, ePub)?		
8	Are virtual classrooms and video conferencing tools accessible?		
9	Is there IT support available for users with disabilities?		
10	Are campus apps and websites tested regularly for accessibility compliance?		

XVII) Web Accessibility Checklist			
1	**Perceivable**		
1.1	Provide text alternatives for non-text content (images, videos).		
1.2	Provide captions and other alternatives for multimedia.		
1.3	Create content that can be presented in different ways, including by assistive technologies, without losing meaning.		
1.4	Make it easier for users to see and hear content (contrast, font size, volume control).		
2	**Operable**		
2.1	Make all functionality available from a keyboard.		
2.2	Provide users enough time to read and use content.		
2.3	Do not use content that causes seizures or physical reactions.		
2.4	Help users navigate and find content (headings, labels, navigation aids).		
2.5	Make it easier to use inputs other than the keyboard.		
3	**Understandable**		
3.1	Make text readable and understandable (simple language, define unusual terms).		
3.2	Make web pages appear and operate in predictable ways.		

3.3	Help users avoid and correct mistakes (error messages, form labels).		
4	**Robust**		
4.1	Maximize compatibility with current and future user tools.		
4.2	Ensure all interactive elements (forms, controls) are accessible.		
4.3	Use proper HTML markup for all elements.		
5	**Additional Points**		
5.1	Test the website with screen readers and other assistive technologies.		
5.2	Ensure the website is navigable without a mouse.		
5.3	Provide a skip to content link at the top of the page.		
5.4	Use ARIA (Accessible Rich Internet Applications) landmarks and roles appropriately.		
5.5	Ensure that pop-ups and modal dialogs are accessible.		
5.6	Provide responsive design for accessibility on various devices.		
5.7	Regularly review and update the accessibility features to meet the latest standards.		

Discussion: The physical accessibility audit conducted at the ICMR headquarters building in Delhi. It was found that ICMR building falls short in few areas, including inaccessible ramps, signage, and adaptations in restrooms. The members cautioned that this lack of accessibility may result in hindering the valuable contributions that individuals with disabilities can make to the organization. ICMR is committed to take prompt action to address these shortcomings, ensuring that its building is transformed into a truly inclusive and accessible space for all. ICMR will work to implement the necessary modifications.

The Expert members stated that accessibility is not only a legal requirement, but also a social responsibility. ICMR is dedicated to creating a workplace that values diversity and promotes inclusivity, where everyone has equal opportunities to grow and succeed. ICMR will continue to monitor and assess building's accessibility and make necessary adjustments to ensure that its workplace is truly inclusive and welcoming to all.

Recommendations: The Expert Group recommended that ICMR should take necessary steps for accessibility build environments, accessible transport and accessible ICT system. Following specific recommendation and specification were suggested by the Expert Group

1. **Built Environment**: To ensure accessibility and inclusivity, buildings should be designed and constructed with the following features: Accessible paths of travel should be provided from the entrance to all areas, with clear space for wheelchairs and universal design principles incorporated to cater to all users. Accessible routes and pathways should have a minimum width of 1200 mm, a firm and slip-resistant surface, and a maximum slope of 1:12, with tactile indicators installed to assist visually impaired individuals.

Entrances should have a clear opening of at least 900 mm, with automatic doors preferred for main entrances, and a threshold not exceeding 12 mm in height. Ramps should have a maximum slope of 1:12, a minimum width of 1200 mm, and handrails provided on both sides, extending 300 mm beyond the ramp, with level landings at the top and bottom.

Handrails should be mounted at 850 mm to 900 mm from the floor, with a tubular or oval shape and a diameter of 30-45 mm, contrasting with the background for easy noticeability. Door hardware should be operable with one hand without tight grasping, pinching, or twisting, mounted at 850 mm to 1100 mm from the floor.

Corridors and passageways should be at least 1200 mm wide, with resting areas provided at intervals not exceeding 30 meters. Public information and reception areas should include Braille and tactile signs, audio-enabled signage, and reception counters at two levels.

Toilets and sanitary facilities should have a minimum clear opening of 900 mm, sufficient space for wheelchair maneuvering, grab bars installed at 850 mm to 950 mm from the floor, and a washbasin mounted at a height of 800 mm to 850 mm from the floor.

Lifts and elevators should have a minimum car dimension of 1500 mm wide by 1500 mm deep, a clear door opening of at least 900 mm, a control panel located between 900 mm and 1100 mm from the floor, and handrails mounted at a height of 900 mm.

These design standards aim to create a built environment that is accessible, inclusive, and user-friendly for all individuals, regardless of their abilities.

2. **Signage's and Info graphics**: Symbols, contrast, and height considerations should be implemented to ensure accessible signage. Internationally recognized symbols should be used, with high contrast between text and background, and positioned at a height of 1400 mm to 1600 mm from the floor. Emergency evacuation plans should be personalized for individuals with disabilities, with visual and tactile notification systems, such as flashing lights and vibrating devices. Staff should receive regular training on assisting persons with disabilities during emergencies. Public information and signage should include Braille and tactile information, audio-enabled signage where applicable, and incorporate assistive technologies like hearing loops and tactile maps to facilitate accessibility and inclusivity.

3. Transport: Accessible parking spaces should have minimum dimensions of 5000 mm x 3600 mm, with clear and visible signage featuring the International Symbol of Accessibility. The surface should be firm and level, without aeration slabs, to ensure safe and obstacle-free access for individuals with disabilities. This design aims to provide ample space for vehicles and passengers with mobility impairments, facilitating comfortable and independent access to the surrounding facilities. The trans for vehicles need to be modified with ramp and wheelchair space within.

4. ICT/Documents/Reports: The new ICMR website requires critical evaluation across various aspects, including design, usability, content, performance, accessibility, and overall user experience. The design should align with modern standards, ensuring consistency in layouts and avoiding visual overload. Navigation and search functionality need improvement for enhanced usability. Content should be updated, complete, and user-focused, catering to diverse audiences. Performance issues like slow loading times and faulty links need resolution. Accessibility features like text resizing options, screen reader compatibility, and keyboard navigation are essential. The user interface should be simplified, and interactive elements like videos and infographics should be incorporated. Technical issues like security concerns and compatibility with all browsers and operating systems need attention. A chatbox can facilitate content discovery. By addressing these concerns, the website can provide an enhanced user experience, aligning with GIGW guidelines and showcasing ICMR's impact on global research by comparing performance with other research councils**.**

The meeting ended with vote of thanks to the all members.

Minutes of the Expert Group Meeting on (I) Final Review of the ICMR Policy for Functional Impairment and (II) Progress Made in Accessibility Initiatives at ICMR and Institutes

Date: July 25, 2025 Venue: ICMR Hqrs

1 **Expert Group Members**

1. Dr. Sanghamitra Pati, Additional Director General, ICMR – *Chairperson*
2. Dr. Hemlata, IGNOU
3. Dr. Navjit Gourav IIT Roorkee
4. Mr. Subhash C. Vashishth, Bureau of Indian Standards (BIS)
5. Dr. Sanjay Wadhwa, AIIMS
6. Dr. Sangeeta Abrol, VMMC/SJHS
7. Dr. Nekram Upadhyay, i-CREATE
8. Mr. Bhupinder Singh, Swayam (NGO)
9. Dr. R. Lakshminaraynan DDG (Admn.)ICMR

ICMR Secretariat

1. Dr. Ravinder Singh, Scientist 'D', ICMR
2. Mrs. Seema Verma, Senior Technical Officer, ICMR
3. Mr. Akash, Project Administrative Assistant, ICMR

The Expert Group Meeting was held to discuss and finalize ICMR policy on Functional Impairment Accessibility, Inclusivity, ensuring equal opportunities for all stakeholders. The member were warmly welcomed by Dr. Ravinder Singh, Sr. Scientist ICMR. Ms. Seema Verma presented a detailed overview of the progress made in accessibility initiatives, highlighting achievements, challenges, and areas for improvement and Draft **Policy on Accessibility, Habilitation, Rehabilitation, and Assistive Care. Ms. Seema Verma requested Dr. Sanghamitra pati to chair the meeting.**

Dr. Sanghamitra Pati, Additional Director General, ICMR, emphasizes that accessibility must be treated as a core component of institutional functioning rather than a supplementary requirement. The recent assessments across ICMR institutes have highlighted both achievements and gaps, providing an evidence-based roadmap for targeted infrastructural upgrades, informed budgeting, and systematic follow-up. Dr. **Sanghamitra** Pati Ma'am firmly believes that building barrier-free campuses will not only empower persons with disabilities but will also create an inclusive environment that enhances dignity, independence, and equal opportunity for all. She has urged every institute to view accessibility as a sustained commitment, integrated into design, operations, and future planning, so that ICMR can set a national benchmark in inclusivity.

(I) Presentation of Draft Policy: Ms. Seema Verma presented the progress on the draft ICMR Policy **on Accessibility, Habilitation, Rehabilitation, and Assistive Care** The Indian Council of Medical Research (ICMR) has been working towards the development of a comprehensive **Policy on Accessibility, Habilitation, Rehabilitation, and Assistive Care** to address the needs of persons with functional impairments and strengthen institutional mechanisms for inclusion. The drafting process began with the preparation of the initial policy on **1st December 2021**, followed by a revised draft on **5th January 2022**. To guide this important initiative, DG-ICMR constituted an **Expert Group** comprising eminent professionals and representatives from diverse fields, including **Dr. Hemlata (IGNOU, Chairperson), Dr. Dipendra Manocha (DAISY Consortium & Saksham Trust), Dr. Sangeeta Abrol (**VMMC/SJHS,**), Dr. Sanjay Wadhwa (AIIMS, New Delhi), Dr. Ashok Bedi (PCI), Subhash C. Vashishth (BIS), Dr. Nekram Upadhyay (**i-CREATE**, Delhi), Bhupinder Singh (Swayam NGO), Dr. Jitesh Kumar, Scientist 'D' (AIMTZ, Vishakhapatnam), and Mr. Jagjit Singh (Founder, JS Design)**.

The **third Expert Group Meeting** to deliberate and finalize the draft policy was convened on **15th December 2023 at the A.S. Paintal Board Room, ICMR Headquarters, New Delhi**, where these experts shared valuable perspectives on accessibility standards, habilitation, rehabilitation, and assistive care. A follow-up Expert Group Meeting was held on **25th July 2025**, to examine the updated draft and move towards finalizing the policy. This sequence of initiatives reflects ICMR's sustained commitment to promoting dignity, independence, and equal opportunities for persons with functional impairments. The policy seeks to create an **equitable and enabling environment** where individuals with functional impairments can fully exercise their rights, access opportunities, and contribute effectively to the scientific and social ecosystem.

Discussion: The expert group discussed the "ICMR Policy on Disability, habilitation, rehabilitation and assistive care" and suggested several changes to improve its clarity and effectiveness. The group recommended that the preamble should begin with a clear statement of purpose to set the context for the policy. A key discussion point was to strengthen the policy's alignment with the Rights of Persons with Disabilities Act, 2016 (RPwD Act) , by explicitly linking it to other available sources and ensuring full compliance with the act's mandates. The experts also emphasized the importance of incorporating the principle of "reasonable accommodation" into the policy. To enhance accountability, the group proposed a robust system for accessibility reporting, including developing a matrix for constant monitoring and evaluation of progress. They also suggested generating data on disability, habilitation, rehabilitation, and assistive care to inform policy recommendations. The Expert Group suggested to the constitution of an Apex Committee to guide and oversee the decision-making process. It was emphasized that the Committee should ensure adequate representation of persons with disabilities, thereby enabling their meaningful participation and inclusion in policy formulation and implementation. Furthermore, The Expert Group underscored the need for institutionalizing continuous training and sensitization programmes for all categories of staff—scientific, technical, and administrative—through structured modules incorporating didactic learning, practical demonstrations, and role-play exercises. Such measures will help promote a sustained culture of inclusivity, equity, and responsiveness within the organization.

Recommendation: An expert group suggested several changes to the ICMR's policy on disability, habilitation, rehabilitation, and assistive care. These suggestions were made to enhance the policy's effectiveness and alignment with current standards. **Inclusivity at Various Positions** The policy should clearly outline how to ensure inclusivity at various positions within the organization. The policy should incorporate the inclusion of persons with disabilities in all its technical documents and actions. The work environment should facilitate the highest standards of health, safety, and accessibility so that people with disabilities can participate and perform to their full potential.

1. Preamble and Purpose

· Begin with a clear and forward-looking *Statement of Purpose* that explicitly positions ICMR as a national leader in promoting accessibility, inclusivity, and equity for persons with disabilities.

· Strengthen the connection with national and international frameworks, including the Rights of Persons with Disabilities Act, 2016 (RPwD Act), the Accessible India Campaign (Sugamaya Bharat Abhiyan), the Harmonised Guidelines and Standards for Universal Accessibility, and the University Grants Commission (UGC) Guidelines on accessibility and inclusivity. Further, align the policy with the initiatives of the Indian Paralympic Committee as well as global commitments such as the UN Convention on the Rights of Persons with Disabilities (UNCRPD).

2. Scope of Policy

· Broaden the scope beyond infrastructure to explicitly include **research, education, healthcare delivery, institutional capacity-building, and community engagement**.

· Clarify that the policy applies not only to ICMR Headquarters but also to all ICMR Institutes, Centres, and affiliated research bodies.

3. Principles and Methodology

· Explicitly articulate the principles of **non-discrimination, reasonable accommodation, universal design, and equity** as guiding tenets of the policy.

· Institutionalize **regular accessibility audits** (annual or bi-annual) at all ICMR institutes.

· Strengthen digital accessibility provisions by mandating compliance with **Web Content Accessibility Guidelines (WCAG 2.1)** for websites, e-learning platforms, and official documents.

4. Implementation Framework

· Ensure the **Apex Committee** has mandatory representation of persons with disabilities and subject experts, thereby incorporating lived experience into decision-making.

· Develop a **time-bound action plan with measurable indicators** (short-, medium-, and long-term targets), with periodic progress reviews.

· Link policy implementation with **ICMR Ethics Committees** to integrate disability inclusion within biomedical and clinical research protocols.

5. Financial Provisions

- Introduce dedicated budget lines for accessibility upgrades, procurement of assistive technologies, staff training programmes, and research on disability inclusion.

6. Capacity Building

- Establish a **structured training curriculum** for scientists, technical staff, administrators, and support staff.

- Adopt **multi-modal training approaches** including workshops, role-play, case studies, and digital modules, ensuring continuous sensitization and upskilling.

7. Research and Innovation

- Integrate **disability research** into ICMR's national research agenda, with focus areas such as assistive technologies, inclusive healthcare delivery models, and disability epidemiology.

- Launch **innovation challenges, fellowships, and grants** to encourage low-cost, scalable solutions for enhancing accessibility.

8. Data and Evidence Systems

- Establish a **centralized disability data repository** under ICMR to support evidence-based decision-making and policy refinement.

- Standardize disability-related indicators across ICMR studies for comparability and long-term monitoring.

9. Partnerships and Collaborations

- Formalize collaborations with NGOs, technical bodies (such as BIS and DAISY Consortium), international agencies (WHO, UN bodies), and disability-rights organizations.

- Promote joint initiatives in training, advocacy, and technology development.

10. Grievance Redressal and Accountability

- Establish a **dedicated grievance redressal mechanism** for accessibility-related issues with clear timelines for resolution.

- Strengthen institutional accountability by linking accessibility compliance to **annual performance reviews** of institutes.

11. Policy Review and Updates

- Mandate a **comprehensive policy review every 3–5 years**, involving stakeholder consultations, to ensure responsiveness to emerging challenges and technological advances.

12. Awareness and Advocacy

· Undertake **regular sensitization campaigns, workshops, and publications** to raise awareness on disability inclusion within ICMR and beyond.

· Document and disseminate best practices, positioning ICMR as a **national model for accessibility and inclusivity**.

(II)

Progress Made in Accessibility Initiatives at ICMR and Institutes: Ms. Seema Verma delivered a comprehensive presentation on the current state of accessibility across ICMR Headquarters and its affiliated institutes. The analysis was grounded in the findings of a structured accessibility assessment conducted by nodal officers, who were nominated and trained specifically for this purpose. These officers underwent formal training sessions designed to enhance their understanding of universal accessibility standards, national guidelines, and inclusive infrastructure requirements as per the Rights of Persons with Disabilities Act, 2016, and the Harmonised Guidelines and Standards for Universal Accessibility (2021).

Following the training, the nodal officers conducted in-depth physical audits of their respective campuses using a standardized checklist developed in line with national norms. The assessment covered key parameters such as entrance and circulation areas, washroom accessibility, signage, ramps, tactile indicators, digital accessibility, and other essential facilities. A comparative analysis of pre- and post-training scores demonstrated a significant and measurable improvement in overall accessibility compliance across the institutions. This data-driven shift reflects not only increased awareness and technical understanding among officers but also enhanced capacity to identify infrastructural gaps that were previously overlooked.

The findings underscored several critical observations: while many institutions had basic provisions in place, significant non-compliances and inconsistencies were evident prior to the training. Post-assessment, a more realistic and evidence-based picture emerged, enabling accurate mapping of the accessibility landscape across ICMR. This exercise has also promoted a cultural shift—instilling a stronger sense of responsibility among institutional heads, engineers, and administrative teams to treat accessibility not as an auxiliary requirement, but as a central component of campus development and service delivery.

The data generated through this assessment will now serve as a foundational reference for guiding targeted infrastructural upgrades, informing future budget allocations, and planning follow-up audits. It will also assist in setting measurable goals and timelines for institutions to progressively work towards barrier-free environments. Importantly, the process has established a framework for continuous monitoring, setting the stage for the introduction of additional initiatives such as accessibility audits, internal committees, and institutional ranking based on compliance.

In conclusion, the presentation highlighted not only the current status but also the opportunities ahead for strengthening accessibility in a systematic and scalable manner across all ICMR campuses. The findings reaffirm ICMR's institutional commitment to inclusivity, equity, and the rights of persons with disabilities.

Discussions:

During the Expert Group deliberations on accessibility enhancement across ICMR and its constituent institutions, several strategic recommendations were put forth to strengthen the implementation of inclusive infrastructure and practices. It was proposed that a **Color Coding Certification System** be introduced to classify institutes based on their level of accessibility compliance. This approach would promote transparency, help monitor progress, and recognize high-performing institutes, while enabling targeted support for those needing improvement. To ensure comprehensive evaluation, the group recommended constituting Audit teams will comprise 'the designated Nodal Officer, subject experts, AO/ACO, the ICMR Headquarters Maintenance Team, and the ICMR Headquarters Nodal Officer', who will conduct detailed audits of all ICMR institutions. These audits would cover physical infrastructure, digital accessibility, and institutional policy adherence, and would generate actionable insights for further improvement.

Recognizing the need for institutional capacity-building, the group emphasized the importance of organizing **training programs for nodal officers, engineers, AOs, and ACOs**, with ICMR-NITM Belgaum identified as the preferred venue for such hands-on training. These sessions would focus on equipping personnel with practical knowledge for implementing accessibility norms. Additionally, the group proposed conducting **pilot surveys** to understand the real-time challenges faced by nodal officers and ground staff in ensuring compliance. The findings would help develop tailored support mechanisms for each institute.

To ensure consistent action across the system, the group proposed issuing a **DO letter from the Senior DDG (Admin)** to all institutes, underscoring accessibility as a key administrative priority. This directive would formally assign responsibility to nodal officers and outline expectations regarding timelines and compliance. Furthermore, strict **adherence to CPWD guidelines and BIS standards** was recommended for all new construction and renovation works, with early involvement of architects, engineers, and procurement teams to integrate accessibility from the design stage.

Digital accessibility was also emphasized, with the recommendation to audit all ICMR websites for compliance with **GIGW 3.0 guidelines**. To support this, training for web developers and content teams was proposed, ensuring they are equipped to create and maintain inclusive digital platforms. On the aspect of mobility, the group advocated for the **designation of accessible parking spaces and the procurement of accessible vehicles**, along with enforcement mechanisms to prevent misuse of such facilities.

To ensure streamlined reporting and effective data management, it was proposed to develop a Google-based accessibility audit checklist format that will allow **ICMR HQ** to record and track its progress in a systematic manner. In order to strengthen institutional accountability, The **Expert Group** is advised to establish an Internal Accessibility Committee, comprising persons with disabilities, Nodal Officers (NO), Administrative Officers/ Accounts Officers (AO/ACO), and the engineering team, to oversee compliance and monitor improvements on a regular basis. The checklist has been designed with mandatory as well as preferred action points, enabling **ICMR to** implement necessary changes in infrastructure, ICT systems, and transport facilities in a phased and practical manner.

Finally, the group endorsed the publication of a compendium titled *"ICMR Initiatives for Accessible ICMR"*, which would document best practices, innovations, and institutional achievements in the area of accessibility. This publication would serve as evidence of ICMR's commitment to inclusivity and act as a valuable reference for other institutions striving to promote universal access. The group further recommended allocation of dedicated financial resources for designing, printing, and disseminating the compendium to ensure its wide reach and impact.

Key Recommendations:

1. **Color Coding Certification**: The **Expert Group** proposed a color coding system to certify its institutes based on accessibility compliance levels, ensuring transparency and facilitating targeted improvements. The system includes three color codes: Red for serious accessibility issues requiring immediate attention, Orange for partially accessible institutes needing further improvements, and Green for institutes meeting high accessibility standards with minimal issues. This system will enable ICMR to track progress, recognize best practices, and promote inclusivity across ICMR and its institutes

2. **Audit Teams:** The **Expert Group** recommended to constitute dedicated audit teams comprising a Nodal Officer (HQ), an external expert, an engineering official, and an AO/ACO from the concerned institute. These teams will conduct comprehensive accessibility audits across all ICMR institutes, assessing physical infrastructure, digital accessibility, and policy compliance. The objective is to identify gaps and provide actionable recommendations to enhance accessibility and inclusivity. The initiative aims to ensure that ICMR institutes are fully accessible, inclusive, and user-friendly for all stakeholders, including persons with disabilities—thereby fostering equal opportunities and a more inclusive environment

3. **Training for Nodal Officers:** The **Expert Group** recommended to organize specialized training sessions for Nodal Officers, engineers, AOs, and ACOs at ICMR-NITM, Belagavi, with a focus on the practical aspects of implementing accessibility standards. These sessions aim to equip participants with the necessary knowledge and skills to effectively lead and monitor accessibility initiatives across ICMR institutes. ICMR-NITM, being one of the most accessible and model institutes, has been identified as the ideal venue for conducting this training, thereby reinforcing the commitment to creating inclusive and accessible environments.

4. **Pilot Surveys**: Conduct pilot surveys to identify ground realities and challenges faced by nodal officers in ensuring accessibility at ICMR institutions. These surveys will inform the development of tailored solutions and support mechanisms for institutes, addressing specific needs and barriers.

5. **Compliance Directive**: Issue a DO letter from Sr. DDG (Admin) to all institutes, emphasizing accessibility compliance as a top priority and assigning responsibility to nodal officers. This directive will ensure a unified approach to accessibility across ICMR institutions, with clear accountability and timelines.

6. **Standards and Guidelines:** The **Expert Group** recommended to is committed to ensuring full compliance with the latest Central Public Works Department (CPWD) guidelines and Bureau of Indian Standards (BIS) norms in all construction, renovation, and infrastructure development projects. This includes a detailed assessment of ICMR's specific accessibility requirements across its institutes and facilities, taking into account the unique needs of each location. The process will involve active collaboration with architects, engineers, designers, and procurement teams to incorporate universal design principles and accessibility features—such as ramps, tactile pathways, accessible washrooms, and inclusive signage—from the earliest planning and design stages. By integrating these standards throughout all phases of development, ICMR aims to create safe, inclusive, and barrier-free environments

that support equal access and participation for everyone, especially persons with disabilities.

7. **Website Accessibility:** The **Expert Group** recommended that ICMR websites will undergo regular accessibility audits to ensure compliance with GIGW 3.0 guidelines, making digital platforms inclusive and user-friendly for all. To strengthen this effort, capacity-building sessions will be organized for web developers and content creators, enabling them to design and maintain accessible digital content. The responsibility for coordinating the training on GIGW 3.0 guidelines has been assigned to **Dr. Ravinder Singh**.

8. **Vehicle Accessibility, Parking, and Wheelchair Availability at Reception Areas:** The **Expert Group** recommended that ICMR will ensure the provision of designated and clearly marked accessible parking spaces across all its institutes, located close to building entrances to facilitate ease of access for persons with disabilities. The organization will also initiate steps to procure accessible vehicles equipped with ramps, lifts, and hand controls to provide safe and convenient transportation for employees, visitors, and research participants with mobility challenges. In addition, wheelchairs will be made available at each reception area. Measures such as clear signage, barrier-free pathways, and adequate lighting will be implemented to enhance overall safety and usability. To maintain these facilities, strict monitoring and penalty mechanisms will be enforced to prevent misuse, reaffirming ICMR's commitment to accessibility, mobility, and inclusion for all.

9 **Audit Report Format:** The **Expert Group** recommended to develop a Google-based format incorporating a revised checklist for accessibility audits that prioritizes the most readily addressable issues. This will streamline the reporting process and facilitate evidence-based decision-making. Additionally, the format will enable institutes to systematically monitor their progress over time, identify recurring challenges, and focus on areas requiring improvement. This approach will support continuous enhancement of accessibility and inclusivity across all ICMR institutes.

10. **Picture uploading provision**: As part of the revised accessibility audit, the Expert Group recommended incorporating a provision for uploading photographs to document infrastructure accessibility, assistive devices, and barrier-free facilities across ICMR Headquarters and affiliated institutes. This feature will enable visual verification of accessibility compliance, thereby supporting more accurate monitoring, assessment, and planning for improvements. Furthermore, it was advised that a dedicated gallery of all accessible areas and facilities be created and uploaded on the ICMR Headquarters website, highlighting good practices and promoting visibility of accessibility initiatives across institutes.

11. **Internal Accessibility Committees:** The Expert Group recommended that each institute establish an Internal Accessibility Committee to oversee, maintain, and monitor accessibility. The committee should comprise representatives, including employees with disabilities, an engineering official, and an AO/ACO from the concerned institute. In addition, an external expert will also be included as a member. These committees will ensure that accessibility initiatives remain responsive to user needs and that institutes are held accountable for compliance with accessibility standards.

12. **Publication:** The Expert Group recommended publishing a book titled *"ICMR Initiatives for Accessible ICMR"* to document best practices and highlight ICMR's commitment to accessibility and inclusivity. This publication will comprehensively capture all steps and measures undertaken by ICMR towards fostering an inclusive environment, including accessibility audits, training programs, infrastructure improvements, policy implementations, and awareness initiatives. Serving as a valuable resource, the book will not only showcase ICMR's efforts but also guide other organizations and institutions in advancing accessibility and inclusivity across the country. During policy discussions, it was further advised to allocate dedicated funds for printing and dissemination of the book to ensure wider outreach and impact.

The Expert Group Meeting concluded with a shared commitment to implementing the recommended accessibility initiatives, ensuring that ICMR institutions are inclusive, accessible, and equitable for all stakeholders. By adopting a comprehensive approach to accessibility, ICMR can promote equal opportunities, improve the quality of life for people with disabilities, and enhance its reputation as a leader in accessibility and inclusivity. The Expert Group looks forward to working together to implement these recommendations and create a more accessible and inclusive environment for all.

The meeting was formally concluded with a vote of thanks.