Handbook
for
Technical Committee Members
of
Bureau of Indian Standards (BIS)

0. FOREWORD

The Bureau of Indian Standards (BIS), established as the National Standards Body of India, plays a pivotal role in the harmonious development of standardization, conformity assessment, and quality assurance across goods, articles, processes, systems, and services. In the activity of standardization, this responsibility is underlined by formulation of more than 22,000 standards by BIS through its 394 sectional committees, each comprising experts from various domains.

These domain experts, numbering over 14000, are drawn from industry, industry associations, research and development (R&D) organizations, central and state governments, users, academic institutions and civil society groups. Their collective expertise ensures that standards are not only comprehensive but also reflective of diverse perspectives and needs.

Despite its impressive standards base, BIS recognizes the imperative of evolving with the changing times. The organization has thus embarked upon a series of structural and process reforms to address contemporary challenges. These reforms aim to make standards more relevant, timely, current, acceptable, and implementable in the present context. By ensuring that its standards remain dynamic and responsive to emerging trends and technologies, BIS reaffirms its commitment to excellence and innovation in standardization.

Membership in a Technical Committee is not just an honor but also a significant responsibility. To guide committee members in effectively discharging their duties, BIS has prepared this booklet that outlines the standardization processes and procedures that should be followed. This resource is invaluable in helping members navigate the complexities of standardization and contribute meaningfully to the development and maintenance of high-quality standards.

The following abbreviations are used in this document:

ARP	Action Research Project
AAP	Annual Action Plan
ASEAN	Association of Southeast Asian Nations
DC	Division Council
FDIS	Final Draft International Standard
IEC	International Electrotechnical Commission
INS	Indian National Strategy
ISO	International Organization for Standardization
LITD	Electronics and Information and Technology Department
MoU	Memorandum of Understanding
NMC	National Mirror Committee
NWIP	New Work Item Proposal

QCOs	Quality Control Orders
R&D	Research & Development
SARSO	South Asian Regional Standards Organization
SC	Sectional Committee
SCMD	Standards Coordinating and Monitoring Department
SDG	Sustainable Development Goals
SDOs	Standard Development Organizations
SMB	Standardization Management Board
SNAP	Standardisation National Action Plan
TMB	Technical Management Board
ToR	Terms of Reference
WC	Wide Circulation
WG	Working Group

1. INTRODUCTION

1.1. Importance of standardization for society, economy and governance

Standards have been widely recognized as catalysts for technical development, industrial growth, the well being of the society and more recently for convergence of new and emerging technologies. The rapid growth of the Indian economy, its size and emerging relevance in global trade, makes it essential to establish a robust quality ecosystem in India with a harmonized, dynamic and mature standards framework. The most important stakeholders of quality ecosystem are the consumers and the industry. Standards will not only ensure that consumers get best quality products, it will also enable industry to access more markets and to be recognized at par with the best in the world. The growing influence of standards has been recognized worldwide through the agreements on Technical Barrier to Trade (TBT). It is essential to evolve strategies to synergize standardization work with technological, social and economic development at national level as well as for playing influencing roles in global standardization.

Developing a dynamic, relevant and priority driven standards will stimulate development across sectors, promote competitiveness of products and services and faster country's eminence among the global leaders in standardization.

1.2. Indian National Strategy for Standardization (INSS)

1.2.1 Recognizing the pivotal role of Standards, Indian National Strategy for Standardization was brought out by Ministry of Commerce and Industry in year 2018. Copy of INSS can be accessed through following link:
https://commerce.gov.in/wp-content/uploads/2020/02/MOC_636655449469105249_INSS_Booklet_2018.pdf

1.2.2 It lays down several goals to be achieved to create a robust standardization ecosystem in the country. Some of the important provisions of INSS are as follows:

i) **Goal 1: Convergence of all standards development activities in India**
Goal 1 states that Bureau of Indian Standards shall remain the apex national standards body and in accordance with the mandate of the BIS Act 2016 continue to oversee the harmonious development of standardization activities under its own umbrella as well as through memoranda of understanding with the other SDOs. Standards thus developed by other SDOs can be adopted/adapted as national standards as and when required.

ii)   **Goal 2: Setting up a dynamic mechanism for new standards identification, development and their revision**

Goal 2 states that there is an urgent need to create fora and processes to articulate and prioritize needs for standards development in different sectors. The best candidate for articulating the needs are the ministries and policy fora under them, the related industry bodies, export promotion bodies and the commodity boards wherever present.

A standards forum needs to be setup in each of these bodies that would be responsible to be setup stakeholders consultation and dialogue fora with businesses and professional bodies and MSMEs to identifies the gaps, to collate the needs and to coordinate with BIS, and the relevant SDOs for a time bound development or the revision of the required standards.

iii) **Goal 3: Inclusive participation of all stakeholders in standards development including states and MSMEs**

Effective standards development requires an adequate and continuous participation of all interest groups and subject matter experts. In order to achieve this, it is important to generate widespread interest and awareness in the standards programmes being undertaken by BIS and other SDOs and to attract participation with financial support where funding becomes restriction, especially for MSMEs, civil society groups and identifies experts.

iv)   **Goal 4: Harmonizing standards with International standards**

The need for harmonizing Indian Standards with International Standards for reducing technical barriers to trade and improving market access for Indian products and services cannot be overemphasized. BIS and other Indian standards bodies that participate in international standards bodies like ISO, IEC, ITU etc, need to undertake a systematic programme for adopting/adapting and aligning relevant Indian standards with the corresponding international standards.

v)   **Goal 5: Identifying sectors where India could pioneer standardization work**

India offers many sectors with significant commercial potential that have remained outside the scope of standardization. Undertaking pioneering standardization work in these areas would not only unleash their commercial potential but also enhance India's contribution to global standardization efforts.

vi)   **Goal 6 Systematic and continuous participation in international and regional standardization work**

It is essential that international standards do not contain provisions that place Indian suppliers at a disadvantage and this can be secured only through the continuous

participation of experts who understand both the technical requirements as well as their impact on trade and commerce.

Continuous participation should be gradually translated into taking leadership positions on international standards and project committees as well as governance structures and winning secretarial responsibilities commensurate with India's position as a leading global economy.

vii) **Goal 7 Development of service sector standards**

In order to accelerate standardization efforts, national task force should be set up comprising of representatives from Department of Commerce, Bureau of Indian Standards, Ministry of Skills, apex industry bodies, QCI and invited experts from each sector. The recommendations of task force should form the inputs for the development of service sector standards by BS on fast track basis.

As service sector is the key driver economies worldwide and especially India we should take early lead in development of service sector standards and leverage the efforts to take leadership positions in international standardization work.

viii) **Goal 8: Creating an ecosystem to meet the challenges from Private Sustainability Standards**

There is a recognition that approximately 500 plus private sustainability standards (PSS) are operating world over with more than 30 impacting Indian market. Many of the PSS does not have mechanisms for global stakeholder consultations and are not transparent. There is a need for mechanism to respond to the challenges posed by such standards at the national level. An initial task would be to identify all PSS that are impacting exports from India and to set up national response structures comprising of experts that could seek membership or be the voice in the standards setting process.

1.3.   Mandate of BIS under the BIS Act 2016 and Rules thereunder

BIS Act, 2016 and BIS Rules, 2018 thereunder has the following provisions:

1.3.1 Governing Council

1.3.1.1 Constitution

Section 3 of the Bureau of Indian Standards (BIS) Act, 2016 defines the Constitution of Governing Council.

1.3.1.2 Functions

As per section 9 of BIS Act, 2016, the powers and duties as may be assigned to the Bureau shall be exercised and performed by the Governing Council and, in particular, such powers may include the power to—

i. Publish Indian Standards and sell such publications and publications of international bodies;
ii. Obtain membership in regional, international and foreign bodies having objects similar to that of the Bureau and participate in international standards setting process;
iii. Identification of any goods, articles, process, system or service for which there is a need to establish a new Indian Standard, or to revise an existing Indian Standard;
iv. Promoting the use of Indian Standards;
v. Seek recognition of the Bureau and of the Indian Standards outside India on such terms and conditions as may be mutually agreed upon by the Bureau with any corresponding institution or organisation in any country or with any international organisation;
vi. Provide training services in relation to quality management, standards, conformity assessment, laboratory testing and calibration, and any other related areas.

1.3.2 Standards Advisory Committee

1.3.2.1 Constitution

As per section 5 of BIS Act, 2016, subject to any regulations made in this behalf, the Governing Council may, from time to time and as and when it is considered necessary, constitute the Standards Advisory Committee (SAC) for the efficient discharge of the functions of the Bureau.

1.3.2.2 Functions

Important functions of SAC are defined in section 6 of Bureau of Indian Standards (Advisory Committees) Regulations, 2018. The Standards advisory committee shall advise on policy matters relating to:

i) Harmonious development of standards;
ii) Establishment, publication, review and promotion of Indian Standards;
iii) Collaboration with other standards formulating organisations within the country and abroad;
iv) Bureau's role in the activities of international organisations in relation to standards;
v) Formulation of guidelines for the effective functioning of Division Councils and reviewing their activities;
vi) Recognition or accreditation of institutions engaged in area of standards formulation in India or abroad;
vii) Capacity building or trainings in area of standardisation;

viii)   Review standards formulation on important subjects and emerging fields and suggest improvements, constitution of joint committees in multi-disciplinary areas;

ix) Other matters regarding standardisation.

1.3.3 Division Council

1.3.3.1 Constitution

Division Councils are constituted under Rule 16 of BIS Rules, 2018 by Standards Advisory Committee for the purposes of formulation of Indian Standards in respect of any goods, article, process, system or service.

1.3.3.2 Functions

Functions of Division Council are defined in rule 19 of BIS Rules, 2018. Important functions of Division Council are as follows:

i)   Advise on the subject areas to be taken up for formulation of Indian Standards in their respective areas keeping in view the national needs and priorities;

ii)   Approve proposals for work and determine the priority to be assigned to the work;

iii)   Direct the sectional committees concerned to undertake the work of formulation of standards;

iv)   Advise on matters relating to research and development needed for the establishment of Indian Standards or their revisions

v)   Study the work of international organisations and their committees in standards formulation related to the area of work of the Division Council and recommend on the extent and manner of participation in standardisation activities at the international level;

vi)   Advise on implementation of established standards and promotion of Indian Standards;

vii)   Receive and deal with activity reports and to make recommendations thereon to the Governing Council concerning matters in which the decision of the Governing Council is necessary.

1.3.3.3 Tenure

The Division Councils are reconstituted once every three years. Each Division Council shall have an adequate number of Sectional Committees to ensure that a Sectional Committee is available for specific and well defined field of work, and that these committees have sufficient potential for standardization work to be carried out within the scope of Division Council concerned.

1.3.4   Sectional Committees

1.3.4.1 Constitution

Sectional committees constituted under rule 17 of BIS Rules, 2018 by Division Council for the work of formulation of Indian Standards, as it may consider necessary for the purpose. Every Sectional committee shall comprise of concerned officers of the Bureau and representatives of various interests such as consumers, regulatory and other Government bodies, industry, testing organizations laboratories or calibration laboratories, scientists, technologists, experts in personal capacity and consumer interests and an officer of the Bureau shall be its Member-Secretary

1.3.4.2 Functions of Sectional Committee

Important functions of sectional committees are as follows:
- i) Decides on new work proposals for standardization.
- ii) Take up the review/revision/amendments of the existing standards based on the latest technological advancements
- iii) Constitutes sub-committees/Panel/Working group and appoint their Conveners
- v) Reviews the composition of panels/working group under its domain including its own for effective participation and relevance.

1.3.4.3 Tenure

Sectional committees are reconstituted once every 3 years. It is expected that those represented in a committee will effectively present the views/opinion of the nominating organization; and be able to provide expertise in areas of the committee's work.

1.3.5 Panels and Working groups

1.3.5.1 Constitution

A per rule 18 of BIS Rules, 2018, a sectional committee may constitute such number of sub-committees, panels or working groups within its area of work as it may consider necessary, and it shall define their scope, composition and coordinate their activities.

1.3.5.2 Tenure

These are deemed to be ad-hoc in nature and may be disbanded on completion of the task assigned.

1.3.6   Formulation of Indian Standards

As per section 10 of BIS Act, 2016:

1.3.6.1 The standards established by the Bureau shall be the Indian Standards. The Bureau may—

    i)   Establish, publish, review and promote the Indian Standard, in relation to any goods, article, process, system or service in such manner as may be prescribed;

    ii)   Adopt as Indian Standard, any standard, established by any other Institution in India or elsewhere, in relation to any goods, article, process, system or service in such manner as may be prescribed;

    iii)   Recognise or accredit any institution in India or outside which is engaged in standardisation;

    iv)   Undertake, support and promote such research as may be necessary for formulation of Indian Standards.

1.3.6.2 The Indian Standard shall be notified and remain valid till withdrawn by the Bureau.

1.3.6.3 Notwithstanding anything contained in any other law, the copyright in an Indian Standard or any other publication of the Bureau shall vest in the Bureau.

1.3.7 Engagement of Consultants

As per rule 21 of BIS Rules, 2018, the Bureau may from time to time, engage such number of consultants as it may consider necessary, to assist the Committees constituted under this rule. The terms and conditions for engaging consultants in the work of sectional committees and in the work relating to establishment of Indian Standards shall be such as may be decided by the Executive Committee. Consultants to be involved in providing support to committees in the following areas:

    i)   Review of existing standards leading to, where required, their timely revision/amendments to update the same as per the latest technological developments.

    ii)   Collection of information/data on state-of-the-art in the country and best practices world over and assist in preparation of draft revision of existing and formulation of standards in new areas.

    iii)   Involve in strategic initiatives for wide publicity and effective implementation of standards.

    iv)   Interact and work coherently with government departments, industry associations, professional institutions, academic institutions, etc for their inputs for standardization work and for promotion of use of standards.

    v)   Technical editing of draft standards/other publications for ensuring their error-free and quality publication.

1.4.   Achievements - Standards published

1.4.1 BIS follows a systematic and transparent standard development procedure to ensure that standards are robust, relevant, and responsive to the needs of stakeholders. Standard development

at BIS is undertaken by Sectional Committees (TC) comprising relevant stakeholders, subject

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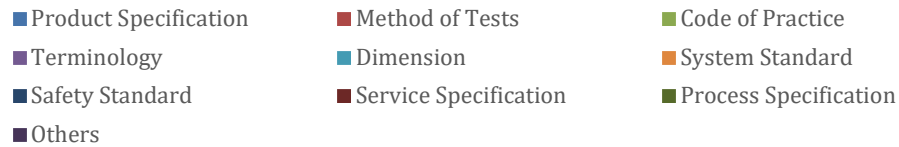
matter experts, and representatives from relevant industries, academia, and government bodies. BIS has achieved significant milestones in terms of the number and scope of standards published across various sectors through its sector specific technical committees.

1.4.2 There are more than 22000 Indian Standards available for multitude of aspects in each sector. Out of these, majority are for products, followed by method of tests, code of practice and so on. A pictorial representation of aspect wise contribution of standards published is given below:

1.5.   BIS and International Standardization - role of BIS at ISO/IEC level

BIS plays a crucial role in international standardization through its active participation in prominent international standard-setting organizations: International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC). BIS's involvement in ISO and IEC underscores its commitment to international cooperation, harmonization, and standardization. By actively participating in the development and adoption of international standards, BIS contributes to the advancement of global trade, innovation, and sustainable development, while also promoting India's interests and competitiveness on the world stage.

1.5.1 International Organization for Standardization (ISO)

ISO is the world's largest developer and publisher of international standards, covering a wide range of industries, products, and services. BIS is one of the founding members of ISO and actively participates in its sectional committees, s, and working groups, contributing to the development and revision of international standards across various sectors. BIS and its representatives collaborate with experts from other ISO member countries to formulate consensus-based standards that reflect best practices, innovation, and technological advancements. BIS also adopts ISO standards as Indian standards, facilitating their implementation and adoption within India.

1.5.2 International Electrotechnical Commission (IEC)

IEC is the leading international organization for standardization in the field of electrotechnology, encompassing electrical, electronic, and related technologies. BIS representatives collaborate with experts from other IEC member countries to address emerging issues, harmonize technical requirements, and facilitate global trade in electrotechnical products. BIS also adopts IEC standards as Indian standards, ensuring alignment with international best practices and promoting interoperability and compatibility with global markets. Through its engagement with IEC, BIS strengthens India's position as a leader in the electrotechnical industry and fosters innovation, safety, and sustainability in this critical sector.

1.5.3 Position of BIS in International Standardization forum of ISO and IEC

Participation of Indian experts through BIS in ISO/IEC technical committees facilitates easier adoption of ISO/IEC standards by BIS later. This is ensured by presentation of India's viewpoints by experts while development of these international standards. Positions of BIS in ISO/IEC can be understood by the following table:

International Standardization Body	No. of TCs/SCs	P-memberships (TCs/SCs)	O-memberships (TCs/SCs)	Secretariats held by BIS	Convenorship positions held by BIS experts
ISO	837	558	151	11	35
IEC	216	122	56	0	13

Apart from participation in technical committees of ISO, BIS is also a participating member in policy committees DEVCO, COPOLCO and CASCO, a member of the Technical Management Board (TMB) and the Standardization Management Board (SMB).

1.5.4 Collaboration with regional standardization bodies

In addition to international standards of ISO and IEC, BIS also collaborates with regional standard-making bodies like Pacific Area Standards Congress (PASC), South Asian Regional Standards Organization (SARSO) and under the framework of IBSA (India, Brazil and South Africa). BIS is also actively involved in bilateral cooperation with National Standards Bodies of other countries and with other Standards Developing Organizations for co-operation in areas of standardization, testing, certification, training etc. BIS has signed a number Memorandum of Understanding (MoU) with these organizations to this effect.

1.6. BIS and other standard making bodies - One Nation One Standard

1.6.1 General

In today's interconnected world, the need for harmonization with other standard-making bodies has become increasingly crucial. BIS plays a critical role in achieving harmonization and through collaboration with other standard development organizations (SDOs), industry bodies, and government agencies, promotes the concept of "One Nation, One Standard". This ensures consistency, interoperability, and quality across sectors. As the National Standards Body, it is the responsibility of BIS, to ensure that there is synergy in the standardization work taking place in the country and that there is no overlap or duplication of the work carried out by other Standards Developing Organizations (SDOs) in the country.

1.6.2 SDO Recognition Scheme

To this effect, BIS has launched an SDO recognition scheme describing the criteria for recognition (including terms and conditions), procedure for recognition and operation of the scheme for recognition of Standards Developing Organizations (SDOs) in India, whether governmental or nongovernmental. Currently, the following three SDOs have been recognized by BIS under the scheme:
1. Research Designs & Standards Organization (Ministry of Railways)
2. Directorate of Standardization (Ministry of Defence)
3. Directorate of Marketing & Inspection (Ministry of Agriculture & Farmers Welfare)

2. ARCHTECTURE OF STANDARD FORMULATION

For formulation of Indian Standards, BIS functions through the multilayer technical committee structure as explained below:

2.1 Division Council (DC)

Division Council is a distinct committee of BIS, set up in defined areas of industries and technologies for formulation of standards. 16 Division Councils have been constituted for standardization activities in following sectors:

1) Ayush
2) Chemical
3) Civil Engineering
4) Electronics and Information Technology
5) Electrotechnical
6) Food and Agriculture
7) Management and Systems
8) Mechanical Engineering
9) Medical Equipment and Hospital Planning
10) Metallurgical Engineering
11) Petroleum, Coal and Related Products
12) Production and General Engineering
13) Service Sector
14) Textile
15) Transport Engineering
16) Water Resources

2.1.1 Scope and Composition

The title and scope of a Division Council is approved by the Standards Advisory Committee and cannot be amended without its approval. Division Councils comprise of representatives of various interests such as consumers, regulatory and other Government bodies, industry, testing laboratories or calibration laboratories, scientists and technologists. Head of the technical department concerned of BIS acts as the Member Secretary. Composition of Division Councils can be accessed through following link:

https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/dgdashboard/committee_sso

2.2 Sectional Committees (SC)

Sectional Committees under respective Division Councils are set up for specific technologies and economic sectors. The Sectional Committees may be supported by panels and working groups which may be set up for dealing with specific group of subjects. Composition of Sectional Committees can be accessed through following link:

2.2.1 Stakeholders in Sectional Committees

The committee structure of BIS seeks to bring together all stakeholders' interest in relevant standardization areas, so that standards are developed keeping in view national interests and after taking into consideration all significant viewpoint through a process of consultation.
The development of an Indian Standard is a collective effort and therefore needs to involve a wide range of concerned interests likely to have a stake in the standard. The committees should at the same time be able to provide the required knowledge and expertise on the subject as well as have a clear understanding of needs and expectations of those likely to use a standard or be affected by it.

2.2.2 Size of Sectional Committees

One of the objectives is to ensure that the committees provide a fair representation of the range of interests affected by the standard, particularly of the users/consumers. The strength of the Sectional Committee should normally be restricted to around 30.

2.2.3 Composition of Sectional Committees

Every Sectional committee must comprise of concerned representatives of various interests such as consumers, regulatory and other Government bodies, industry, testing organizations laboratories or calibration laboratories, scientists, technologists and if required experts in personal capacity. As far as possible, non-industry representation should not be less than two-third of the committee composition. Individuals also be eligible for membership in committees in their personal capacity based on their expertise, knowledge of and/or experience in the subject that would be of benefit to the work of the committee.

2.3 Working Panel

Panels are set up by Sectional Committees to deal with standardization work on a specific topic (standard or a group of related standards) and within a specified time involving a small group of subject experts.

2.3.1 Composition of Working Panel

Composition of Panels are therefore defined by the names of individual experts and not that of the organizations they may otherwise be representing. A panel reports to the Sectional Committee or

Division Council which constituted it. The need for maintaining balance of representation of all interests shall therefore not apply in case of panels.

The Convener of the panel is appointed by the parent committee which constitutes it. The Convener normally assumes the responsibility of the secretariat of the Panel. There is no term of appointment in the case of conveners.

2.4 Working Group

Working Groups are similar in constitution to panels and may set up by a Sectional Committee, or a panel to deal with specific and time bound tasks related to a standard(s). The process of appointment of Conveners is similar to that of a panel.

Standards Advisory Committee

Division Councils
(16)

Sectional Committee
(394)

Working Panel
(1008)
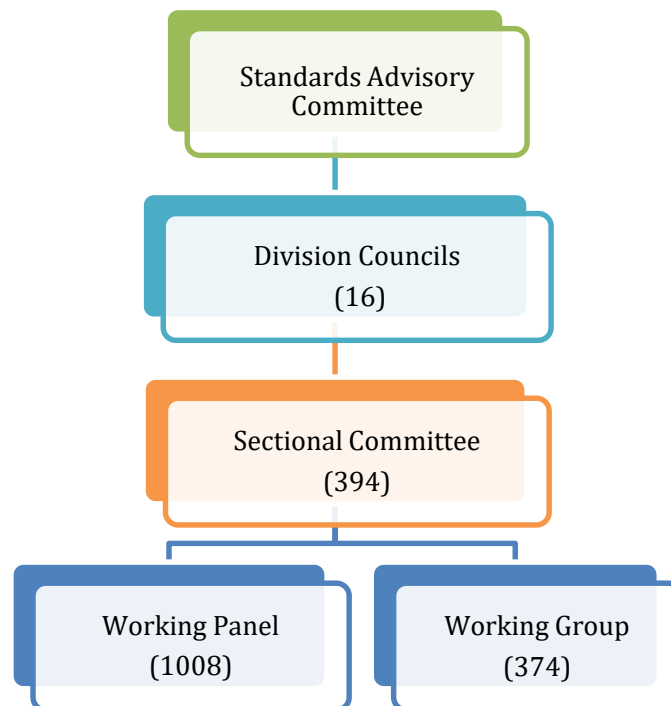
Working Group
(374)

Diagrammatic Representation of Standard Formulation Architecture

Division Councils	Sectional Committee	Working Group	Working Panel
AYD-Ayush Department	7	0	44
CHD-Chemical Department	25	42	90
CED-Civil Department	38	170	79
LITD-Electronics and Information & Technology Department	35	28	88
ETD-Electrotechnical Department	45	8	43
FAD-Food and Agriculture Department	30	19	126
MSD-Management & Systems Department	13	14	31
MED-Mechanical Engineering Department	28	13	96
MHD-Medical Equipment & Hospital Planning Department	20	2	8
MTD-Metallurgical Engineering Department	21	0	103
PCD-Petroleum, Coal and Related Products Department	15	8	95
PGD-Production and General Engineering Department	27	3	36
SSD-Service Sector Department	22	30	68
TXD-Textiles Department	26	2	26
TED-Transport Engineering Department	21	13	52
WRD-Water Resources Department	21	22	23

Department-wise breakup of Sectional Committees, Working Panels and working groups

2.5 Meetings

2.5.1 Objective of Meeting

The primary job of sectional committees is to formulate standards by progressively building consensus from within a small group of experts to that within the committee and finally a national consultation by seeking public comments and getting these resolved in the committees. Therefore, the objective of convening meetings would depend upon the type of committee.

During meetings of sectional committees, committee also decide for further actions on standards due for review. Review of composition of sectional committee, working panel and working groups, are furthermore important actions are taken during meetings. At times or on some of the areas under the scope of work of the Sectional Committee, the Sectional Committees may work directly without the assistance of any subordinate committees.

2.5.2 Meeting Frequency

Though it is desired that every SC has quarterly meetings, however, SC can decide the number of meetings to be held in view of the workload and urgency of the standards under developments. At least two meetings should be held by a SC, nonetheless, in a year.

2.5.3 Meeting in Absence of Chairperson

To ensure that the SC meeting is held on the scheduled dates, the meeting should not be postponed for the inability of the chairperson to attend it for some unavoidable reason. It should, in his/her absence, be chaired by one of the members chosen by the members present, and the decisions taken

in the meeting shall be deemed to have been taken by the SC for all purposes (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

2.5.4 Meeting Mode

The SC meeting should as far as possible be held in the physical mode. The chairperson may decide, however, to hold them in the hybrid mode.

2.5.5 Rigorous Meetings of Working Panel/Working Group

The Working Groups are created by the Sectional Committees as Special Purpose Vehicle to carry out a Standardisation Project in a time-bound manner. Meetings of panels/working groups are convened in order to carry out the task assigned to it by the parent committee which is largely to deliberate and decide on the contents of the standard/amendment under development.

2.5.6 Organizing Meeting at Academic Institutions and Industries

To the extent possible, SC meeting may be organized at prominent academic institutions or industries, as it may serve to spread awareness about the work and functioning of SCs. Attendance of the members in SC meetings is sine qua non for its effective and efficient functioning.

3 MEMBERSHIP OF SECTIONAL COMMITTEE

3.1 Who can be Members?

BIS sectional committees are representative of a balance of the following stakeholder interests:

i) *Consumers*: Organized buyers, consumer organizations, NGOs (with public interest objective) and user groups including government organizations and PSUs.

ii) *Government/Regulatory Bodies*: Central/State Government Ministries and their departments and regulators

iii) *Industry*: Manufacturing and service industry (including government organizations and PSUs), consultancy organizations, industry/manufacturer associations, etc.

iv) *Technologists*: R&D organizations, scientific institutes, academic and technical institutions, professional bodies/institutes, testing/ calibration laboratories, accreditation bodies and experts (persons in individual capacity)

It is expected that those represented in a committee will effectively present the views/opinion of the nominating organization; and be able to provide expertise in some areas of the committee's work.

3.2 How to apply for membership

3.2.1 To apply for membership in sectional committees, the nomination of an expert/professional to a SC shall be sent by/with the approval of the Head of the Organisation concerned along with his/her CV. The DC reserves the right to examine if the nominated person has the requisite expertise and experience and accept or reject the nomination.

3.2.2 An expert or professional interested to join SC may also apply online through the Standardization Portal of eBIS (www.manakonline.in). It is necessary, however, that the interested expert should furnish NOC from the Organisation if he/she is an employee thereof. An expert having vast expertise and experience can apply to become a member in his/her personal capacity. DC reserves the right to accept or reject an application without communicating the grounds for rejection.

3.2.3 Steps to apply online through the Standardization Portal

Following steps to be followed:

Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization".> Click on the "Login" button available on the top right corner and enter your credentials to login into our portal> Click on the "Standards Portal" tile.> Go to "Become a member" option in the left menu and click on "Submit Request" button>Click on "Submit Request" button>Enter your details and submit

3.3 Mandatory Requirements for the Membership

3.3.1 Attendance in Meetings

Members of BIS sectional committees are expected to attend all committee meetings and contribute to its work by examining and commenting on circulated documents/published standards, providing technical inputs to standardization work, help in drafting of standards, proposing new subjects of work and participating in deliberations/discussions.

3.3.2 Participation in two consecutive meetings and at least 50 percent of meetings in a year

In case a member is not able to attend a meeting, prior intimation of this is necessary to be given to the Member Secretary of the Sectional Committee. However, a member cannot abstain from attending two consecutive meetings of the Sectional Committee, and must attend at least 50 percent meetings of the Sectional Committee held in a year (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

3.3.3 Attending On-boarding Session

It is mandatory for a newly inducted member of the Sectional Committee to attend the on boarding session organized by BIS (*BIS office order Ref: PNC 09/18/2023-PNC-BIS dated 06 September 2023*).

3.3.4 Conduct of a member

It is expected for a member of a Sectional Committee to act with impartiality and fairness, free from any undue influence and bias to ensure that the standards established by the Committee address the needs of all the stakeholders equitably.

3.3.5 Self Declaration

Each of the SC member is required to sign a declaration, as prescribed by the BIS, affirming their commitment to carry out the responsibilities of a SC member with utmost sincerity. The declaration does not have legal implication and it imposes no liability on a member. It is just an instrument of remembrance of the role and responsibilities of a SC member. Signing of the declaration is, however, a mandatory condition for the membership of SC (*BIS office order Ref: PNC 09/18/2023-PNC-BIS dated 06 September 2023*).

3.3.6 Attending Trainings

The members shall attend the training programmes for technical committee members organized by BIS so that they have a clear understanding of the processes and reforms and are able to effectively participate and contribute to committee work (*BIS office order Ref: PNC 09/18/2023-PNC-BIS dated 06 September 2023*).
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3.3.7 Participation of Nominated Members

Only the designated principal/alternate members shall attend sectional committee meetings.

3.4 Termination of the Membership

3.4.1 Termination due to failure to attend meetings

Failure to attend two consecutive meetings of the Sectional Committee and/or at least 50 percent meetings of the Sectional Committee held in a year, shall attract termination of the membership of the Sectional Committee, except in extra-ordinary cases to be considered by the Division Council concerned (*BIS office order Ref: PNC 09/18/2023-PNC-BIS dated 06 September 2023*).

3.4.2 Termination due to failure to provide comments

A member not commenting on two consecutive and/or one fourth of the preliminary drafts circulated by the SC in a year will automatically be disqualified to continue as a member (*BIS office order Ref: PNC 09/18/2023-PNC-BIS dated 06 September 2023*).

3.5 Code of Ethics for Technical Committee Members

All technical committee members and their Chairs and Conveners shall:

i) Respect others and conduct oneselves in a professional manner. Behave in a polite and respectful manner with those present in the meeting during committee meetings.

ii) Make an effort to hear and try to understand the diverse technical, scientific or other views that may emanate in the technical committees.

iii) Embrace an attitude of compromise and consensus building in developing Indian Standards and be ready to accept and respect consensus decisions of committees.

iv) Refrain from bringing back topics from previous meeting agenda for discussions unless new and relevant information has emerged. Also refrain from providing the same view point already presented in the discussions in a meeting.

v) Respect the fact that individual skills vary from person to person. Speak clearly and slowly and avoid using language that is difficult to comprehend.

vi) Be ethical, act in good faith and with due care and diligence.

vii) Respect the applicable statutes and procedures, without prejudice against any.

viii) Refrain from speaking in a disrespectful or threatening manner or in a tone that is offensive to other participants in the course of debates and discussions.

ix) Refrain from providing misleading or incorrect information or withholding information that may be necessary for a full, fair and complete consideration of the issues concerned.

x) Be fair to all and not give preferential treatment to any person or group of persons or appear to do so.

xi) Not harass, threaten or coerce fellow participants in an effort to persuade them to support or oppose issues.

xii) Committee chairs, conveners and project leaders should act in a neutral manner, desist from giving personal opinion and divest themselves from their organizational views and act in a neutral manner.

xiii) Respect that Indian Standards are for the net benefit of the country and keep national interests before individual considerations. Therefore, accept consensus decisions in broader interest.

xiv) Actively participate in standardization activities, contribute to the work of committees and uphold your roles and responsibilities.

xv) Do not share information provided for the purpose of technical work of committees with others without the formal permission of the person/organization sharing such information.

xvi) Engage and consult within your organization to ensure they are informed, and that the organization's views are represented.

xvii) Come well prepared with the agenda items for fruitful and to the point discussions in the meeting.

3.6 Young Professionals

At the discretion of the nominating organization and to encourage induction of next generation participants in standardization work, organizations may also nominate an additional representative as 'Young Professional' to the sectional committees, provided such individuals are below the age of 35 years. Nominating organizations are also encouraged to ensure gender balance in their representations.

4 DUTIES AND FUNCTIONS OF SECTIONAL COMMITTEE

Sectional Committees are responsible to carry out following duties:

i) To decide on the NWIPs and to assign their priorities.

ii) To take up the review/revision/amendments of the existing standards based on the latest technological advancements

iii) To provide clarification on the technical issues relevant to of the committee

iv) To constitute sub-committees/Panel/Working group and appoint their Conveners

v) To review the progress of work of sub-committees/Panel/Working group under its domain

vi) To undertake any R & D work, technical study for establishment/ revision of standards

vii) To deliberate on the NWIP/CD/DIS/FDIS drafts emanating from international/regional standardization bodies (ISO/IEC/SARSO)

viii) To decide on the participation of Indian Delegation for participation in international/regional standardization meetings and to decide on India's point of view on different documents emanating from ISO/IEC/SARSO etc.

ix) To review the composition of panels/working group under its domain including its own for effective participation and relevance.

x) To carry out such work as assigned specifically by Division Council/Standards Advisory Committee.

5 FUNCTIONING OF SECTIONAL COMMITTEES

5.1 Annual Programme for Standardization

Each of the Sectional Committee is required to prepare the Annual Programme for Standardization (APS) based on the needs of different sectors and gap analysis of uncovered areas needing standardization. Inputs for preparing APS are taken from Standardisation Cells of the Ministries and Industry Associations through organizing interactive webinars/meetings, internal deliberation in BIS, the Standard National Action Plan (SNAP), NWIPs received from diverse sources, ISO/IEC NWIPs, standards/drafts and Indian Standards due for review. APS will also give timelines for completion of projects. Tracking the progress of each of such projects is necessary for accomplishing stage wise progress leading to timely publication of standards.

5.2 Annual Meeting Calendar

5.2.1 Meetings of sectional committees are convened based on priorities involved. An Annual Meeting Calendar for the year shall be prepared well in advance in consultation with the concerned Chairperson. This shall be uploaded on BIS Standards Portal of eBIS (www.manakonline.in) and be available in public domain/accessed by members. Meetings can be fully physical or hybrid (physical with video conferencing facilities) or fully virtual (video conferencing only).

5.2.2 In general, all meetings should be planned as hybrid meetings. The decision on the mode of conducting meetings shall be of the Chairperson and Member Secretary. It is to be noted that critical issues to be discussed which may require intense debate and deliberation may call for opting for meetings in physical or hybrid mode.

5.3 Agenda Setting

The agenda shall cover all business required to be placed before the sectional committee for deliberation/information/decision. It normally covers the following matters, as applicable:
   i) Confirmation of minutes of the previous meeting;
   ii) Issues arising from the previous meetings;
   iii) Review of its own scope and composition and the composition of its s/ Panels/Working Groups;
   iv) Progress on annual work programme;
   v) Comments received on published standards or on relevant subjects;
   vi) Recommendations from evaluation of standards for review by Member Secretary;
   vii) Draft standards/amendments for finalization
  viii) Action Research Projects under progress or to be considered
   ix) R&D work under progress or to be considered (this may be included as a separate item of the agenda)
   x) Report on international work, including alignment of national standards with ISO/IEC standards, forthcoming international meetings, ballots circulated/casted.

5.3.1 Systematic approach in preparation of agenda

5.3.1.1 A systematic approach shall be followed in preparing the agenda. It is well advised to maintain an Agenda Point Register for keeping a note of agenda points to be discussed in the next meeting of the committee

5.3.1.2 Virtual meetings are of shorter duration as compared to hybrid meetings, and it may therefore be necessary to often have a series of successive virtual meetings to cover the entire agenda.

5.3.1.3 It is important to have a clear plan of action on the agenda points to be taken up in a particular virtual session. This is carried out by the Member Secretary in consultation with the Chairperson/Convener so as to have a clear understanding of the objectives of the deliberations/discussions and the targeted outcome so as to steer a meaningful and effective meeting. It is suggested that the time frame for each agenda point should preferably be planned in advance and mentioned in the agenda.

5.3.2 Other measures in preparation and circulation of agenda

5.3.2.1 The agenda shall be issued preferably two weeks in advance through the standards portal of eBIS (www.manakonline.in). At the earliest opportunity but not later than the issue of notice of the meeting, members may be requested to forward in writing suggestions for matters which they would wish to be included in the agenda.

5.3.2.2 Supplementary agenda may be issued to include:

i)   Additional business matters for consideration after the issue of the agenda, including business of which notice has been given by members but which could not be included in the agenda, may be issued in the form of supplementary agenda

ii)   Supplementary agenda may be sent to members in advance where possible or distributed/shared during the meeting

iii)   Copies of the agenda of sectional committees shall be marked 'For BIS Use Only'.

iv)   Points for discussion under item 'Any Other Business' shall be for items not already covered in agenda, with the permission of the Chairperson.

v)   In the case of the first meeting of a sectional committee, an additional agenda item, like 'Inauguration, and Scope of Work including Background to the Formation of the Committee', is included.

5.4 Resolutions

BIS has institutionalized the practice of recording resolutions, containing the decisions/ action points, immediately after the SC meeting. Detailed minutes of the meeting is to be finalized within a month of the meeting.

5.5 Writing Minutes

5.5.1 Minutes are a brief record of business transacted at meetings of all sectional committees of BIS along with the decisions taken. Decisions are the most significant part of the minutes and shall be stated clearly and without ambiguity.

5.5.2 Minutes should be brief, but should state decisions taken clearly without any ambiguity and recording the reasoning for the same. It should not attempt to record all that was said and who said it as this may lead to endless correspondence. It is however necessary to record important details of the technical discussions particularly the rationale behind decisions and also points of disagreement (for contentious issues, the views of various members may be properly recorded).

5.5.3 All the comments received on the published and draft standards should be disposed of recording justification particularly for any disagreement with the comment. Proceedings and minutes are primarily meant for those who took part in the meeting and those who have to take action on them. When a member of the committee renders special meritorious service, the committee should record its appreciation suitably.

5.5.4 Draft minutes should preferably be prepared on the same day but definitely within a week of the meeting. Every effort shall be made to obtain an early approval of the Chairperson for the draft minutes. In case of difficulty in obtaining the approval of the Chairperson in time, the draft minutes may be circulated to the members and got approved by circulation.

5.5.5 The minutes approved by the Chairperson or otherwise shall be circulated to the members of the Committee by uploading on BIS Standardization Portal of eBIS (www.manakonline.in). A deadline, of not more than two weeks shall be fixed by which comments on minutes on the accuracy of the recording, if any, should reach the member secretary and beyond which it will be assumed that the members concerned have no comments to make.

6 STANDARD FORMULATION

The Secretariat of Sectional Committee is responsible for the management of all standards development work identified in the work programme of that Sectional Committee, including

monitoring of their progress against the agreed target dates. The sequence of stages through which the technical work is carried out and a standard is developed are given below.

6.1 New Work Item Proposal (NWIP)

6.1.1 NWIP stage is proposal stage for development of standard on new subject. As provided in Rule 22 (1) of BIS Rule, 2018, requests for new Indian Standards or revision or amendment to existing standards may come from any Ministry of Central Government, State Government, Union Territory Administrations, regulatory bodies, consumer organizations, industrial units, industry associations, professional bodies, members of Bureau, any individual and members of a BIS technical committee.

6.1.2 The proposal for a new subject (development of a new standard) shall be submitted online on Standards Portal of e-BIS (www.manakonline.in) giving relevant information. A proposer is expected to be able to demonstrate a broad need for the proposed standard, that the work is likely to have the participation/support of a wide range of stakeholder interests, that resources are likely to be available to provide an initial draft, that the project can be completed in reasonable time and that there is no conflict with any existing standard. The proposal shall be analysed to cover the following aspects:

i) Futuristic developments (such as national priority/policy imperatives of Government, bearing on Government legislation/ regulations, technology up-gradation/ transfer, harmonization with international standards/practices, addressing gaps in standardization and supporting upscaling of innovation);

ii) Economic importance (such as domestic trade, export potential/import substitution, variety reduction, resource conservation and energy conservation, circular economy;

iii) Social importance (such as health, safety, for weaker sections/disadvantaged groups, mass consumption, environment protection/waste utilization, consumer protection, accessibility and gender responsiveness, etc);

iv) Contribution to sustainability including UN SDGs; and

v) Others (such as implementablity/certifiably and any other aspect).

The proposal stage would not apply in the case of a revision of an Indian Standard.

6.1.3 The Sectional Committee shall analyze the proposal during a meeting The Sectional Committee shall, considering such analysis, arrive at a decision as to whether the subject would be taken up for standardization and if so, the priority/time-frame to be assigned.

6.1.4 A subject accepted by the Sectional Committee shall be thereafter placed in the Division Council for approval. In order to avoid any delay in the project, the Sectional Committee shall,

however, proceed with the development of the standard without awaiting the formal approval of the Division Council.

6.1.5 In case the Division Council feels it appropriate to disapprove a subject proposal, the Sectional Committee shall forthwith withhold further work on the proposed subject. It is however, the responsibility of the Sectional Committee and member secretary to ensure that subjects taken up, have the approval of the Division Council by the time such subjects progress to the finalization stage of a standard. When a proposal is rejected by the Sectional Committee/Division Council, the proposer shall be informed of the decision.

6.2 Preliminary Drafts (P Draft)

6.2.1 The P draft shall be circulated to all members of the Sectional Committee and concerned (s) and panel(s) for comments, with a clear indication of the last date for sending comments (not less than 2 weeks after circulation).

6.2.2 In-depth analysis of P-drafts by members

Preliminary draft stage of a standard is the occasion for the members of the SC to undertake a nuanced and in-depth analysis of the proposed standard. Abstaining from commenting on the P draft by a member, therefore, has serious implications for the quality of the draft. Members must either support or reject it or offer their comments for improvement (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

6.2.3 Comments on P drafts shall be made only through the Standardisation Portal of e-BIS (www.manakonline.in).

6.3 Wide Circulation Drafts (WC Draft)

6.3.1 WC draft, apart from the members of concerned sectional committee shall be circulated to all those who may be interested and are expected to contribute as identified under the signature of the departmental head.

6.3.2 The period of circulation shall be determined by the committee concerned which should normally be 60 days but not less than one month and hosted on BIS website for free access to the public for comments. For draft Indian Standards identical to ISO/IEC standards, only the national foreword (along with other details from the standard as made available gratis by ISO/IEC in their website) is to be hosted on BIS website and the full text of the standard made available to stakeholders on receiving specific requests only.

6.3.3 WC drafts may be specifically circulated to the following stakeholders for their comments, as applicable: a) Key producers; b) Key users/consumers, civil society organizations/NGOs; c) Key technologists (professional bodies, R&D and scientific institutions, academia, testing and calibration laboratories, etc); d) Central and State Government departments likely to be interested; e) Members of the Sectional Committee, members of the concerned (s) and Panel(s)/Working Group(s); f) Members of the Division Council which has appointed the Sectional Committee; and g) Members of the other Sectional Committee(s), (s) and Panel(s) with whom liaison is felt necessary.

6.3.4 Comments on wide circulation drafts shall be made only through the Standardisation Portal of e-BIS (www.manakonline.in). It not only helps in compiling and analyzing the comments, but also helps in the documentation of the standards formulation/review process.

6.4 Final Drafts

The Sectional Committee after considering all comments on the circulated draft finalizes the draft standard with or without changes. A decision to finalize and adopt a draft Indian Standard as an Indian Standard is taken following the principle of consensus. The decision to finalize a document should be taken in a meeting of the Sectional Committee and decision through a process of circulation is not recommended and should be avoided.

6.5 Review of Standards

6.5.1 General

If required, standards or some of their provisions may be reviewed from time to time due to various reasons such as technological changes, technical comments received and changes in other connected standards. However, all standards have to be reviewed at least once in five years, as provided in Rule 23 of BIS Rules, 2018. Every standard shall, therefore, be reviewed by the Sectional Committee responsible within five years after publication (three years in case of LITD standards) or its last reaffirmation. Review of the standard may give rise to any of the following conclusions:
- i) Continuing without any change to the standard,
- ii) Necessity of revision/amendment to the standard, or
- iii) Necessity of withdrawal of the standard.

In case of (a), the standard is reaffirmed and in case of (b), the standard is taken up for revision/amendment. However, till the establishment of the revised standard/amendment, the existing standard may be reaffirmed.

6.5.2 Process for review

6.5.2.1 When a standard is due for review, a basic evaluation shall be made on the present position of base standard if any, technological developments in the country and elsewhere that may be relevant, harmonization status against International Standards, etc. and provide any proposal for further consideration of the committee. The Sectional Committee shall be approached along with available information to consider a more detailed Action Research based review is required to be undertaken. Detailed guidelines on Action Research Projects are mentioned in clause 10 of this handbook.

6.5.2.2 The preparation for the examination of the standards due for review should, therefore, start well in advance, so that reaffirmation with examination does not become unavoidable for the constraint of time. Meetings of sectional committees are convened based on priorities involved and normally once in three months.

6.5.2.3 The Action Research for the review of standards may be assigned to the member secretary of the Sectional Committee, other scientific officers of BIS, members of the Sectional Committee, panel, working group, an expert, academic or research institution, industry association, a specific industry, ministry or an organization thereunder, etc. The Sectional Committee shall decide the individuals or organizations to be assigned Action Research Projects (ARP).

6.5.2.4 The report from the review along with the draft document of proposed revision/amendment shall be considered by the Sectional Committee to decide whether the standard should be reaffirmed, amended and reaffirmed, taken up for revision and reaffirmed, or withdrawn. Following the receipt of comments and appropriate consultation on them with the Chairperson or at a meeting, the Sectional Committee decides the action to be taken on the standard.

6.5.3 Archiving

Policy of archiving has been adopted to help the Sectional Committees prioritize the review of standards. The standards, which cannot be withdrawn, but have lost relevance due to diminishing use in the wake of onset of new products, processes or test methods, can be archived, and a mention to this effect shall be made against that standard in the database of the published standards. This will not only enable the SCs to focus on more important standards, but will also keep the window open for the stakeholders to point out if the review is required (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

7 ANNUAL PROGRAMME FOR STANDARDIZATION

7.1 Basis for Preparation of Annual Programme for Standardization

7.1.1 Each of the Sectional Committees is required to prepare the Annual Programme for Standardization based on the inputs from the Standard National Action Plan (SNAP), Standardization Cells of the Ministries/Departments, Standardisation Cells of the Industry Associations, NWIPs received from diverse sources, ISO/IEC NWIPs, standards/drafts and Indian Standards due for review (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

7.1.2 To prepare the comprehensive roadmap for APS, BIS has adopted mechanism to get inputs of Ministries/Departments, industries and BIS licensees beforehand. To achieve this, interactive webinars/meetings are held with Industry Associations, BIS licensees and Standardization Cells of Ministries/Departments.

7.1.3 Annual Plan for Standardization to be shared with ministries/department for further actions at their end like tracking status of APS through participation in committee meetings, accessing and commenting of draft documents of subjects covered in APS as and when circulated by BIS, stakeholder consultations and encouraging industries for adoption of standards.

7.1.4 Provision has been made on the BIS Standardization Portal of e-BIS (www.manakonline.in) to prepare the Annual Plan for Standardization online. Ministry/Department wise Annual Programme for Standardization is can be accessed online through following link:
https://www.services.bis.gov.in/php/BIS_2.0/actionplan_new/Standard/ministry_wise_report/

7.2 Prioritization of Work

The primary criterion to decide whether to include a subject in the APS is to be the need of/demand for the standard. Once the need is established, the work to be prioritized under following grades:

Grade 1 Request received from Ministries.
Grade 2 QCOs have been notified.
Grade 3 QCOs have been proposed.
Grade 4 QCOs may be proposed.
Grade 5 Standard already revised/replaced by new one.
Grade 6 Proposal received from Manak Manthan/Manak Mantrana.
Grade 7 Proposal from any other stakeholder.
Grade 8 SNAP implementation.
Grade 9 NWIP taken from ISO/IEC level.

7.3 Guidelines for Preparation of APS

i) After prioritization, each Sectional Committee to prepare a statement in the following format in respect of the items for new works and revision included in the APS:

Sl. No	Title of the Subject	Stage of Development (published, under publication, FD, WCD, PD, WD, Action to be initiated)	Priority Grade	Mode of Execution: (Intern, consultant, ARP, R&D, Member Secretary on his/her own)

ii) Once the subjects/standards have been identified for the mode of execution, the next task is to look at the subjects /standards which do not figure against any of the priority grades. Here, the either of the actions: whether to drop (for NWIP), archive/reaffirm & archive (for standards for review) or take up for formulation/review to be indicated.

iii) Against each of the pre-2000 standards if it is to be archived and against each of the standards due for periodic review, if it is to be reaffirmed &archived to be indicated. This will leave them with those standards which are fit to be reviewed. The decision that will have to be taken at this stage is which of the pre-2000 standards should be included in the APS.

8 ENGAGEMENT WITH ACADEMIA

8.1 Memorandum of Understanding

8.1.1 Academia has a special place in the standardization eco-system, as their participation in the standards formulation process not only brings in the conceptual clarity and evidence-based perceptual insights, but also works as a filter for the competing interests of different stakeholders, helping the Sectional Committees in arriving at balanced and unbiased decisions. BIS has entered into MoUs with a number of revered academic institutions to collaborate in the areas of standardization and conformity assessment.

8.1.2 There are several ways in which the academia and BIS collaboration may contribute effectively to the standards formulation process and Sectional Committees may leverage from this collaboration, as follows:

i) Faculty of member academic institutions getting the membership of the Sectional Committees, Working Groups of BIS, etc.
ii) Institutions sharing insightful comments on the draft and existing standards
iii) Creation of Standards Clubs to inculcate quality consciousness through a vibrant group of young brand ambassadors
iv) Teaching of Indian Standards as part of the regular teaching-learning process in institutions
v) Learning Science via Standards wherein lesson plans based on Standards are prepared to demonstrate the application of scientific laws and principles behind formulating a Standard

8.2 Expectations from Academia having MoU with BIS

i) Coordinating R&D efforts towards development of standards and inputs to the drafts of new Indian Standards or revision/amendment of Indian Standards or are of relevance to Conformity Assessment Schemes of the Bureau.

ii) Undertaking review of Indian Standards involving thorough analysis of technical developments that product/processes/practices/use have or taken place in the application/testing/input materials, the international standards available, etc relevant to the standard under review.

iii) Preparation of handbooks/literature/case studies on implementation of Indian Standards and Conformity Assessment.

iv) Sensitizing and strengthening participation of the faculty/professors of institute in standards formulation activities of the Bureau.

v) Organization of joint seminars, conferences, workshops, symposia or lectures on topics of Standardization and Conformity Assessment of common interest for dissemination of knowledge. At least one lecture to be given by the Chair Professor every year at an event organized by the Bureau.

vi) Exchange with incubation centres in institute for promoting how standards can encourage/facilitate innovation.

vii) To provide adequate and suitable office and laboratory space, access to the library and other central facilities such as Institute Computer Centre, Institute Instrumentation Centre etc to help BIS Standardization Chair Professor to carry out his/her mandate.

9 RESEARCH AND DEVELOPMENT (R&D)

9.1 Research and Development (R&D) projects are critical to the quality of standards. No standard should be developed or reviewed without examining if a R&D project is necessary to be taken to collect relevant data and evidence and develop a clear understanding of the issues involved.

9.2 In accordance with the Research and Development (R&D) guidelines, small R&D projects involving financial requirements up to Rs 10 lakh may be granted to members of sectional committees, panels, working groups and faculty or research scholars affiliated with academic institutions under memorandum of understanding (MoU) with BIS. However, sectional committee can recommend the R&D projects requiring financial support beyond Rs 10 lakh for approval of BIS.

9.3 The following are eligible for carrying out research & development projects under the scheme:

i) Academic institutions & universities having MoU with BIS and faculties and research scholars thereof;
ii) Member(s) of Technical Committees of BIS.

iii) Government research laboratories of repute like CSIR, DRDO, ICAR etc.

9.4 The Sectional Committee is responsible for recommending the Scope and Terms of Reference (ToR) for each R&D project. Projects recommended by the Sectional Committees undergo scrutiny and approval by a dedicated review committee established for this specific purpose. Subsequently, the details of the R&D projects are made accessible on the BIS Standardization Portal of e-BIS (www.manakonline.in) and notifications of new projects are disseminated to SC members, faculty, and research scholars via the portal. The Sectional Committee is also responsible for monitoring the progress of the project and approval of the final report.

9.5 All proposals to undertake an R&D project shall be submitted through the online portal of e-BIS (www.manakonline.in).and are subject to examination and approval by the research evaluation committee specifically constituted for this purpose.

10 ACTION RESEARCH PROJECTS

10.1 Action Research Based Approach

As a foundational policy, review of each and every existing standard should be preceded by an Action Research Project ensuring a thorough evidence-based review of standards due for periodic review and where required revise the standard reflecting the state-of-the-art and considering the latest technological developments globally through review module of BIS Standardization Portal of e-BIS (www.manakonline.in). However, the Sectional Committee (SC) may, through a deliberate decision documented in the minutes of the SC meeting, waive this requirement, if it determines that the available data and information for revision are deemed sufficient and do not necessitate further research.

10.2 Activities Required in Action Research Project

Action research project implies that preparation of a review document to be put up to the committee for consideration must be preceded by the following activities:
  i)   Study and analysis of relevant international standards.
  ii) Literature survey on the subject.
  iii) Study of changes in the technologies, practices, testing (including where necessary visiting relevant industry and feedback from laboratories or certification);
  iv) Interaction with BIS offices and labs for feedback on certification and test method related issues; and
  v)   Any comments/suggestions received and ongoing discussions in the committee relating to the standard

10.3 Who Can Carry Out Action Research Project

The Action Research for the review of standards can be assigned to the members of the sectional committee, sub-committee or working panel, academic or research, institution, industry association, a specific industry or ministry and an organization, thereunder.

The Sectional Committee shall decide the individuals or organizations to be assigned Action Research projects. After proper review of standard as indicated above, if member/panel whom the standard has been allocated felt that revision is required in the standard, the draft for revision of standard to be submitted to the sectional committee within specified timeline.

11 RESOURCE SUPPORT TO THE MEMBERS

i) Chairpersons of Sectional Committees are entitled to a sitting allowance of Rs. 20,000 for each of the Sectional Committee meetings.

ii) Experts /Professionals, excluding the scientific officers of BIS, having been assigned an action research project (ARP) shall be entitled to honorarium of Rs. 40,000/- along with a letter of recognition on the acceptance of the report by the Sectional Committee concerned. If the ARP is assigned to a working panel, the honorarium of Rs. 20,000/- shall be payable to each of members of the working panel on acceptance of the ARP by the Sectional Committee concerned.

iii) The payment of honorarium to the Chairperson of a Sectional Committee or the expert/professional shall be subject to the rules of the organization, the expert/chairperson belongs to, in regard to the acceptance to honorarium by the officials thereof.

iv) Members can send requests for providing international standards for carrying out standardization work efficiently. Members can also send requests for subscription of Journals.

12 MANAK MANTHAN

12.1 One of the areas of concern has been the poor visibility of the new standards and the draft standards floated for comments. SMEs and the manufacturers or users at the grassroot level remained outside the process of consultation. Manak Manthan is conceptualized as an effective answer to this problem.

12.2 Every Branch Office of BIS is required to hold a brainstorming session with the manufacturers, users of standards, members of academia etc. every month on the new standards and draft standards with relevance in their jurisdiction, and share the feedback received from local stakeholders with the concerned standards formulation department. Thus, it serves as a platform for the formal launch of

the new standards thereby facilitating their implementation and ensuring discussion on draft standards amongst larger stakeholders which results in getting more inputs to improve the quality of standards.

13 STANDARDIZATION CELLS

With a view to creating an institutional mechanism for effective coordination and synergy with the Bureau of Indian Standards, in the development, promotion and implementation of the Indian Standards to create a robust quality ecosystem in the country, Standardization Cells in the Industry Associations and Ministries are created. Standardization Cells are expected to involve the right kind of experts and professionals to be inducted in the SCs, panels and WGs. Details of the Standardization Cells can be seen on the BIS Standardisation Portal of e-BIS (www.manakonline.in). The functions of Standardization Cells are as follows:

i) Identification of the new areas and subjects for standard development;
ii) Preparation of the Annual Programme for Standardisation;
iii) Identifying and nominating experts to the Sectional Committees and Working Panels of BIS;
iv) Examination of the Indian Standards to be included in the guidelines for the programmes and schemes of the department;
v) Identification of the Indian Standards for mandating compulsory certification and drafting of QCOs;
vi) Organizing consultation with the industry and other stakeholders to promote the use of Indian Standards and sharing the feedback with BIS;
vii) Leveraging the capacity-building programmes of BIS.

14 PARTCIPTION IN ISO/IEC LEVEL STANDARDIZATION

14.1 General

BIS, being the National Standards Body, represents India in International Organization for Standardization (ISO) and through the Indian National Committee of IEC, in International Electrotechnical Commission (IEC). BIS may choose to be a Participating member (P-member) or an Observer member (O- member) in any of the Technical Committees or s of ISO and IEC. The decision to participate in an international Technical Committee/ rest with the concerned Sectional Committee of BIS (with the approval of its Division Council), whose scope of work is similar or aligned (fully or partly) with the scope of work of an ISO/IEC committee. Such a committee of BIS is called the National Mirror Committee (NMC) of the corresponding ISO/IEC committee. The decision to participate and the extent of involvement/participation in the international

standardization work is based on the relevance of the international work to India and the expertise available in the country to involve in and contribute to the work of the ISO/IEC committee

14.2 Leadership Positions in ISO/IEC

Harmonizing national standards with international standards provides opportunities for Indian industries to be globally competitive and have market access. To facilitate the adoption of international standards, it is necessary that national requirements get addressed at the time of development of international standards.

While participating in Technical Committees and s of international standards bodies (ISO/IEC) enables India to comment on draft standards and pursue the incorporation of requirements that are of interest of Indian stakeholders, it is more important to be able to influence the development of international standards from the very beginning. Participation of Indian experts at the Working Group level of ISO/IEC is therefore of critical importance.

For India to effectively influence international standardization work, it is also crucial that our participation in the Technical Committees of the international standardization bodies is on subjects that are of interest based on strategic considerations like trade and dissemination of technologies. It is simultaneously important to look into potential areas of standardization where India can play a leadership role particularly in sectors of the economy where India has the potential to influence the global economy, trade or technology.

In light of the above considerations, BIS Sectional Committees/Division Councils need to identify priority areas of participation in ISO and IEC that are of strategic importance to India, identify relevant experts who would participate (emphasizing on ensuring continuity in such participation) and decide on which of the committees India needs to actively engage in. It is also a constant endeavour for all Sectional Committees to identify subjects where India can propose new work items for standardization or propose new areas of work and establishment of new technical committees and stake claim of secretariats of such committees.

14.3 How to Submit Proposal for New Work at ISO/IEC Level

14.3.1 Proposal for a new field of technical activity

A proposal for a new field of technical activity to be submitted in ISO Form 1 justifying need for new field of technical activity. The scope shall precisely define the limits of the field of activity. Scopes shall not repeat general aims and principles governing the work of the organization but shall indicate the specific area concerned.

14.3.2 Proposal for a new work item

New Work Item Proposal (NWIP) required to be submitted in ISO Form 4. This includes defining the scope, justification why Society needs the standard, what sustainable development goals are supported, who the stakeholders are etc. The scope shall give a clear indication of the coverage of the proposed new work item and if necessary for clarity, exclusions shall be state. A project leader must be identified to be able to start the project.

14.4 Acquiring ISO Secretariat and Secretariat Responsibility by BIS

14.4.1 Secretariat of a Technical Committee and is allocated to a national body/national committee only if the national body/national committee:

   i)   has indicated its intention to participate actively in the work of that Technical Committee or and;
   ii) has accepted that it will fulfill its responsibilities as secretariat and is in a position to ensure that adequate resources are available for secretariat work. Once the secretariat of a Technical Committee or has been allocated by ISO to the national body/national committee, the latter shall appoint a qualified individual as Committee Manager (for ISO committees)/Secretary (for IEC committees).

14.4.2 The secretariat shall ensure the timely execution of the following:

   i)   Launch of CIB ballots and the treatment of the comments received;
   ii)   Preparation of meeting including: establishment of the agenda and arranging for its distribution, arranging for distribution of all documents on the agenda, including reports of the secretariat and the working group, and indicating all other documents which are necessary for discussion during the meeting; and preparation of compilation of comments on documents which appear on the agenda
   iii) Recording of discussions taken in a meeting and making these decisions available for confirmation during the meeting as resolutions;
   iv)   Preparation of the minutes of the meetings;
   v)   Preparation of reports to the parent committee (SC Secretariat);
   vi)   Preparation of enquiry drafts and final draft International Standards
   vii) Registering documents at various stages with the ISO Central Secretariat/IEC Central Office;
   viii) Ensure project management and maintenance of timelines of all projects under the committee.

14.5 Processing of ISO/IEC Draft Standards for Casting Vote on Ballots

14.5.1 General

International Standards are developed through a sequence of project stages as follows:

i)   Preliminary Stage [Preliminary Work Item (PWI)]
ii) Proposal Stage [New Work Item Proposal (NP)]
iii) Preparatory Stage [Working Draft (WD)]
iv) Committee Stage (CD)
v)   Enquiry Stage [DIS(ISO)/ CDV(IEC)]
vi) Approval Stage (FDIS)
vii) Publication Stage (ISO, IEC or ISO/IEC)

PWI, NP, CD, DIS/CDV and FDIS are referred to the P-members and O-members for voting. Member countries are expected to examine these documents in the light of national work and trade interests.

14.5.2 Constitution of special panels and consultation on draft documents

It is recommended that Sectional Committees may constitute small panels for consultation on ISO/IEC draft international standards/documents and questions submitted for voting. The relevant documents shall be circulated to the members of the panel constituted for the purpose and to any other expert/stakeholder deemed necessary to obtain comments on the documents.

In order to stimulate response from members of panel/other stakeholders on the ISO/IEC draft/documents, it is encouraged that along with the FDIS/DIS(CDV)/CD a short summary be sent by the secretariat informing on the following aspects:

i)   Whether an Indian standard corresponding to the FDIS/DIS(CDV)/CD exists or not;
ii)   If it exists, does it differ significantly from the FDIS/DIS(CDV)/CD and if so, in what major respects;
iii)   Is it intended/desirable to revise the Indian Standard to align with the FDIS/DIS(CDV)/CD or is it intended /desirable to suggest change in the FDIS/DIS(CDV)/CD; and
iv)   If no Indian Standard exists, is it intended/required to prepare an Indian Standard based on the FDIS/DIS(CDV)/CD.

Where India votes in favour of a new work item proposal it is recommended to nominate an expert/experts to participate in the development of the standard.

14.5.3 Analysis of Comments and Casting of Ballots

On receiving the comments from the experts of the Panel/other stakeholders, these shall be analyzed and suitably edited. The observations may be of following nature:

i)   Approval of document as presented;
ii)   Approval of the document with editorial or other comments;
iii)   Disapproval of the document due to some technical reasons, citing the reasons; or
iv)   Abstaining the ballot (applicable when a national opinion or consensus on the subject could not be evolved).

The documents along with the edited comments should be sent to the Chairperson of the concerned Sectional Committee (that is the NMC) for approval before casting the ballot. It is the responsibility of the Head of the Department for casting the ballot. The head of the department shall monitor and ensure timely voting for Technical Committees and s where India is a P-member.

14.6 Participation in ISO/IEC Meetings

14.6.1 General

Indian experts who are nominated in Working groups/Task Forces etc of ISO/IEC are expected to actively involve themselves and contribute in the work of the Working group/Task force and attend meetings of these groups. Experts nominated in Working Groups are expected to act in their individual capacity while developing/drafting standards in the Working Groups. However, they are required to inform the NMC of their contribution and progress of the work. Participating in Working Groups provide the right opportunity to and are critical in exerting the right influence in the development of the international standards right from the beginning.

14.6.2 Nominating experts in working group (WG)

Any member of the concerned NMC (or its /panel/working group) shall be eligible for consideration. While nominating the experts, the following shall be given due consideration:
i)   The knowledge and expertise of the expert in the subject area,
ii)   Willingness of the individual to fulfill the responsibilities and expectations and commitment to devote ample time for such purpose and of their organization (or the individual in case of experts in individual capacity) to provide necessary resources for the same.

14.6.3 Indian delegation for attending ISO/IEC meetings

While selecting the delegates, the Sectional Committee (NMC) shall keep in view the following:

i)	Knowledge and familiarity of the subject/scope coming up for discussion at the international meeting;
ii)	Familiarity with the rules and procedures of business transacted in the meeting;
iii)	Specialized technical knowledge and experience in the area, active participation in the ISO/IEC work through the corresponding national work;
iv)	Knowledge of Indian as well as complementary positions on the subject and associated ability to put forth Indian view point;
v)	Willingness to work within the brief agreed to.

14.6.4 Briefing and Debriefing meeting

14.6.4.1 Briefing of and debriefing by the experts nominated to the meetings of ISO or IEC is compulsory. This will ensure that our experts are fully prepared to represent the country's interest. This, in turn, will ensure that ISO/IEC standards are already aligned to the needs of our stakeholder in the country and can be adopted without a time lag (*BIS office order Ref: P&C/09/18/2023-P&C-BIS dated 9 November 2023*).

14.6.4.2 Some of the important discussion items for briefing and debriefing meetings are as follows:

i) Expected contribution/contribution of Indian delegation and usefulness of the meeting.
ii) Any issues which need to be taken up subsequently.
iii) Any action points.
iv) Important decisions and decisions especially on Indian view point.

15 DIGITAL SOLUTIONS FOR STANDARDIZATION

15.1 The entire standardization activity of BIS covering the management of committees, the development and maintenance of the standards including submission of standardization proposals, circulation of draft documents for comments, publication and notification of published standards, project management, management of meetings as well as related communication with committee members and participation in international standardization like accessing ballots, submission of NWIP are all carried out through digital platforms, the 'Standards Portal' and 'International Relations Portal' of eBIS (www.manakonline.in). The platform provides necessary interfaces with committee members for such purposes, with different levels of access provision.

15.1.1 Accessing BIS Standards Portal

BIS Standards portal can be accessed as follows:
• Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.

- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "Standards Portal" tile.

Further guidance to access different tiles on standards portal is provided in Annexure 1. Same can also be accessed through following link:
https://www.services.bis.gov.in/php/BIS_2.0/eBIS/how-to-use

15.1.2 Accessing BIS International Relations Portal

BIS International Relations portal can be accessed as follows:
- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "International Relations Portal" tile.

Annexure 1

1. Accessing Published Indian Standards

- Go to e-BIS Portal (www.manakonline.in).
- Click on the "Standardization" tile, available below the center image.
- Click on the "Published Standards" tile, available below the "News & Events" Section.
- Subsequently, department wise details of published Indian Standards (both new & revised) will be displayed in a new webpage.
- On clicking the department name, committee wise details of published Indian Standards will be displayed and on clicking the counts shown against the department or committee, details of Indian Standards published by that department or committee will be displayed.li>

2. Accessing Standards Under Development

- Go to e-BIS Portal (www.manakonline.in).
- Click on the "Standardization" tile, available below the center image.
- Click on the "Standards Under Development" tile, available below the "News & Events" Section.
- Subsequently, department wise details of documents under development will be displayed in a new webpage
- On clicking the department name, committee wise details of documents will be displayed and on clicking the counts shown against the department or committee, details of documents developed by that department or committee will be displayed.

3. Accessing details of Sectional Committees

- Go to e-BIS Portal (www.manakonline.in).
- Click on the "Standardization" tile, available below the center image.
- Click on the "Technical Departments" tile, available below the "News & Events" Section.
- Subsequently, department wise details of sectional committees will be displayed in a new webpage.

On clicking the department ame or counts shown i   echnical committee, details of sectional committees will be displayed.

4. Accessing details of Working Panels or Working Groups

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Technical Departments" tile, available below the "News & Events" Section.
- Subsequently, department wise details of Working Panels and Working Groups will be displayed in a new webpage.
- On clicking the department name or counts shown in Working Group or Panel, details of Working Groups or Panels will be displayed.

5. Applying for membership of Sectional Committees

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "Standards Portal" tile.
- Go to "B come a memb r" option in the left menu and click on "Submit Request" button
- Click on "Submit Request" button
- Enter your details and submit

6. Applying for membership of Working Groups

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "Standards Portal" tile.
- Go to "Become a member" option in the left menu and click on "Submit Request" button
- Enter your details and submit

7. Access details of R&D projects and submission of proposals

Go to e-BIS Portal (www.ma akonline.in) and click o he "Standardization" tile.

- Click on the "R&D Projects" tile available below the "News & Events" Section.
- Subsequently, all the R&D Projects being offered by BIS will be displayed in a new webpage.
- Applicant can physically submit their proposal in a "single stage – two envelope bid system" consisting of separately sealed "Technical and Financial proposals"
- Subsequently, the applicant can update the details of their proposal by clicking on the "Submit Proposal" button to receive future updates on their proposal.

8. Sharing details of Research projects of Institution

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "Standards Portal" tile.
- Go to "Submit Activity Report" option in the dashboard
- Enter th details of Res arch Projects and submit

9. Commenting on Wide Circulation Drafts.

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Wide Circulation Drafts" tile available below the "News & Events" Section.
- Subsequently, department wise details of documents will be displayed in a new webpage. On clicking the department name, committee wise details of documents will be displayed and on clicking the counts shown against the department or committee, details of documents developed by that department or committee will be displayed.
- Click on the button "Comment" against the relevant Wide Circulation Draft
- Login into the portal and submit your comments.

10. Proposing New Work Items.

Go to e-BIS Portal (www.ma akonline.in) and click o he "Standardization" tile.

- Click on the "Login" button available on the top right corner and enter your credentials to login into our portal
- Click on the "Standards Portal" tile
- Go to "Propose a new standard" option in the left menu and click on the link "Submit a new proposal".
- Enter the proposal details and submit.

11.Accessing Know Your Standards (Please click here to access the user manual)

- Go to e-BIS Portal (www.manakonline.in) and click on the "Standardization" tile.
- Click on the "Know Your Standard" tile, available in the top bar.
- Select whether you want to search Indian Standard by IS number, keyword, ecomark
- Enter the IS number or keyword as per your previous selection and click on the Search icon
- All the relevant details of your search input will be displayed. Click on the tile "Indian Standard" to download the Indian Standard. The user will be redir cted to BIS Sal s Portal wherein the relevant Indian Standard can be downloaded.

12.Accessing Weekly Standards Bulletin

- Go to e-BIS Portal (www.manakonline.in).
- Click on the "Standardization" tile, available below the center image.
- Click on the "Weekly Standards Bulletin" tile available in the "Documents" Section.
- Subsequently, the latest Weekly Standards Bulletin will be displayed in a new webpage.