

BUREAU OF INDIAN STANDARDS
(WATER RESOURCES DEPARTMENT)

RESOLUTIONS

Water Resources Planning, Management, and Evaluation, WRD 06		21st Meeting
Day and Date	Time	Venue
Wednesday 26 June 2024	11: 00 A.M.	Virtual Meeting: https://bismanak.webex.com/bismanak/j.php?MTID=mdb867a44fbac5aacbcbb7c9363247fe
Link of the Meeting: https://bismanak.webex.com/bismanak/j.php?MTID=mdb867a44fbac5aacbcbb7c9363247fe		
Password: UYrpeFfY634		
Chairperson: SHRI YOGESH PAITHANKAR, CHIEF ENGINEER(PAO), CENTRAL WATER COMMISSION		Member Secretary: SHRI NAVDEEP YADAV, ASSISTANT DIRECTOR, WRD, BIS

PARTICIPANTS:

S.No.	Name	Email
1)	Shri Balwan Kumar, Director, CEA	balwan72@nic.in
2)	Chief Auditor, Water & Irrigation, WRD, Maharashtra	cemwrdc@gmail.com
3)	Dr. Dhruvajyoti Sen, IIT Kharagpur	djsen@civil.iitkgp.ac.in
4)	Shri Dileep Tawar, WRD Maharashtra	ddt2007.tawar@gmail.com
5)	Shri Dilip Yewalekar, Jain Irrigation Systems Limited,	yewalekar.dilip@jains.com
6)	Dir canal, WRD Rajasthan	dircanal.wr@gmail.com
7)	Director BP-I, CWC	bpdte@nic.in
8)	Shri Sandeep Kumar Rajan, GFCC	dirc.gfcc@gmail.com
9)	Dr. Sridhar Patra, ICAR - Indian Institute of Soil and Water Conservation	mail2sridharpatra@gmail.com
10)	Dr. Uday Mandal, ICAR - Indian Institute of Soil and Water Conservation	udaymandal_icar@yahoo.co.in
11)	Mr. Sanjay Rana , HPPCL	pdc3hppclsnr@gmail.com
12)	Shri Hari Dev, Central Soil and Materials Research Station	haridev@nic.in
13)	Shri K K SINGH, Central Board of Irrigation and Power,	kksingh@cbip.org
14)	Dr. Manoj Khanna, Indian Agricultural Research Institute Library	mkhanna@iari.res.in

15)	Shri Padmakar Kelkar	padmakar.kelkar@gmail.com
16)	Smt Puja Kumari, NHPC	pujakumari@nhpc.nic.in
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19)	Smt. R. Sindhu	jddamdesign@gmail.com
20)	Dr. V. M. Yagni, SSNNL	npdcgateunit@gmail.com
21)	Shri Sagar khichi, DD, CWC	sagarkhichi-cwc@gov.in
22)	Superintending Engineer TNWRD	sedesignstnpwdwr@gmail.com
23)	Shri Suresh Maan , BBMB	directordesign2@gmail.com
24)	Shri Patanjali Agnihotri, SSNNL	patanjaliagnihotri@gmail.com
25)	Shri Z. Rahman, GFCC	sepippcirclepatna@gmail.com

ITEM 0 WELCOME AND INTRODUCTORY REMARKS

The Chairperson extended his warm welcome to all the members present in the 21st meeting of WRD 06 Sectional Committee. The Chairperson requested all the members for their active Contribution and regular participation in the meeting so that effective deliberation could be done in the Committee.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING

The Committee NOTED that no comments were received on the circulated minutes. The Committee therefore CONFIRMED the minutes of the previous meeting as circulated.

ITEM 2 COMPOSITION OF THE SECTIONAL COMMITTEE

2.1 The Committee NOTED the present Composition of the Committee as given in Annex 1 of the agenda.

2.1.1 The Committee NOTED the following organizations as listed below will be recommend to WRDC for withdrawal in the next meeting.

1. Ministry of Environment & Forests, New Delhi
2. National Bank for Agriculture and Rural Development
3. NTPC Limited
4. Water Resources Department, Chhattisgarh
5. Water Resources Department, Arunachal Pradesh
6. Geological Survey of India, Nagpur
7. Gujarat Engineering Research Institute, Vadodara
8. Indian National Committee on Surface Water, New Delhi
9. Irrigation & Power Research Institute, Amritsar
10. Jal Shakti Vibhag, Himachal Pradesh
11. Uttarakhand Irrigation Department

2.1.2 The Committee NOTED the following fresh nominations received from the member

organizations.

S. No.	Organization	Nominations
1	Ganga Flood Control Commission, Patna	Sh. Sandeep Kumar Rajan, Member Sh. Amitabh Prabhakar, Director (<i>Alternate</i>)
2	Hindustan Construction Company Limited, Mumbai	Shri Suryarao Chalamkuri, Chief Technology Officer (Shri Praveen Shettigar) (Alternate)
3	Irrigation & Water Resources Department, Haryana	Sh. Tarun Aggarwal, Superintending Engineer Sh. P. K. Luthra, Superintending Engineer, CDO

2.2 The Committee NOTED the request of nominations received through BIS portal. The Committee deliberated and decided that the composition was reviewed in the last meeting and is at its optimum strength. The Committee has decided to consider the received requests in the future when the need arises.

S. No.	Organization	Nominations
1	Tecton Engineering & Construction W.L.L	Shri R. Prabakaran, Sr.QS Engineer/Civil Engineer, Tecton Engineering & Construction W.L.L
2	Fotorbit Pvt Ltd	Shri Jibok Chatterjee, Director
3	Centre for Policy Research	Shri Neha Agarwal ,Research Associate
4	M/S Biswas Enterprise	Shri Nityananda Biswas, Proprietor
5	National Integrated Human And Industrial Development Agency(Nihida),Odisha	Shri Bhakta Bihari Mishra, Secretary
6	Wasser and Strom MEP Services	Shri Reghunadhan pillai, General Manager
7	Self Employed and currently working as a Freelance Technical and Business Development Consultants in various organizations	Shri Mangesh Dhamele, Consultant
8	NHPC Limited , Faridabad	Shri Ashok Kumar Grover, Retired Executive Director
9	M/S Biswas Enterprise	Shri Nityananda Biswas, Proprietor

ITEM 3 PROGRAMME OF WORK

3.1 The Committee NOTED the Present Scope and Programme of work.

3.2 Review of Published Standards:

The Committee NOTED and decided to reaffirm the following standards which are due for reaffirmation in 2024-25 as given below.

S. No.	IS No.	Title	Last Reaffirm Month/Year
1	IS 13028 (Part 1) : 2014 Reviewed In: 2019	Guidelines for integrated planning, development and management of river basins Part 1 Overall planning (First	Aug 2019

		revision)	
2	IS 4410 (Part 21) : 1987 Reviewed In: 2020	Glossary of terms relating to river valley projects Part 21 Flood control	2020

3.4 Standards National Action Plan (2022 – 27)

3.4.1 The Committee NOTED the following nominations received from member organizations and decided to name this as panel (P-1) and Dr M. Selva Balan, Central Water and Power Research Station, Pune as Convenor of this panel. Further, Shri Dileep Tawar, WRD Maharashtra informed the Committee that he will pursue Mechatronics Systems Private Limited, Pune for nomination in the panel. The Committee agreed to the

S. No.	Organization	Nominated Member
1.	Central Water Commission, New Delhi	Director, Gates Design (N&W), CWC (Presently Sh. Satish Kamboj, Director)
2.	Mr Amarappa Krishna, Bhagya Jala Nigam Limited Bangalore	Drop from the panel.
3.	Dr. M. Selva Balan, Central Water and Power Research Station, Pune	Official nomination letter received from Dr. M. Selva Balan., Scientist 'E' (Joint Director), Head Hydraulic Instrumentation & Canal Automation Divisions along with the letter of Approval from the Director, CWPRS
4.	Mechatronics Systems Private Limited, Pune	Shri Dileep Tawar will pursue for nomination..
5	Rubicon Water, Bangalore	Shri Sumith Choy, General Manager India Shri Anthony Oakes, Consultant, Rubicon Water (<i>Alternate</i>)
6	ICAR- Indian Agricultural Research Institute, New Delhi	Dr. Manoj Khanna

3.4.1.1 The Committee deliberated and decided to Co-opt Dr P S Rao and Mr Nilesh Salgaonkar in the panel.

3.4.1.2 The Committee noted and decided to request WRD 13 & WRD 16 for nomination of suitable experts in the panel.

ITEM 4 DRAFT STANDARDS NOTIFIED GAZETTE

4.1 WRD 06 (19372) Proforma for Reporting Progress During Construction for River Valley Projects Part 2 Hydel Works (First Revision of IS 13218 Part 2)

The Committee NOTED item 4.1 of the agenda.

4.2 WRD 06(19440) Guide for Preparation of Project Report for River Valley Projects (Second Revision of IS 4186)

The Committee NOTED item 4.2 of the agenda.

4.3 WRD 06(20273) Glossary of terms relating to river valley projects Part 17 Water requirements for crops (First Revision of IS 4410 Part 17)

The Committee NOTED item 4.3 of the agenda.

ITEM 5 DRAFT STANDARDS COMPLETED WIDE CIRCULATION

5.1 WRD 06 (22547) WC Proforma for Reporting progress during construction for river valley projects Part 3 Flood Control (First Revision of IS 13218 (Part 3))

The Committee NOTED and decided to FINALIZE the document for adoption and printing.

5.2 WRD 06 (22645) WC Recommendations for watershed management relating to soil conservation Part 1 Agronomic aspect (First Revision of IS 6748 Part 1)

The Committee NOTED item 5.2 of the agenda. The Committee deliberated and resolved the comments received from CBIP. The Decisions on the comments are placed in Annex 1.

ITEM 6 DRAFT STANDARDS COMPLETED P-DRAFT CIRCULATION

6.1 WRD 06 (22370) P Guidelines for fixing rates for irrigation water (First Revision of IS 14519)

{Earlier Doc. No. WRD 06 / WD2}

The Committee NOTED item 6.1 of the agenda. The committee decided to deliberate in the next meeting based on the inputs received from WRD Maharashtra.

S. No.	Clause	Comment	The decision taken in the 20 th meeting
1	3.5	1. The methodology for estimating evapotranspiration should be modified Penman Montheith method using climatological data. A software namely CROPWAT (FAO released in public domain) could be used for this purpose. 2. Irrigation efficiency should be clearly spelt out. (Surface irrigation: 60%, Sprinkler irrigation : 85% and Drip irrigation: 90%	The Committee deliberated on the comments.

2	4.1	In this section, Pipe distribution network which is being introduced in canal irrigated areas should be added. This is with specific Repair and maintenance cost involved.	The Committee deliberated on the comments.
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6.2 WRD 06 (24196)P Proforma for reporting progress during construction for river valley projects Part 1: Irrigation works [first revision of IS 13218 (Part 1)]
{Earlier Doc. No. WRD 06 (637)}

The Committee NOTED item 6.2 of the agenda. The Committee deliberated and resolved the comments received from SSNNL and WRD Bihar. The Decisions on the comments received are placed in Annex 2. The Committee decided to incorporate the resolved comments in the draft and place the document in Wide Circulation

ITEM 7 DRAFT STANDARDS UNDER PREPARATION

7.1 IS 10336: 1983 Guidelines for preparation of completion reports of multi – purpose river valley Projects

The Committee NOTED item 7.1 of the agenda. Shri Dilip Jha, Director PMO, CWC informed the committee that the document is under preparation and will be submitted within 2 months. The Committee decided to circulate the document as received from CWC as P-draft document among Committee members for comments.

7.2 IS 13142: 1991 Proforma for reporting progress of benefits created by river valley projects

The Committee decided to circulate once again with the members for inputs regarding relevance of standards in the present context which will be deliberated in the next meeting.

ITEM 8 STANDARDS TAKEN FOR REVISION

S. No.	IS No.	TITLE	Decision In The 21 st Meeting
1.	IS 4410 Part 1: 1991	Glossary of terms relating to river valley projects Part 1 irrigation practice First Revision	The Committee decided to deliberate in the next meeting.
2.	IS 4410 Part 11 Sec 5: 1977	Glossary of terms relating to river valley projects Part 11 hydrology Sec 5 floods	
3.	IS 4410 Part 14 Sec 1: 1977	Glossary of terms relating to river valley projects Part 14 soil conservation and reclamation Sec 1 soil conservation	
4.	IS 4410 Part 14 Sec 2: 1977	Glossary of terms relating to river valley projects Part 14 soil conservation and reclamation Sec 2 reclamation	
5.	IS 7560: 1974	Guidelines for allocation of cost	

		among different purposes of river valley projects	
6.	IS 13668: 1993	Guidelines for fixing intensity of irrigation	
7.	IS 13739: 1993	Guidelines for estimation of flood damages	The Committee deliberated on the comments received from Shri Dileep Tawar, WRD Maharashtra and the decisions on the comments are placed in Annex 3. The Committee to incorporate the resolved comments in the draft and circulate the document as P-draft document among Committee members for comments.

ITEM 8 NEW SUBJECTS UNDER PREPARATION

8.1 Guidelines for Integrated Planning, Development & Management of River Basins Part 2: Development and Management (as Part 2 of IS 13028: Part 2)

{Earlier Doc: WRD 6 (608)/Doc. WRD 06(674)}

The Committee NOTED item 8.1 of the agenda and deliberated on the status of document. The Chairperson informed that he will pursue with BPMO Directorate, Central Water Commission for expedited submission of inputs. The Committee decided to circulate the document as received as P-draft document among Committee members for comments.

8.2 Guidelines on Water Audit and Water Conservation Methods

The Committee NOTED item 8.2 of the agenda and deliberated on the status of document. WRD Maharashtra informed that they are working on the document and agreed to collate all the inputs on the document and submit the draft document within 1 month of time. The Committee decided to circulate the document as received as P-draft document among Committee members for comments.

8.3 Improving Water Use Efficiency

The Committee NOTED item 8.3 of the agenda and deliberated on the status of document. The Committee decided to request Dr. Manoj Khanna, IARI for expedite submission of the draft document.

S. No.	Organization	Nominated Member
1	ICAR - Indian Agricultural Research Institute (IARI), New Delhi	Dr. Manoj Khanna
2	ICAR - Indian Agricultural Research Institute (IARI), New Delhi	Dr. Sushma Sudhisiri
3	Central Water Commission, New Delhi	Ms. Jyotika Pegu, Director, IPO

		Directorate
4	Indian Institute of Technology, Roorkee.	Prof M L Kansal

8.4 Piped Irrigation Network

The Committee NOTED the nominations received for the working group and decided Sh. Sameer Kumar Shukla, Director BCD (N&W), CWC to be a Convener of this working group. CWC also agreed to provide contact details of the expert to be requested for nomination from WRD Madhya Pradesh.

S. No.	Organization	Nominated Member
1)	ICAR - Indian Agricultural Research Institute (IARI), New Delhi	Dr Manoj Khanna, Principal Scientist
2)	Central Water Commission, New Delhi	Director, BCD (N&W), CWC (Presently Sh. Sameer Kumar Shukla, Director)
3)	Maharashtra Krishna Valley Development Corporation, Pune	Dr. Hanumant Tukaram Dhumal, Chief Engineer
4)	Water Resources Department, Govt. of Madhya Pradesh	Not yet received
5)	Irrigation & CAD Department, Govt. of Telangana	Shri V. Raghunath Sharma, Executive Engineer Shri M.A Zaheer, Executive Engineer (Alternate)

ITEM 8 RESEARCH & DEVELOPMENT PROJECTS FOR FORMULATION AND REVIEW OF STANDARDS

The Committee NOTED item 8 of the agenda.

ITEM 9 ANY OTHER BUSINESS:

9.1 The Committee decided to plan the next meeting in the month of Sep 2024.

ANNEX 1

COMMENTS ON IS 6748 Part 1 FROM CBIP:

TITLE: Recommendation for watershed Management Relating to Soil Conservation Part 1 Agronomic Aspects

Sl. No.	Committee / Organisation/ Individual	Clause/ Subclause Paragraph Figure/Table	Type of Comment General / Technical/ Editorial	Comments (Justification For Change)	Proposed Change	Decision in the 21 st meeting
1.	WRD 06 (22645) Central Board of Irrigation & Power Shri K.K.Singh, Director (WR)	Sub Clause 4.1.1	General	In severely eroded cultivated land it is observed that surface velocity needs to be broken/staggered to reduce erosion and assist in growth of vegetation.	In last line "with bamboo/any soil reinforcement species benching particularly in slopy area" may be added.	Shri Dilip Yewalkar informed the Committee to provide input on this comment within 10 days. The Committee requested the Member Secretary to circulate the comment among the Committee members and resolve the comment in consultation with the Chairperson.
2.	WRD 06 (22645) Central Board of Irrigation & Power	Sub Clause 4.1.8	General	Sentence needs to be modified.	From line of bottom of para "should be" be replaced by "is".	The Committee Agreed to the proposed change.

ANNEX 2

COMMENTS FROM SSNNL:

Doc WRD 06 (24196) IS 13218 Part 1
Title: PERFORMA FOR REPORTING PROGRESS DURING CONSTRUCTION FOR RIVER VALLEY PROJECTS PART 1 IRRIGATION WORKS

Sl. No.	Name of the commenter/ Commenting organization	Clause/ Sub clause Paragraph Figure/Table	Type Of Comment General/ Technical/ Editorial	Comments (Justification For Change)	Proposed Change	Observations of the Secretariat
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	SSNNL. GANDH INAGAR	Performa Q1 3.1.1 (c) (iv)	Editorial		It may be ,add in last line "Irrigation Potential utilized progress/completed"	The Committee Agreed to the proposed change.
2	SSNNL. GANDH INAGAR	Performa Q1 3.1.2	Editorial	Bottlenecks	It may be , (a) Utility crossing (i.e. Interstate level/Intra state level) progress/completed (b) Land Acquisition progress/completed (c) farmer's protest (d) Flow of Fund (e) Inter departmental issues (f) Litigation ,court cases etc.	The Committee Agreed to the proposed change of clause a,b,d,e,f. In clause c) The Committee agreed to replace the Protest with consultation.

3	SSNNL. GANDH INAGA R	Performa Q3 clause (3.3)	Editorial	It is mentioned in column 9 “ Total expenditur e to date (Col 3 to 7) “	It may be “ Total expenditure to date (Col 3 + 7) “	The Committee Agreed to the proposed change.
4	SSNNL. GANDH INAGA R	Performa Q4 clause (3.4)	Editorial	Content in Table col. (1) to (7) are ok	It may be “Add two column necessary for completion of progress after end of the year (i.e. (1) Col (8) Potential created at the end of the year) (sum of 4 to 7) , (2) Col (9) Total Potential created till date (2+8) & (3) Col (10) Remarks	The Committee Agreed to the proposed change.

COMMENTS FROM WRD BIHAR:

Sl. No.	Committee/ Organization/ Individual	Clause/ Sub clause Paragraph Figure/Table	Type of Comment General/ Technical/ Editorial	Comments (Justification For Change)	Proposed Change	Decision in the 22 nd meeting
1.	WRD BIHAR	Table- PROFORMA Q2	Editorial	spelling mistake	Proporma Q-2 should be replace by Proforma Q-2	The Committee Agreed to the proposed change.

2	-Do-	Table- PROFORMA Q-4	-Do-	spelling mistake	-In second line Sate should be replace by State . -Spelling of utilization should be checked in fourth line.	The Committee Agreed to the proposed change.
3	-Do-	Table- PROFORMA A2(concluded)	-Do-	spelling mistake	In second line Fo should be replace by of .	The Committee Agreed to the proposed change.
4	-Do-	Table- PROFORMA A4	-Do-	spelling mistake	In table heading Major Medium should be replaced by Major / Medium	The Committee Agreed to the proposed change.
5	-Do-	Table- PROFORMA A5	-Do-	spelling mistake	Spelling of utilization should be checked in First line, last line as well as 3 rd and 5 th column in Table.	The Committee Agreed to the proposed change.
6	-Do-	FOREWORD- First page last line	-Do-	spelling mistake	Whether it is anti- sea erosion or anti- erosion- should be checked.	The Committee Agreed to write it as anti-erosion.
7	-Do-	FOREWORD- Second page third line	-Do-	reference code	In place of IS 2:2022 it	The Committee requested

					should be IS 13218 Part 1 - should be verified.	MS to check and resolve.
8	-Do-	PROFORMA Q-1 para 3.4 and 3.9	-Do-	spelling mistake	Spelling of utilization should be checked in para 3.4 and 3.9	The Committee Agreed to the proposed change.

Annex 3

Committee/ Organization /Individual	Clause/Su bclause/Pa ragraph	Type of comment General/Tec hnical/Editor ial	Comments (Justificati on for change)	Proposed change	Decision in the 21 st meeting
WRD06 Dileep Tawar Member	4.2 Methodolog y of Data Collection	Technical	New sampling techniques such as use of Satellite Maps and Drone surveys can be used to cover large areas of flood damages	Additional paragraph may be added to existing clause as follows <i>Survey and Sampling of affected areas should be carried out using modern techniques and tools such as use of Drones and latest Satellite maps to assess the damages more correctly</i>	The Committee Agreed to the proposed change.
	4.5 Flood damage s and Hydrologica l Factors	General	Since Climate Change is now happening to be a major factor for flooding	In continuation to this Clause 4.5 a) additional paragraph may be added as follows <i>Since Climate Change in recent years has caused significant changes in the intensity and the spread of flash floods it is important to consider the revised flood calculations for rivers and impounding structures</i>	The Committee did not agree with the comment since comment is very general in nature and not related to technical aspects.

Committee/ Organization /Individual	Clause/Su bclause/Para graph	Type of comment General/Tec hnical/Editor ial	Comments (Justificati on for change)	Proposed change	Decision in the 21 st meeting
	8.0 Fear,Anxiet y and Distress	General	Use of early warning systems and proper resettlemen t of affected people will help to reduce the anxiety and distress in future	This para may continue further as follows <i>However proper alternative resettlement and rehabilitation of the people who get affected frequently should be considered as a long term measure and the use of early warning systems based upon modern forecasting methods will help to reduce the distress and anxiety</i>	The Committee did not agree with the comment since the comment is very general in nature and not related to technical aspects.