



BUREAU OF INDIAN STANDARDS

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MINUTES

Document Dispatch Advice	
Ref	Date
LITD 22/A-2.14	09 May 2024

All Members of **Geospatial Information Sectional Committee, LITD 22**

Subject: Minutes for the Fourteenth meeting of Geospatial Information Sectional Committee, LITD 22

Date and Time

Monday, 29 Apr 2024
1030h

Venue

**Hybrid Meeting
Green Room, Manak Bhawan,
9, BahadurShah Zafar Marg,
New Delhi-110002)**

<https://bismanak.webex.com/bismanak/j.php?MTID=md127656b867e9cf91846aaf22b95934>

Dear Sir/Madam,

Further, to our meeting dated 29 Apr 2024, please find enclosed minutes of the fourteenth Meeting of above referred Committee held on 29 Apr 2024 in hybrid mode duly approved by the chairman.

Thanking you,

Yours Sincerely,
Sd/-
(Ashish Tiwari)
Sc'D'(Electronics and IT Dept)
Email: ashishtiwari2205@bis.gov.in

BUREAU OF INDIAN STANDARDS

MINUTES

FOURTEENTH MEETING OF GEOSPATIAL INFORMATION SECTIONAL COMMITTEE, LITD 22

DATE: 29 APR 2024
MONDAY
TIME: 1030 hrs

VENUE:
Green Room, Manak Bhawan,
9, BahadurShah Zafar Marg,
New Delhi-110002)

<https://bismanak.webex.com/bismanak/j.php?MTID=md127656b867e9cfc91846aaf22b95934>

CHAIRMAN:1. Dr. Debapriya Dutta, Individual Capacity

MEMBER SECRETARY: 2. Shri Ashish Tiwari

Members Present:

S.No.	Member	Organization
3	Smt Bansari Mangia	BISAG-N, Gandhinagar
4	Dr Sanjay Rajpal	BISAG-N, Gandhinagar
5	Shri T B N Singh	CGWB, New Delhi
6	Dr. Gajanan Ramteke	CGWB, New Delhi
7	Shri Karbhari Kale Vice Chancellor	DBATU
8	Shri Gokul C V	Dept. of Posts
9	Shri A Venkateshwar Reddy	Dept. of Posts
10	Dr Rajesh Mathur	ESRI, Noida
11	Shri Kamlesh Sharma	ESRI, Noida
12	Dr Anirudh Roy	Genesys International, Mumbai
14	Shri Nandan Kumar	GSI, Kolkata
15	Shri Harshika Kishore	GSI, New Delhi
16	Shri P Ramamurthy	IIC Technologies
17	Dr Surya S Durbha	IIT Bombay, Mumbai
18	Dr Sumit Sen	IIT Bombay, Mumbai
19	Dr Suman Gurjar	IMD, New Delhi
20	Shri S K Manik	IMD, New Delhi
21	Shri Kuldeep Srivastava	IMD, New Delhi
22	Shri. P S Acharya	In Personal Capacity
23	Shri Paragjyoti Garg	IN-SPACE, Ahmedabad
24	Dr Akhileshwar	ISRO
25	Dr Rajendra N Gaikwad	ISRO-SAC, Ahmedabad
26	Shri Sajikrishnan K	NATMO, Kolkata

27	Dr Manohar Yadav	MNNIT, Prayagraj
28	Dr G P Obi Reddy	NBSSLUP Nagpur
29	Dr Konga Gopikrishna	NSDI New Delhi
30	Shri R. N. Nanda	NSDI New Delhi
31	Cdr Victor Paul	NHO, Dehradun
32	Shri Uday Kumar	NIC, New Delhi
33	Dr V M Chowdary	NRSC, Hyderabad
34	Shri Harsha Vardhan Madiraju	OGC, New Delhi
35	Shri P V Rajasekhar	SOI, Dehradun
36	Smt Bindu Manghat	SOI, Dehradun
37	Shri Kaushik Dey	SOI, Dehradun
38	Shri Mahesh R	SOI, Dehradun
39	Dr U N Mishra	SOI, Dehradun
40	Shri Tushar Vaish	SOI, Dehradun
41	Shri Nirmalendu Kumar	SOI, Dehradun
42	Shri Sandeep Shrivastava	SOI, Dehradun
43	Shri Anup Pathak	SOI, Dehradun
44	Dr Shweta Shah	SVNIT, Surat
45	Dr Anindya Bose	The University of Burdwan, Bardhaman

ITEM 0 GENERAL/OPENING REMARKS

0.1 The Member Secretary welcomed all the members to the fourteenth meeting of LITD 22. He informed the members about the importance of standards on Geospatial Information and also informed about various activities of the Panels under LITD 22 and the developments over various draft standards under it. He also informed about the discussions held during GDPDC meeting held during Feb 2024 where BIS presented the progress of work under LITD 22. He then requested committee chair to deliver his welcome remarks.

0.2 Dr Debapriya Dutta extended a warm welcome to all the members present and requested all the members for their contribution to the Standardization activities of the Committee. He highlighted that the current National Geospatial Standard landscape consists of a) existing 12 BIS Standards, b) 6 standards under development and c) 7 Thematic Working Groups constituted for standards development as defined in National Geospatial Policy 2022. He informed the Committee about the need for standards in successful implementation of National Geospatial Policy in India and the need for working towards of adopting existing ISO/ TC 211 standards in practice. He thanked BIS for hosting the TC 211 meeting and requested members for active contribution during the upcoming TC 211 meeting in London. He then requested the Member Secretary to take up the agenda items.

ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 There being no comments on the minutes of 13th meeting, the Committee formally confirmed the minutes of the same held on 2nd February 2024 in Hybrid mode.

ITEM 2 COMPOSITION OF SECTIONAL COMMITTEE

2.1 The Committee reviewed its composition as given in Annex 1 of the Agenda. It was informed that BIS wrote to many organizations seeking fresh nominations to the Committee and many of the organizations have already sent new nominations. The committee requested members to review their nominations in the following link and let them inform the BIS secretariat if there are any changes:

https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/dgdashboard/committee_sso/comp/osition/330/2

3.2 The committee decided to approach following organizations to offer the membership of the committee (subject to their acceptance):

- a) Ministry of Panchayati Raj
- b) National Disaster Management Authority, New Delhi

Representatives of the Department of Post informed that they will shortly inform the name of the nominated member.

ITEM 3 Draft Indian Standard in Wide Circulation

3.1 The member secretary informed that following draft standards are currently in wide circulation. The last date for comments is 10 Dec 2023.

Sl No.	Document No.	Latest ISO No.	Title
2	LITD 22 (23733)	IS/ISO 19160-1 : 2015	Addressing — Part 1: Conceptual model
3	LITD 22 (23736)	IS/ISO 19160-3 : 2020	Addressing — Part 3: Address data quality
4	LITD 22 (23737)	IS/ISO 19160-4 : 2023	Addressing — Part 4: International postal address components and template language

The committee requested members to review the drafts and provide their comments, if any by due date. Further, the committee discussed the drafts, LITD 22(23733,23736 and 23737) and it was informed that these standards may not be used as it is in the Indian context and a detailed review is required pertaining to these standards. In addition, Dept of Posts is developing their own standard under Thematic Working Group (TWG) constituted as per National Geospatial policy, 2022.

In view of the current work in progress, it was decided that TWG on addressing will review these documents in details based on which further decision will be taken. Till then, the committee decided not to go ahead with the adoption and the documents may be dropped.

Further, as there being no comments, the committee decided to approve following draft standards as final Indian Standards for printing.

Sl No.	Document No.	Latest ISO No.	Title
1	LITD 22 (23732)	IS/ISO 19105 : 2022	Geographic information — Conformance and testing

ITEM 5 ACTIVITIES OF THE PANELS UNDER LITD 22

5.1 The member secretary informed that at present, there are 6 panels under LITD 22 working towards various areas.

i) Panel 2 “Data Content Standard for Geospatial Information – Soils, Geology, Forestry”

The Member Secretary informed that the work of this Panel is to prepare the Data Content Standard for Geospatial Information in the following domains: .

Part 1 Geology

Part 2 Soil

Part 3 Forestry

Further, Dr. Obi Reddy briefed the Committee about the work done by this panel in preparing the drafts for Data Content Standard for Soils, geology and Forestry.

Further, GSI presented the status of draft standard on Data Content Standards on Geology. GSI informed that they are in the process of revising the earlier draft submitted to BIS through NSDI and would like to submit the revised draft with addition of some annexures for consideration

The committee decided to approve the following 3 drafts to be circulated as Preliminary Draft (P Draft) to committee members for a period of 1 month. The comments received will be discussed by Panel 2.

SI. No.	Doc No	TITLE
1	LITD 22 (25213)	Data Content Standard for Geospatial Information Part 1 - Soils
2	LITD 22 (25214)	Data Content Standard for Geospatial Information - Part 2 Forestry
3	LITD 22 (25215)	Data Content Standard for Geospatial Information - Part 3 Geology

Regarding Part 2 Geology, the revised draft from GSI will be provided within 15 days, which will be circulated by BIS as P Draft. The committee also authorized BIS to make necessary modifications as per requirements of IS 12.

The present composition of the panel is given below:

- i) Dr. Obi Reddy, NBSSLUP – Convener

- ii) Shri Rahul Saxena, IMD
- iii) Shri Sunil Chandra, FSI
- iv) Ms Savita Semwal, FSI
- v) Dr Konga Gopikrishna, NSDI
- vi) Ms Harshika Kishore, GSI
- vii) Sh Nirmalendu Kumar, SOI
- viii) Sh Neeraj Gurjar, SOI

ii) PANEL 3 “Standard on LiDAR” (Doc LITD 22 (23096))

In absence of Panel 3 Convener, Dr Manohar Yadav briefed the committee about the status of the draft Indian Standard on LIDAR. This standard consists of standards relating to Data Acquisition, Data Quality Assessment, Data Processing and Data delivery. The draft was widely circulated for comments for which the last date was 04 March 2024. In addition, a public consultation was also organized on 28th Feb 2024 inviting comments from stakeholders. So far, more than 50 comments were received on the draft which are currently under discussion within Panel 3.

The committee requested Panel 3 to discuss and resolve the comments by 20 May 2024 and submit the final draft to BIS secretariat. Once the final draft is received from Panel 3, the committee authorize chair and member secretary to finalize the draft on behalf of the committee for printing. The present composition of the panel is given below:

Composition:

- a) Dr. Bharat Lohani , IIT Kanpur - Convener
- b) Dr. Ajay Dashora, IIT Guwahati
- c) Dr. Jaya Sreevalsan Nair, IIIT Bangalore
- d) Dr. Suddhasheel Ghosh, MGM University
- e) Sh O.P. Srivastava, CE, MORTH
- f) Sh Narendra Sharma, SE, MORTH
- g) Dr. Anirudh Roy, Genesys International
- h) Mr. Balaji Nagarajan, Geokno India Pvt. Ltd.
- i) Shri Amit Bhargawa, NIC
- j) Shri Rakesh Kashyap, MoWR
- k) Shri Shailesh Kumar Sinha, Survey of India
- l) Shri Vinod Kumar, IFS
- m) Mr. Rajasubramani, Secon Pvt Ltd
- n) Dr P Ramamurthy, IIC Technologies
- o) Dr. Manohar Yadav, MNNIT Allahabad

iii) Panel 4 “Cadastral Data Content standard for Geospatial Information”

During the previous meetings, the Committee constituted a Panel to look into the possibility of formulating a draft standard on cadastral data content standard for geospatial information. Shri R.N.Nanda, NSDI informed the committee about the status of the draft. He also informed about a separate discussion held with Dept of Land Resources about LADM and the need for cadastral data content standard. In addition, he suggested that workshops should

be organized for consulting state govts, seeking their feedback, and promoting utilization of the output standards in their work environments.

Sh Nanda informed that the 1st draft will be available by 15 May 2024 which may be circulated to committee members for comments and feedback. The Committee reconfirmed the composition of panel as given below. The Committee also authorized the panel to add or replace few more experts, if needed.

COMPOSITION:

- a) Shri R N Nanda, National Spatial Data Infrastructure – Convener
- b) State Governments of Karnataka, Haryana, Punjab, Odisha, Andhra Pradesh, Maharashtra, Chhattisgarh from their NLRMP- MIS Cells
- d) Dept. of Land Resources, Ministry of Rural Development.
- e) Sh Harsha Madiraju, OGC India Forum
- f) Shri Hemanth Kumar, Karnataka State council for Science & Technology.

iv) Panel 5 “NAVIC Receiver”

The Member Secretary informed that Panel 5 was constituted for developing Indian Standard on NAVIC (Navigation with Indian Constellation) receivers. This was based on the request from ISRO.

In absence of Dr Manish Saxena, Convener (Panel 5), Dr Akhileshwar updated the committee about the progress of the draft. This standard will :

- a) provide mandatory and optional requirements for NavIC receiver.
- b) Test methods for testing NavIC requirements.
- c) Test cases for NavIC specifications.

This standard will also accelerate the adoption of indigenous NavIC system by various sectors.

Currently, the draft has been circulated as Preliminary Draft to all committee members for comments.

Sl No.	Document No.	Title	Last Date of Comments
1	LITD 22 (25216)	NavIC Receiver - Requirements	24 May 2024

The committee requested all committee members to review the draft and provide their comments by due date. The committee authorized Panel 5 to review the comments and submit the updated draft to BIS. The current composition of the panel is given below:

- a) Dr Manish Saxena, ISRO - Convener
- b) Dr Akhileshwar, ISRO
- c) Mr Sukrutha B H K, Signalchip
- d) Mr. R V Kaushik, IN-Space
- e) Dr Suddhasheel Ghosh, MGM University

- f) Dr D.Venkata Ratnam (KLEF deemed to be University)
- g) Dr Rajendra Gaikwad, SAC-ISRO
- h) Dr Nishkam Jain, SAC
- i) Mr Sudhir, Accord Bengaluru
- j) Dr. Anindya Bose, University of Burdwan
- k) Dr. Shweta Shah, NIT Surat
- l) Mr. Vinay Srivastava, Reliance Jio
- m) Sh Ashish Tiwari, BIS

v) Panel 6 “REVISION OF IS 16439 Metadata Standard for Geospatial Information”

During the last meeting, the committee constituted Panel 6 to revise IS 16439 based on the revision of ISO 19115. Dr Rajendra Gaikwad, SAC-ISRO briefed the committee about the revised content of the Metadata standard. Various comments were received from the members and it was decided to circulate the revised draft to all committee members for review. It was also decided to co-opt Survey of India and BISAG as panel members so that the draft may be revised in an wholistic manner.

The present composition is given below:

- a) Dr Shashikant Sharma, SAC-ISRO – Convener
- b) Dr Rajendra Gaikwad, SAC-ISRO
- c) Sh S V Singh, SOI
- d) Sh Neeraj Gurjar, SOI
- e) Sh V Udaya Kumar, NIC
- f) Sh Amit Bhargava, NIC
- g) Dr. Harish Chandra Karnatak, IIRS
- h) Dr. G.P. Obi Reddy, NBSSLUP
- i) Dr. Aniruddha Roy, Genesys International
- j) Dr Surya Durbha, IIT Bombay
- k) Dr Sumit Sen, GISC IIT Bombay
- l) Dr Sanjay Rajpal, BISAG
- m) Smt Bindu Manghat, SOI
- n) Sh Kaushik Dey, SOI

ITEM 5 WORK PERTAINING TO GDPDC

5.1 The member secretary briefed the committee about the work pertaining to Thematic Working Groups (TWGs) constituted as per National Geospatial Policy, 2022 under GDPDC. At present, following Thematic Working Groups (TWGs) are exploring Geospatial standards in various areas:

Sl No.	Thematic Groups National Fundamental Geospatial Themes	Working (TWGs)/ Fundamental Data	Nodal Ministry/Dept	Convener	Current Draft Standard under consideration
1.	Geodetic Frame	Reference	SOI	Dr U N Mishra	

2.	Orthoimagery	SOI	Shri Sandeep Shrivastava	Orthoimagery
3.	Functional Areas (Administrative Boundaries)	SOI	Sh S V Singh	Administrative Boundaries
4.	Geographical Names (Toponymy)	SOI	Sh Mahesh Ravindranathan	
5.	Elevation and Depth	SOI	Ms Bindu Manghat(Elevation)	
6.	Topographic Database harmonization and maintenance	SOI	Sh D N Pathak	
7.	Water	DoWR		
8.	Transport Networks	MorTH, MoR, MoCA		
9.	Buildings and Settlements	MoHUA, MoPR		
10.	Land Cover and Land Use	NRSC, FSI		
11.	Physical Infrastructure	MoHUA and MoPR		
12.	Land Parcels	DOLR	Sh Kumar Satyarthi	LADM
13.	Addresses	Dept of Posts	Sh Dushyant Mudgal	
14.	Geology and Soils	GSI and NBSSLUP		
15.	Population Distribution	ORGI		

Following presentations were made during the meeting by the Convenor, thematic working groups:

- a) **Geodetic Reference Frame** – Dr U N Mishra presented the work done by thematic working group to develop 1st standard towards geodetic reference frame which was based on existing SOI guidelines. The committee suggested that TWG may review the existing ISO/TC 211 standards in particular ISO 19161, ISO 19127 and ISO 19111 before finalizing the document. In addition, the content of the document needs to be modified as per standard format. The thematic working group will review the draft and will submit the modified draft to the committee.
- b) **Orthoimagery** – Sh Sandeep Shrivastava, SOI presented the work done by thematic working group to develop standard towards orthoimagery which was based on existing SOI guidelines. The committee suggested that TWG may review the existing ISO/TC 211 standards in particular ISO 19123, ISO 19109 and ISO 19103 before finalizing the document. In addition, the content of the document needs to be modified as per standard format.
- c) **Functional Areas (Administrative Boundaries)** – Sh S V Singh, SOI briefed the committee about the draft standard on Administrative Boundaries. The committee suggested to review ISO 3116 standard before finalizing the document. The committee appreciated the draft and approved the same to be circulated to all committee members as P Draft for comments for a period of 1 month. The comments received will be reviewed by Thematic Working Group.

- d) **Geographical Names (Toponymy)** - Sh Mahesh R, SOI presented the work done by thematic working group to develop standard towards Toponymy. The work is in progress and progress will be updated during next committee meeting.
- e) **Elevation and Depth** – Ms Bindu Manghat, SOI presented the work done by thematic working group. The work is in progress and progress will be updated during next committee meeting.
- f) **Topographic Database harmonization and maintenance** – Sh D N Pathak, SOI presented the draft standard on Topographic Database harmonization and maintenance, which is currently under discussion within the thematic working group. The committee suggested to structure the document as per standard format alongwith referring to the necessary existing ISO standards.
- g) **Addresses** – Sh Gokul CV, Dept of Posts presented the draft standard on Digital Postal Index Number (DIGIPIN) which is currently under consideration in Thematic Working Group. The committee suggested to review the draft based on ISO 19160 series of standard and structure the draft in similar lines.

The committee felt that there is a need for a panel which review the work of Thematic Working Groups in a continuous manner alongwith sharing of relevant information amongst members. The committee decided to create a panel under LITD 22, Panel 8 consisting of all thematic working group conveners which will look after the work of drafts under discussion within all thematic working groups. The Convener will be decided by BIS in consultation with chair. The composition of Panel 8 is given below:

- a) Sh Hitesh Kumar Makwana, SOI
- b) Dr U N Mishra, SOI
- c) Sh Sandeep Shrivastava, SOI
- d) Sh S V Singh, SOI
- e) Sh Mahesh Ravindranathan, SOI
- f) Ms Bindu Manghat(Elevation) , SOI
- g) Sh D N Pathak, SOI
- h) Sh Kumar Satyarthi, DoLR
- i) Sh Dushyant Mudgal, Dept of Posts
- j) Sh P S Acharya, Individual Capacity

ITEM 6 PRESENT POSITION OF WORK

6.1 The committee noted the present position of work of LITD 14 as given in **Annex 3** of the agenda. The committee discussed the status of various Indian standards as given in **Item 6.2** of the agenda and decided as follows:

Sl No.	IS Number and Title	Equivalent International Standard	Latest position of corresponding Int. Standards	Decision of the committee

1.	IS 16966 : 2018 Geographic Information — Location-Based Services — Reference Model	ISO 19132 : 2007	ISO 19132 : 2007	Reaffirmed as per the due date and month
2.	IS 16967 : 2018 Geographic information - Location - Based services - Tracking and navigation	ISO 19133 : 2005	ISO 19133 : 2005	Reaffirmed as per the due date and month
3.	IS 16968 : 2018 Geographic information - Location - Based services - Multimodal routing and navigation	ISO 19134 : 2007	ISO 19134 : 2007	Reaffirmed as per the due date and month
4.	IS 16970 : 2018 Geographic information - Rules for applications schema	ISO 19109 : 2015	ISO 19109 : 2015	Reaffirmed as per the due date and month
5.	IS 16626 (Part 2) : 2018 Geographic information - Geography markup language (GML): Part 2 extended schemas and encoding rules	ISO 19136-2 : 2015	ISO 19136-2 : 2015	Reaffirmed as per the due date and month
6.	IS 17007 : 2018 Geographic information - Conceptual schema language	ISO 19103 : 2015	ISO FDIS 19103 : 2024	To be circulated in wide circulation for a period of 2 months.
7.	IS 16701 : 2021 Geographic information - Web Feature Service	ISO 19142 : 2010	ISO 19142 : 2010	Reaffirmed as per the due date and month
8.	IS 18594 : 2024 Geographic information - Land Administration Domain Model (LADM)	ISO 19152 : 2012	ISO 19152-1 : 2024	To be circulated in wide circulation for a period of 2 months.

In addition, the committee decided to adopt ISO 19147 : 2015 Geographic information – Transfer Nodes as Indian Standard. The committee decided to circulate the draft standard in wide circulation for a period of 2 months for comments.

ITEM 7 INTERNATIONAL WORK

7.1 The Committee examined the list of standards prepared by TC 211 as given in the Annex 4 of the agenda. The Committee decided to nominate following members in ISO GD for the given WGs:

SI No.	TC 211 WGs	Expert to be nominated
1	ISO/TC 211 Geographic Information	Sh Hitesh Kumar Makwana, SOI Sh S V Singh, SOI Dr Sumit Sen, IIT Bombay
2	ISO/TC 211/ WG 1	Sh Hitesh Kumar Makwana, SOI Sh S V Singh, SOI
3	ISO/TC 211/WG 4	Sh Hitesh Kumar Makwana, SOI
4	ISO/TC 211/WG 6	Sh S V Singh, SOI
5	ISO/TC 11/WG 9	Dr Sumit Sen, IIT Bombay
6	ISO/TC 211/JWG 11	Sh Hitesh Kumar Makwana, SOI Dr Sumit Sen, IIT Bombay

7	ISO/TC 211/WG 10	Smt Bindu Manghat, SOI Sh Neeraj Gurjar, SOI
8	AG 3 Programme Maintenance Group (PMG)*	Dr Debapriya Dutta, Individual Capacity
9	AG 2 Strategy	Dr Debapriya Dutta, Individual Capacity
10	AG 1 Advisory group on Outreach	Dr Debapriya Dutta, Individual Capacity
11	AG 7 Terminology Maintenance Group (TMG)	Dr Sumit Sen, IIT Bombay
12	AG 4 Joint Advisory Group OGC-ISO/TC 211 (JAG)*	Dr Sumit Sen, IIT Bombay

7.2 The 58th plenary meeting of ISO/TC 211 will be held in London during June 2024. The committee decided to approve following Indian delegation for the upcoming TC 211 meeting:

- a) Dr Debapriya Dutta, Individual Capacity – Head of the delegation
- b) Sh Hitesh Kumar Makwana, SOI
- c) Sh S V Singh, SOI
- d) Sh D N Pathak, SOI
- e) Smt Bindu Manghat, SOI
- f) Sh Mahesh Ravindranathan, SOI
- g) Sh Neeraj Gurjar, SOI
- h) Dr Sumit Sen, IIT Bombay
- i) Sh Ashish Tiwari, BIS

7.3 Based on the inadequate participation, the committee decided to remove member given in Annex A from ISO GD.

7.4 India's proposal in ISO/TC 211

The committee decided to approve following new proposals from India to be presented in upcoming TC 211 plenary meeting:

a) **Technical Report on Mapping of ESG standards for Geospatial Sector**

The proposed technical report will do a Geospatial analysis related to new regulations of Green Credit, Net Zero & Sustainability and formulation of new ISO standard based on modifications of ISO 14000, 26000 & 37000.

b) **Technical Report on Gender Neutral Geospatial Standard**

The proposed technical report will provide guidance to include gender-specific information in geospatial standards and integrating the gender perspectives into the design, implementation, and evaluation of geospatial data collection, analysis, and dissemination. It is important to incorporate gender specific requirements in the entire process flow of geospatial information and technology to ensure that it represents gender-related data accurately and inclusively. The guidance document will focus on gender-specific map symbols, colors, and labels involve designing cartographic elements that are inclusive and respectful of diverse gender identities and experiences.

ITEM 9 DATE AND PLACE FOR THE NEXT MEETING

9.1 It was decided to fix the exact date and place for the next meeting in consultation with the Chairman.

ITEM 10 ANY OTHER BUSINESS

10.1 The meeting ended with a vote of thanks to the Chair.

Annex A
Experts to be removed from ISO GD

Sl. No.	TC 211 WG and Title	Name and Organization	Participation in TC 211 Meeting in India	Remarks
1	ISO/TC 211 , Geographic information/Geomatics	Sunil Chandra , FSI	N	
		Dr. Kuldeep Srivastava , IMD ,New Delhi	N	
2	TC/211/WG 1 Framework and reference model	Varuna Kumar Guddanti, SOI	N	Not a committee member
		Dr. Kuldeep Srivastava , IMD	N	
		Rajesh Mathur , ESRI India	N	
		Shashi Prakash , NATMO	N	Not a committee member
		Shelfali Agrawal , IIRS	N	
		Sweta Gupta , SOI	N	Not a committee member
		Karbhari Vishwanath Kale, VC , DBAUTU, Lonere, Maharashtra	N	Not a committee member
		Shashi Prakash , NATMO	N	Not a committee member
		Sweta Gupta , SOI	N	Not a committee member
3	TC/211/WG 6 Imagery	Mohd. Monis Khan , TCPO, MOHUA	N	
5	TC/211/WG 7 , Information communities	Abhijit Paul , NATMO	N	Not a committee member
		Bikram Nasipuri , NATMO	N	Not a committee member
		Chitrlekha Das , NATMO	N	Not a committee member
		Jitendra Kumar Jaiswal , NATMO	N	Not a committee member
		Kandanala Aditya Kumar, NATMO	N	Not a committee member
		Lipika Khamaru , NATMO	N	Not a committee member
		Mehram Ram , NATMO	N	Not a committee member
		Sk Mujibar Rahaman , NATMO	N	Not a committee member
		Nitish Raj Chandra , NATMO	N	Not a committee member
		Pankaj Kumar , NATMO	N	Not a committee member

		Sanjeev Kumar Sinha , NATMO	N	Not a committee member
		Sanup Mandal , NATMO	N	Not a committee member
		Saranya R Chandran , NATMO	N	Not a committee member
		Dr. Surya Durbha , IIT Bombay	N	
		Soumen Sadhukhan , NATMO	N	Not a committee member
		Subhas Garai , NATMO	N	Not a committee member
		Subhasish Sutradhar , NATMO	N	Not a committee member
		Sudipa Halder , NATMO, DST	N	Not a committee member
		Swami Nath , NATMO, DST	N	Not a committee member
		Karbhari Vishwanath Kale, VC , DBAUTU, Lonere, Maharashtra	N	Not a committee member
		Prof. SK Gosh , IIT Kharagpur	N	Not a committee member
6	TC/211/WG 9 , Information management	Anupam Pal , FSI, Dehradun	N	Not a committee member
		Mohd. Monis Khan , TCPO	N	
		Dr. Surya Durbha , IIT Bombay	N	
		Prof. SK Gosh , IIT Kharagpur	N	Not a committee member
7	TC/211/AG 4 , Joint advisory group (JAG) ISO/TC 211 – OGC	Rajesh Mathur , ESRI India	N	
		Lipika Khamaru , NATMO	N	Not a committee member
		Triparna Barman , FSI	Y	Not a committee member
		KV Kale, VC , DBAUTU	N	Not a committee member
		Dr. Kuldeep Srivastava , IMD ,New Delhi	N	
11	TC/211/AHG 11 , Climate change	Bikram Nasipuri , NATMO	N	Not a committee member
		Sunil Chandra , FSI	N	
		Sunil Chandra , FSI	N	
		Dr. Harish Chandra Karnatak , IIRS	Y	
		Dr. Kuldeep Srivastava , IMD	N	
		Sanjeev Kumar Sinha , NATMO, DST	N	Not a committee member

		Shefali Agrawal , Indian Institute of Remote Sensing, ISRO	N	
		Triparna Barman , FSI	Y	Not a committee member
13	TC/211/AG 6 , Group for Ontology Maintenance (GOM)	Dr Anindya Bose, University of Burdwan	N	
		Varuna Kumar Guddanti , SOI	N	Not a committee member
		Triparna Barman , FSI	Y	Not a committee member
14	TC/211/JWG 11 , Joint ISO/TC 211 - ISO/TC 204 WG: GIS-ITS	Anupma Shekhawat , NATMO	N	Not a committee member
		Dr. Sanjay Rajpal , BISAG-N	N	
		Khushwant Rao , NATMO	N	Not a committee member
		Dr. Kuldeep Srivastava , IMD ,New Delhi	N	
		Bansari Magia , BISAG-N	N	
		Santosh Singh , SATPALDA	N	Not a committee member
		Soumen Sadhukhan , NATMO	N	Not a committee member
		V S S Kiran , Garudalytics	N	Not a committee member
15	TC/211/AG 13 , Land cover and land use	Dr. Harish Chandra Karnatak , IIRS	Y	
		Mohd. Monis Khan , TCPO	N	
16	TC/211/AG 14 , Register Maintenance Group (RMG)	Jitendra Kumar Jaiswal , NATMO	N	Not a committee member
		Kandanala Aditya Kumar , NATMO	N	Not a committee member