COURSE REPORT

3-Days Training Programme for Other Services
on
"Green Infrastructure"
21st to 23rd February 2024

Central Academy for State Forest Service, Dehradun
Ministry of Environment, Forest & Climate Change
Government of India

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EXECUTIVE SUMMARY

Central Academy for State Forest Service (CASFOS), Dehradun under the aegis of Directorate of Forest Education (DFE) Ministry of Environment, Forest, and Climate Change, took a step ahead of its mandate and conducted three days (from 21.02.2024 to 23.02.2024) training programme for "**NHAI, PWD / CPWD, Railways, Power Sector and other Engineering Department**" on the theme ***"Green Infrastructure"***. The Ministry of Environment, Forest and Climate Change, Government of India sponsored for the 'Training of other stakeholders' and 'Personnel of other services' on topics/themes related to conservation of Forest & Natural Resources. The training was conducted in a physical mode.

The training was inaugurated by Chief Guest – Dr. V. B. Mathur, Ex-chairman, NBA & Former Director, WII, Dehradun in presence of Smt. Meenakshi Joshi, IFS, Principal, CASFOS, Dehradun. In the opening remarks, Smt. Meenakshi Joshi, IFS stressed the need for such courses intended for other stakeholders and their importance in spreading awareness and carrying forward extension activities. She emphasized further on the link between the participants and the forest department in carrying forward the work of conservation. Chief Guest keynote speaker Dr. V. B. Mathur, Ex-chairman, NBA & Former Director, WII, Dehradun talked about various developmental activities presently underway in the country especially where forest is involved. The Chief Guest emphasized the importance of Green Infrastructure on presen, days as conservation of nature during the construction has to be kept in mind. He also urged the participants to use innovative & different ways to save forests for green growth inclusive of conservation. The detailed timetable showing session-wise topics and resource persons is enclosed as **Annexure-V**.

A total of 27 participants from 10 States across India registered for the training out of which 20 participants from 04 States successfully completed the training programme. The training programme was very well appreciated by the participants who also requested more of such training programmes regularly, for keeping up the momentum of conservation of natural resources through other stakeholder participation. The reduction in the number of participants when compared to the registered number was due to unavoidable reasons for some participants at the last moment.

Valedictory session was presided over by chief guest Mr. Anurag Bhardwaj, IFS, Director, Directorate Forest of Education, Dehradun during which an interactive session with the participants was also held. Feedback by the participants during the session was also highlighted by her for improving future programs. Sh. Amlendu Pathak, IFS, Course Director, gave a presentation about the program and concluded the program with a vote of thanks to the entire team and to the participants. The participants gave an overwhelming response to the course.

A compendium of articles, presentations related to the relevant topics covered during the course, apart from the copies of the presentations made by the experts in each session were provided in soft copy to each trainee as part of the training kit by the Academy.

The overall impact of the training was positive and the feedback and high rating from the participants corroborates the assessment of the organizers.

Format for reporting evaluation of refresher course conducted by the institute/organization for other stake holders sponsored by the Ministry of Environment, Forests & Climate Change, GOI, New Delhi as per the merged format of MoEF&CC and JICA

Course Report

MoEF&CC /DFE's letter number and date		File No. 4-927/TRG.II/DFE-2023/4147, Dated 21.02.2024
Institute's reference number		File No. 4-143/TRG.II/OS/CASFOS/2023-24/2832, Date 19.01.2024
1.	Name and complete address of the Institute (including phone, fax, and e-mail)	Central Academy for State Forest Service, Dehradun Ph: 01352-2754575/2754648 Email-casfos.dd-mef@gov.in
2.	Title of the course	Green Infrastructure
3.	Duration & period of the Course	Three Days 21st to 23rd February, 2024
4.	Name & designation of the Course Director	Shri Amlendu Pathak, IFS
5.	Number of officers participated	20 (Details at **Annexure-IV**)
6.1	(a)Did the institute get in touch in advance with the participants of the course?	Yes
	b) If yes, when (mention the date of communication to the officers)?	
	(c) Details of nomination received from States prior to the Course	27
	(d) How many officers received the intimation?	All
	(e) How many officers responded?	22
6.2	(a)Were the course expectations of the participants ascertained by the institution?	Yes
	(b) If yes, how, and when (dates)?	By direct interaction and in form of feedback on prescribed proforma collected during the course
7.1	a) Was the course conducted at the institution's campus? If no, where?	Yes
	(b)Whether the course was "residential" or non-residential. If residential, whether the residential facilities were provided in the institution's own hostel or in a hotel etc.?	Residential Course. Residential facilities were provided in the hotel.
7.2	(a) Total no. of working days in the course	03 days
	(b)Total no. of sessions planned/covered in the course	08 Session (including inaugural and valediction sessions)
	(c) No. of sessions, which could not be conducted as planned with reasons	NIL
	(d) Internal faculty hours	-
	(e) Guest faculty hours	45 mts
	(f) No. of days / hours spent on field visit(s) if any	01 days

Enclosure (2 copies each): - Final course timetable - List of faculties (both in-house and guest faculty) - Final list of participants - The background material supplied to the participants		
8	(a) Had the same or similar course been conducted earlier under the sponsorship of the MOEF&CC/Department of Personnel and Training (Government of India)?	No
	(b) What changes based on the feedback received in the previous course were made in the current course?	-
9	Evaluation Report received from current course participants in terms of: (*1.1, 2.1, shown below refer to question number in Part C or Part E of the Evaluation Report.)	
9.1	Course Content and Structure (CCS)	The course contents and the structure were reported to be very relevant and highly appreciated by the participants with the rating of **94.92**%. The course has met the expectations of the participants as per their feedback.
9.2	Training Faculty (TF)	The participants have rated the training faculty at more than **94.82%** Training faculty and their lectures were highly appreciated by the participants.
9.3	Usefulness of the course (UOC)	The participants have given feedback that the training course will be highly useful immediately and in future for their job with combined rating as **85.94%**
9.4	Overall impression about the Course (OIC)	The participants have given feedback about overall impression of the course was very good with rating **89.06%**
9.5	Participants' views about the strengths and weaknesses as well as other aspects pertaining to the course	Overall, the participants appreciated the course. The suggestions made by them along with Academy's comments are attached. **(Annexure-1)**
9.6	Logistics (including Residential accommodation, Food quality, Classroom facilities, Computer facilities and Recreation facilities and Time management etc.)	The internet connectivity was very good throughout the training program and was rated as **(95.83%)**
9.7	Weighted Average of the course	The weighted average of the course has been rated as **92.25%** which is found to be very satisfactory
10	General remarks of the Course Director on the nature and extent of participant's involvement in the course including attendance punctuality and interest evinced	The participants showed keen interest and attended the sessions with due punctuality.

11	Suggestion highlighting the areas of improvement in the Course for future by Course Director	The training received a very positive response in all aspects such as Course contents, Topics, Choice of speakers, and Components of Field visits, Field demonstrations.
12	Comments of the Institution on how the feedback is proposed to be recycled into future programmes in terms of course content, methodology, etc.	The Training was a learning reference for the Academy and faculty also to Co-ordinate with the Forest Department and other departments. The participants of Personnel of other servies received the training with good and the feedback received was very positive enthusiasm.

Course Director

Countersigned
Principal

Annexure-I

Course Director's comments on

S. No.	Participants' views	No. of participants who have expressed the view	Course Director's Comments
1	Course was very well managed, coordinated and informative	5	All the aspects were taken into account while planning the Course, hence the comments.
2	Off-line presentation may be preferred	2	Suggestion is Noted.
3	Field visit exposure enhanced the visualization of wildlife aspects and it's conservation	1	All the aspects were taken into account while planning the Course, hence the comments..
4	1) Green infrastructure may be linked with resilient infrastructure 2) The climate change and its impact on long-term may be discussed wrt to new infrastructure being constructed. 3) The concept of extreme value theory and catastrophe modelling may also be discussed for designing of project. e.g. https://www.bgcengineering.ca/portfolio/three-sisters-creek-debris-flood-hazard-and-risk-assessment/	1	Suggestion is Noted.
5	Topics related to FRA 2006, ESG/SR/SDGs and R&R may be added "1) Environmental and wildlife clearances 2) Application of GIS tools for mapping projected area vis a vis new projects. 3) Integrated planning of different development project in and around forests/NP/WLS/TR 4) Climate Change and its regional/local impacts with case studies from ADB/WB etc. 5) Climate Resilient infrastructure and challenges 6) Hydropower projects in Himalayan region and environmental challenges. 7) Biodiversity of India with global as well as regional perspective"	1	Suggestion is noted for future training programmes.
6	This course can be extended to the DPR consultants (Environmental personnel) who does DGPS survey, prepare the project feasibility report, EIA, EMP etc. Couse could be for providing inputs on how to proceed with FC, EC, EIA, EMP, designing of mitigation structures etc.	1	Suggestion is noted for future training programmes

Annexure-II

Numerical value of feedback and Weighted Average

For calculation of numerical value of feedback, each factor is valued as percentage value to the top grade given to the factor. If no answer is provided, it is excluded from calculation. (Cf; where number of grade is 4, percentage value be 100, 75, 50, 25)
Average of numerical value of factors consisting of the element is a numerical value of the element.

1. **Course Content and Structure (CCS) = 94.92**

    1.1 Course aims met (95.31)
    1.2 Increase of knowledge (90.63)
    1.3 Relevance of content (98.44)
    1.4 Reading Material (95.31)

2. Training Faculty (TF) = 94.82

    2.1 Assessment of the Course contents/topics = **90.89**
        Contents (92.08)
        Presentation (91.25)
        Quality of Discussion/Interaction (90.00)
        Meeting for Objectives (90.21)

    2.2 Assessment of the Field Visit = **98.75**
        Contents (98.75)

3. Usefulness of the Course (UOC) = 85.94

    3.1 How useful to you immediately (85.94)
    3.2 How useful to be for the future jobs (85.94)

4. Overall Impression about the Course (OIC) = 89.06

5. Logistic = 95.83
    5.1 Food quality (90.00)
    5.2 Classroom facility (98.75)
    5.3 Time management (98.75)

Weighted Average for the Course

For calculation of Weighted Average (WA), following formula is used.

WA = (CCS (100%) + TF (100%) + UOC (75%) + OIC (100%) + L (75%) * 100/450

WA = (94.92+ 94.82+ 64.46+ 89.06+ 71.88) *100/450

= 92.25%

Details of Topics & Resource Persons

Sl. No.	Topic	Name	E-mail
1.	Green Infrastructure for Green Growth	Dr VB Mathur, Ex- Chairman, NBA & Former Director, WII, Dehradun	vbm.ddn@gmail.com
2.	Green Infrastructure for Human- Wildlife Conflict Management	Dr Akansha Saxena, Project Scientist, WII	akanksha01065@gmail.com
3.	Green- Blue Infrastructure: Case Study	Shri Saswat Bandhopadhy, Project Director, CUPP, CEPT, Ahamadabad	crdf@cept.ac.in
4.	Green Building: Concept & Guidelines	Ms Shabnam Bassi, Associate Director and Fellow TERI, New Delhi	shabnam.bassi@teri.res.in
5.	National Green Highway Mission	Dr Ajoy Bhattacharya, Ex-MD, National Green Highway Mission, MoRTH	ajoykb@gmail.com
6.	Connecting the Fragmented Forest	Dr. Vinay Kant Mishra, IFS, ADG, ICFRE, Dehradun	adg_edu@icfre.org
7.	RVNL: Environmental Concerns in Himalayas	Shri Sumit Jain, General Manager (Project), RVNL, Dehradun	mr.sumit@gmail.com
8.	Integrating Green Concerns in Linear Infrastructure and Hydropower Projects	Shri Pankaj Agrawal, IFS, APCCF, Bhopal	pkjagr@yahoo.com

Annexure- IV

Details of Participants

S. No.	Name of Participants	Designation	Email Id	Mobile no	State
1.	Mr. Pramod Kumar Dhyani	Executive Engineer	pk_dhayani@ptcul.org	9411110171	Uttarakhand
2.	Mr. Harendra Singh Negi	Executive Engineer	hs_negi@ptcul.org	7088117822	Uttarakhand
3.	Mr. Mohd Amir	Assistant Engineer	exnpdddun@gmail.com	9456302211	Uttarakhand
4.	Mr. Narendra Gaur	Add. Assistant Engineer	eecdpwdddun@ediffmail.com	9557050482	Uttarakhand
5.	Mr. Rajiv Srivastava	Assistant Director (Monitoring)	Dirm-pwd@delhi.gov.in	9013877667	Delhi
6.	Mr. Ashish Arora	Chief Engineer (Civil)	asquare_2k@yahoo.com	9412997831	Uttarakhand
7.	Mr. Rakesh Kumar	Executive Engineer	-	9837239777	Uttarakhand
8.	Mr. Sandeep Gupta	Assistant Director (Monitoring)	Dirm-pwd@delhi.gov.in	9560293030	Delhi
9.	Er. Pawan Sharma	Assistant Environmental Engineer	pcbropaonta1@gmail.com	9418964049	Himachal Pradesh
10.	Er. Abhay Gupta	Assistant Environmental Engineer	pcbrobaddi@gmail.com	9418500327	Himachal Pradesh
11.	Mr. Sarvesh Kumar	Assistant Engineer	-	9536346711	Uttarakhand
12.	Mr. Sagar Pursora	Junior Engineer	sagarpursora98@gmail.com	7579208185	Uttarakhand
13.	Mr. Jitendra Kumar	Junior Engineer	-	7900277744	Uttarakhand
14.	Mr. Vineet Kureel	Executive Engineer	eeresusn@gmail.com	9760920967	Uttarakhand
15.	Mr. Rakesh Harsh	Executive Engineer	-	8222023757	Haryana
16.	Ms. Sushma Dakey	Deputy Manager (Technical)	sushmadakey@nhai.org	8332939089	Delhi
17.	Mr. Amit Bhadula	Manager (Environment)	amit.bhadula@gmail.com	8527677780	Haryana
18.	Ms. Pooja Sundi	Deputy Manager (Environment)	poojasundi@nhpc.nic.in	9797781049	Haryana
19.	Mr. Sahil Rana	Assistant Engineer	-	9418673228	Himachal Pradesh
20.	Ar. Devinder Kumar Mista	Architect	-	7018589448	Himachal pradesh

Central Academy for State Forest Service, Dehradun

Three days specialised training on

"Green Infrastructure"

For

NHAI, PWD/CPWD, Railways, Power Sector and Other Engineering Department

21 February to 23 February 2024

Tentative Schedule

Annexure-V

Date / Time	Session I		Session II		Session III		Session IV	
	0945 -1115		1130-1300		1400-1530		1545-1 645	1 645-1 71 5
21.02.2024 (Wednesday)	**Inaugural Session (VBM, MJ, TB, AP, AG)** Green Infrastructure for Green Growth **(VBM)**	Tea Break	Green Infrastructure for Human- Wildlife Conflict Management **(AS)**	Lunch Break	Green- Blue Infrastructure: Case Study **(SBD)**	Tea Break	Green Building: Concept & Guidelines **(SB)**	Participants' Experience Sharing **(AP)**
22.02.2024 (Thursday)	**Field Visit: Rajaji Tiger Reserve**							
23.02.2024 (Friday)	National Green Highway Mission **(AB)**	Tea Break	Connecting the Fragmented Forest **(VKM)**	Lunch Break	RVNL: Environmental Concerns in Himalayas **(SJ)**	Tea Break	Integrating Green Concerns in Linear Infrastructure and Hydropower Projects **(PA)**	**Valedictory Session (ABD, MJ, TB, AP, AG)**

***Abbreviations*:**

VBM	**:**	Dr VB Mathur, Ex- Chairman, NBA & Former Director, WII, Dehradun	**AB**	:	Dr Ajoy Bhattacharya, Ex-MD, National Green Highway **Mission,** MoRTH
ABD	:	Mr. Anurag Bhardwaj, IFS, Director, Directorate Forest of Education, Dehradun	**PA**		Shri Pankaj Agrawal, IFS, APCCF, Bhopal
MJ	**:**	Mrs. Meenakshi Joshi, IFS, Principal, CASFOS Dehradun	**AS**		Dr Akansha Saxena, Project Scientist, WII
AP	:	Mr. Amlendu Pathak, IFS, Course Director, CASFOS Dehradun	**SB**	**:**	Ms Shabnam Bassi, Associate Director and Fellow TERI, New Delhi
TB	**:**	Dr. T Beula Ezhil Mathi, IFS, Lecturer, CASFOS Dehradun	**SBD**	**:**	Shri Saswat Bandhopadhy, Project Director, CUPP, CEPT, Ahamadabad
AG	:	Mr. Ankit Gupta, Scientist- C, CASFOS, Dehradun	**VKM**	**:**	Dr. Vinay Kant Mishra, IFS, ADG, ICFRE, Dehradun
SJ	**:**	Shri Sumit Jain, General Manager (Project), RVNL, Dehradun.			

Course Director

Inaugural Session & Lecturer Session

Inaugural Address by Dr. VB Mathur, Ex-Chairman, NBA & Former Director, WII, Dehradun Chief Guest

Opening Remarks by Smt. Meenakshi Joshi, IFS, Principal, CASFOS, Dehradun

Brief description about the course by Sh. Amlendu Pathak, IFS, Course Director

Lecture session by Ms Akansha Saxena, Project Scientist, WII, Dehradun (UK)

Lecturer session by Ms Shabnam Bassi, Associate Director and Fellow, TERI, New Delhi

Day-1 (Classroom sessions)

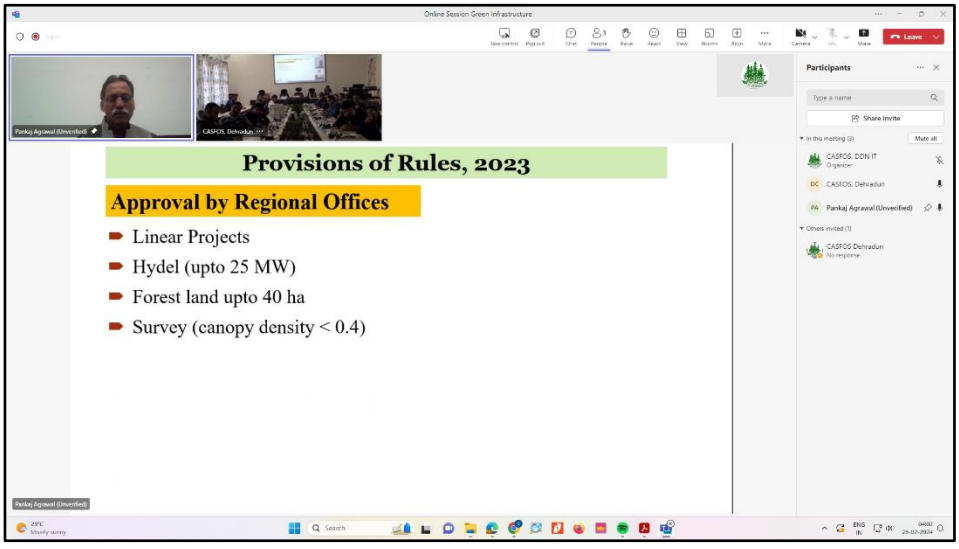
Field Visit – Rajaji Tiger Reserve

(Day 2 - Field Visit at Rajaji Tiger Reserve)

Lecture Session by Dr. Ajoy Bhattacharya, Ex-MD, National Green Highway Mission, MoRTH

Lecture Session by Dr. Vinay Kant Mishra, IFS, ADG, ICFRE, Dehradun

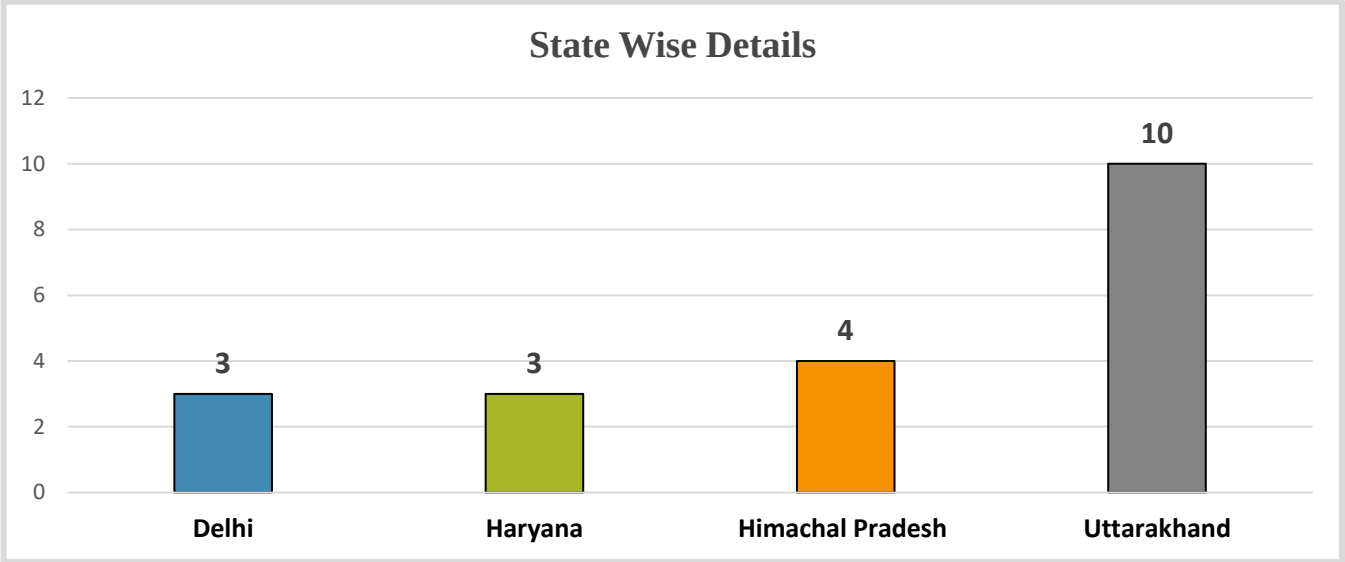
Lecture Session by Sh. Sumit Jain, General Manager (Project), RVNL, Dehradun

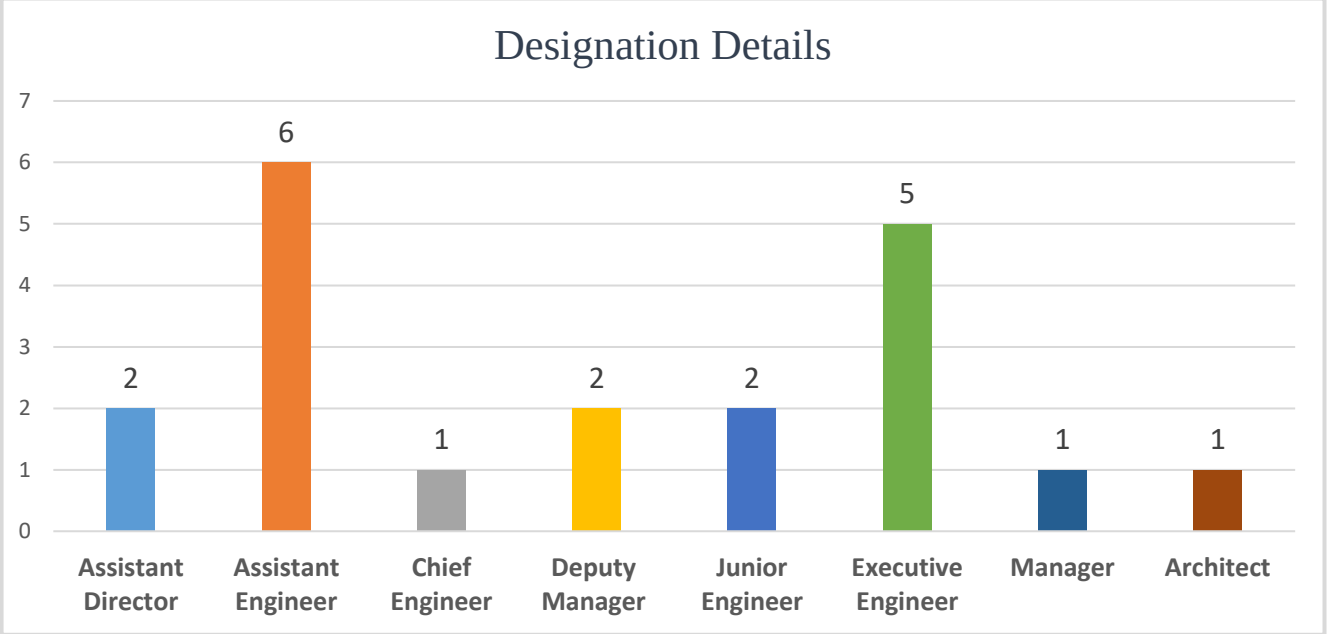


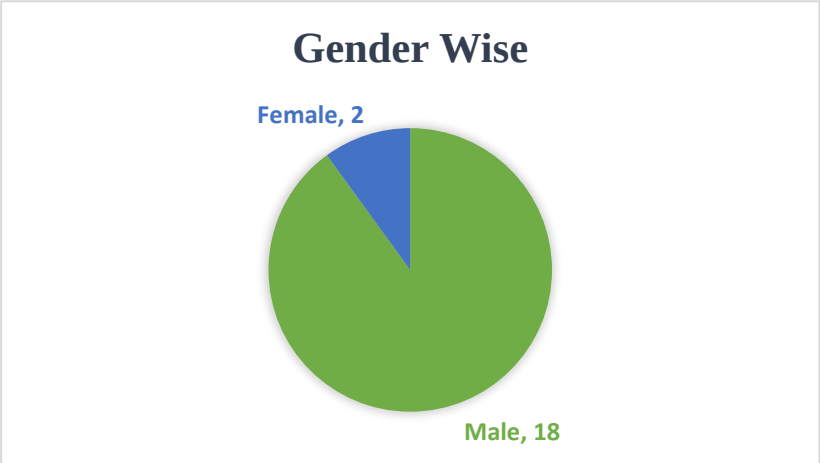
Online Lecture Session by Sh. Pankaj Agrawal, IFS, APCCF, Bhopal

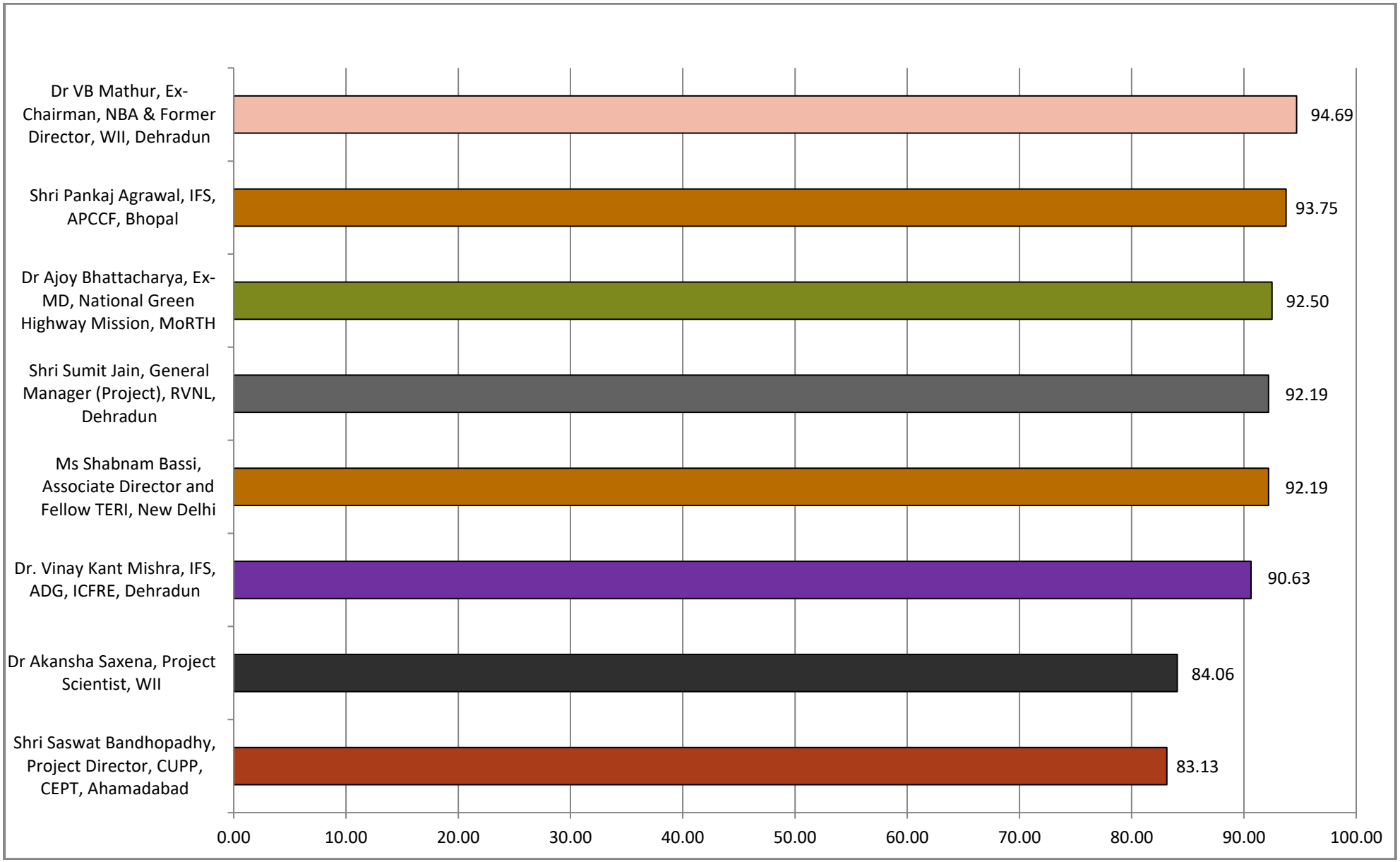
Day-3 (Classroom sessions)

STATE WISE PARTICIPANTS

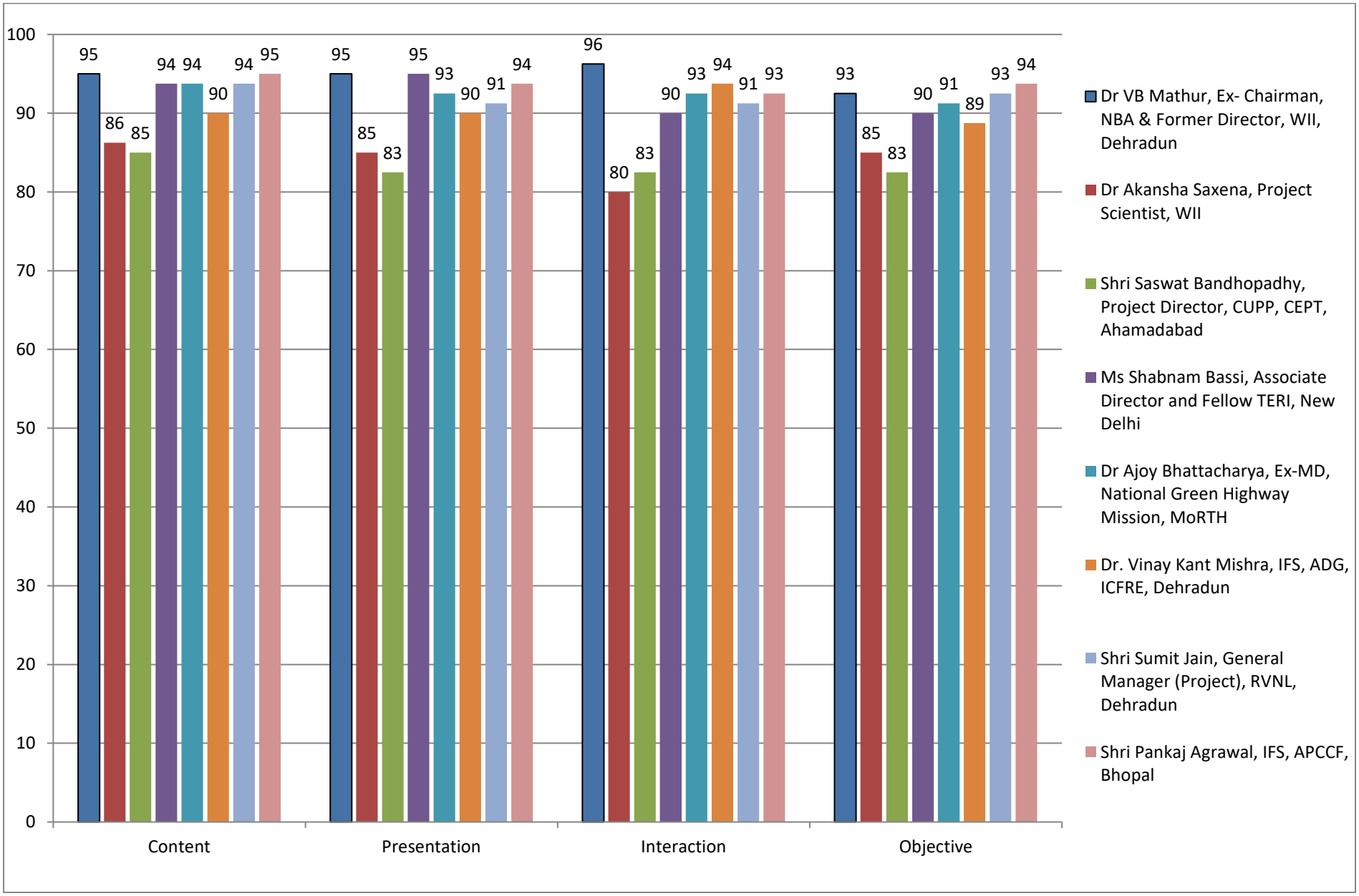








Overall Feedback of Resource Persons on all Parameters



PARAMETER WISE FEEDBACK OF RESOURCE PERSON

VALEDICTORY SESSION & Certificate Distribution

CENTRAL ACADEMY FOR STATE FOREST SERVICE, DEHRADUN

Three day Training Programme for Personnel of Other Services on "Green Infrastructure"
For NHAI, CPWD, CCU, Railways, Power Sector and Other Engineering Department
21st to 23rd February 2024

Sitting Row (L - R)	:	Mr. Ankit Gupta (Scientist C), Dr. T. Beula Ezhil Mathi, IFS (Lecturer), Dr. V.B. Mathur (Ex-Chairman, NBA & Former Director, WII, Dehradun), Mrs. Meenakshi Joshi, IFS (Principal, CASFOS), Mr. Amlendu Pathak, IFS (Lecturer & Course Director)
Standing Row 1 (L - R)	:	Mr. Naveen Kapoor, Mr. Sandeep Gupta, Mr. Mohd Amir, Mr. Rakesh Harsh, Ms. Sushma Dakey, Ms. Pooja Sundi, Mr. Ashish Arora, Mr. Pawan Sharma, Mr. Surendra Pratap
Standing Row 2 (L - R)	:	Mr. Rakesh Kumar, Mr. Rajiv Srivastava, Mr. Sagar Pursora, Mr. Ar Davinder Kumar Mista, Mr Sarvesh Kumar, Mr. Amit Bhadula, Mr. Sahil Rana, Mr. Vineet Kureel, Mr. Pramod Kumar Dhyani, Mr. Harendra Singh Negi, Mr. Jitendra Kumar, Mr. Narendra Gaur, Mr. Abhay Gupta

Group Photograph