



COURSE REPORT

of
3-day Training for Personnel of Other Services
on



'Green Infrastructure and Development'

during
26 – 28 November 2025

for
NHAI, CPWD, CCU, Railways, Power Sector, and other Engineering
Depts., etc.



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

C O N T E N T S

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EXECUTIVE SUMMARY

Central Academy for State Forest Service (CASFOS), Dehradun under the aegis Ministry of Environment, Forest, and Climate Change (MoEF&CC) has a mandate to conduct various theme-based short-term training programme. In this regard, during F.Y. 2025-26, CASFOS, Dehradun organized a 3-day Training for Personnel of Other Services on “**Green Infrastructure and Development**” between 26.11.2025 and 28.11.2025, for NHAI, CPWD, CCU, Railways, Power Sector, and other Engineering Depts., etc.

The said training programme was conducted in blended mode i.e., both online on iGoT platform and offline at the Academy physically. Various engineering departments in northern region of the country were requested to nominate relevant officials from their organisations for the said training. Nominated officials were informed to enrol for the course on iGoT platform. During the training programme, feedback with comments and suggestions for each sessions were also taken. All lecture presentations and training material along with all photographs were also shared with the participants at the end of the course.

The said training programme comprises of a total 6 lecture sessions by Subject Matter Experts and a full day of field visit, which also includes an inaugural and valedictory session at the beginning and end of the course respectively. A total of 30 nominations has been received from various a total 11 organisations, but only 24 participants attended the said training programme.

The training course began with an inauguration on the first day, i.e., 26.11.2025. The Course Director of the training Mr. Ankit Gupta, Scientist-C, CASFOS, Dehradun gave a brief presentation about the course and structure of the training programme, followed by Address of the Principal by Mr E. Vikram, IFS, Principal, CASFOS, Dehradun. He warmly welcomed participants to this training and emphasized the necessity of integrating eco-friendly practices, renewable energy, and resource efficiency into modern engineering. By adopting green technologies and minimizing carbon footprints, we can ensure long-term ecological balance and sustainable infrastructure. He noted that responsible consumption is vital for a cleaner future and encouraged attendees to utilize the sessions from green building design to field visits, to ensure that development and environmental responsibility go hand in hand.

Further in the programme, Prof. R. Pradeep Kumar, Director of CSIR-CBRI, Roorkee, delivered the inaugural address, emphasizing that sustainability is no longer an option but a necessity for long-term progress. He noted that the green approach to development must focus on harmonizing economic growth with environmental well-being. By integrating energy-efficient design principles, sustainable infrastructure, and eco-friendly technologies, we can create a future that benefits both people and the planet. He urged participants to adopt responsible policies and collective efforts to contribute to a cleaner, healthier, and more sustainable world. He also appreciated the variety of topics chosen for the training and requested all to visit CSIR-CBRI for any technical assistance any official required for any purpose.

Important topics on which discussion was carried out during the training programme were delivered by expertise of that domain. Topics and resource persons delivered a session during first day in this training programme are a) ‘Green Building: Concept & Guidelines’ by Ms Shabnam Bassi, Director & Senior Fellow, TERI, New Delhi; b) ‘Waste Management towards Green Development’ by Mr Vinod Solanki & Mr Adison Stevenson, Faculties of Waste Warriors Society, Dehradun (UK), and last session on c) ‘Engineering Solutions for Environmental Actions’ by Dr K. Ramesh, Scientist-F & Head, Wildlife Institute of India, Dehradun (UK) towards the end of the day.

On the second day of the training programme, all participants along with the Course Director and Course Clerk visited for a full day field excursion to Rajaji Tiger Reserve (RTR), Motichur Range. It started with a welcome note and briefing by Mr Ajay Lingwal, Assistant Conservator of Forest (ACF) at the Haridwar - Dehradun - Rishikesh Highway, followed by a visit to Range office and one-to-one discussions with various field forest staff. All were briefed about the increasing pressure on RTR due to rapid urbanisation, importance of infrastructural developments, work carried out by the forest department, clearance procedure, etc., in maintaining a safe path to both human and wildlife integrating green approaches in development.

On the last day of the training, session on a) ‘Energy Efficient Design Principals of Green Building’ by Dr Nagesh Babu Balam, Principal Scientist, CSIR - Central Building Research Institute, Roorkee (UK), b) ‘Urban Planning and Smart Cities’ by Dr Manushi Bhatt, Assistant Professor, CEPT University, Ahmedabad (GJ), and last session on c) ‘Technologies in Disaster Risk Reduction’ by Ms Vagmi Patel, SGE, CAG-CRDF, CEPT University, Ahmedabad (GJ) has been delivered. All sessions were very well appreciated by the participants.

The training course ends with a valedictory-cum-interactive session towards the end of the last day, i.e., on 28.11.2025 in presence of CASFOS Team comprises of all Faculties and staff. During the valedictory, the Course Director of the training Mr Ankit Gupta, Scientist-C, CASFOS, Dehradun, briefly summarizes the 3-day long course. Participants interacted with all and gave their verbal feedback regarding the course. The course was highly appreciated by all and gave an overwhelming response to the course, w.r.t management. Participants expressed high satisfaction with the relevance of the topics, quality of resource persons, and the learning gained through classroom interactions and field exposure. Participants have also suggested conducting such training programmes more frequently with increased duration of 5 days. The overall impact of the training was positive, and the feedback collected with high ratings from the participants corroborates the assessment of the organizers.

Format for reporting evaluation of refresher course conducted by the
institute/organization for the SFS officers 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		RT-15/22/2024-RT- I/96657/2025, Dated 07.02.2025
Institute's reference number		4-136/Trg-II/STC/CASFOS/2023-24 – I/107120/2025, dt. 23.04.2025
1	Name and complete address of the Institute (including phone, fax, and e-mail)	Central Academy for State Forest Service, Dehradun ☎ 0135-2754575/2754648 Email- casfos.dd-mef@gov.in
2	Title of the course	Green Infrastructure and Development
3	Duration & period of the Course	Three Days (from 24 th to 26 th September, 2025)
4	Name & designation of the Course Director	Shri Ankit Gupta, Scientist-C
5	Number of officers participated	24 (Details at Appendix- 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)?	Multiple times on various days through email, voice calls and messages from 14.10.2025 till start of training
	(c) Details of nomination/registered received from States prior to the Course	30 registrations from UK
	(d) How many officers received the intimation?	All
	(e) How many officers responded?	30
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 the 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 (Accommodation was provided to all participants at CASFOS Guest House)

7.2	(a) Total no. of working days in the course	3 days
	(b) Total no. of sessions planned/ convened in the course	6 sessions
	(c) No. of sessions, which could not be conducted as planned with reasons	Nil
	(d) Internal faculty hours	Nil
	(e) Guest faculty hours	9 hours
	(f) No. of days / hours spent on field visit(s) if any	Full-day on Day-2
Enclosure: - Final timetable - List of faculties - Final list of 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)?	Yes, under the sponsorship of the MoEF&CC
	(b) What changes, based on the feedback received on the previous course, were made in the current course?	This is a new training program on the said theme
9	Feedback received from current course participants in terms of: (*1.1, 2.1.... shown below refer to question number in Part C or Part D of the feedback form.)	
9.1	Course Content and Structure (CCS)	Course Content & Structure including reading material was found to be relevant and highly appreciated by the participants with rating of 90.81% The course aim was met to the full satisfaction & as per feedback, there was increase in knowledge level of the participants.
9.2	Training Faculty (TF)	The participants rated the training faculty with 88.27% All training faculties for lecture sessions 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, with a combined rating as 91.18%
9.4	Overall impression about the Course (OIC)	The participants have given overall feedback of the course as very good and rated it around 86.76%
9.5	Participant's views about the strengths and weaknesses as well as other aspects pertaining to the course. (Please attach summary as Appendix-I)	Overall, the participants appreciated the course. The suggestions made by them along with the Academy's comments are attached for reference.

9.6	Logistics (including Residential accommodation, Food quality, Classroom facilities, Computer facilities and Recreation facilities and Time management etc.)	The expectations of participants regarding the level of all logistics facilities provided by the academy have been highly appreciated, with an overall rating to logistics arrangement received is 86.73%
9.7	Weighted Average (Please attach summary as Appendix-II)	The weighted average of the course has been rated as 88.73% , 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	Participants were enthusiastic and expressed their keenness to learn from the day one of the training programme. All appeared to be interactive during the sessions, cleared their doubts, and shared their own experiences.
11	Suggestion highlighting the areas of improvement in the Course for future by Course Director	As per the feedback received, the overall training was good in all aspects viz., course design, content, quality, faculty knowledge, etc.
12	Comments of the Institution on how the feedback is proposed to be recycled into future programmes in terms of course content, methodology, etc.	As reported by the participants, they benefitted immensely from the course. The Academy will try its best to incorporate the suggestions to further improvement of the course in future.

(Mr Ankit Gupta, Scientist-C)
Course Director

Countersigned

Mr E. Vikram, IFS
Principal
CASFOS, Dehradun

Appendix-I

Course Director's comments on
Participant's views about the strengths and weaknesses pertaining to the course

S.No.	Participants' views	No. of participants who have expressed the view	Course Director's Comments
1	Linear infrastructure component may be added in such future trainings	3	Noted
2	The training program was very good and useful in future work	2	
3	Learned about green infrastructure and various related aspects of it	4	
4	Training has provided practical related aspects of remote sensing and geographic information systems wonderfully	4	
5	Training days may be increased from 3 to 5 days with hand-on demonstration and training on RS&GIS software	4	
6	Overall orientation of the course was good	3	
7	This course is very good and provided useful information	5	
8	The course was very informative and learned a lot about training	5	

Appendix-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 grades is 4, percentage value be 100, 75, 50, 25)

The average numerical value of factors consisting of the element is a numerical value of the element.

1. Course Content and Structure (CCS) = 90.81

- 1.1 Course aims met (91.18)
- 1.2 Increase of knowledge (85.29)
- 1.3 Relevance of content (94.12)
- 1.4 Reading Material (92.65)

2. Training Faculty (TF) = 88.27**2.1 Assessment of the Course contents/topics = 84.33**

- Contents (87.06)
- Presentation (84.71)
- Quality of Discussion/Interaction (85.53)
- Meeting for Objectives (80.00)

2.2 Assessment of the Field Visit = 92.20

- Contents (92.80)
- Objectives (91.60)

3. Usefulness of the Course (UOC) = 91.18

- 3.1 How useful to you immediately (89.71)
- 3.2 How useful to be for the future jobs (92.65)

4. Overall Impression about the Course (OIC) = 86.76**5. Logistic = 86.73**

- 5.1 Residential accommodation (78.70)
- 5.2 Food quality (86.25)
- 5.3 Classroom facilities (93.75)
- 5.4 Time management (88.20)

Weighted Average for the Course

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

$$WA = \{[CCS (100\%) + TF (100\%) + UOC (75\%) + OIC (100\%) + L (75\%)] * 100\} / 450$$

$$WA = [(90.81 + 88.27 + 68.38 + 86.76 + 65.05) * 100] / 450$$

$$= 88.73\%$$

Appendix – III**List of Faculties (along with their details and topics)**

S.No.	Name and Affiliation	Topic	Mb No.	E-mail
1.	Ms Shabnam Bassi, Director & Senior Fellow, TERI, New Delhi	Green Building: Concept & Guidelines	9971933566	shabnam.bassi@teri.res.in
2.	Mr Vinod Solanki & Mr Adison Stevenson Waste Warriors Society, Dehradun (UK)	Waste Management towards Green Development	8118860062 9950303573	vinod.solanki@wastewarriors.org adison.stevenson@wastewarriors.org
3.	Dr K. Ramesh, Sci-F & Head, WII, Dehradun (UK)	Engineering Solutions for Environmental Actions	9412971678	ramesh@wii.gov.in
4.	Dr Nagesh Babu Balam, Principal Scientist, CBRI, Roorkee (UK)	Energy Efficient Design Principals of Green Building	9557874199	nagesh.balam@cbri.res.in
5.	Dr Manushi Bhatt, Assistant Professor, CEPT University, Ahmedabad (GJ)	Urban Planning and Smart Cities	9724951854	manushi.bhatt@cept.ac.in
6.	Ms Vagmi Patel, SGE, CAG-CRDF, CEPT University, Ahmedabad (GJ)	Technologies in Disaster Risk Reduction	6355547418	vagmi.patel@cept.ac.in

Appendix- IV**Final List of Participants**

S.No.	Name of Participants	Affiliation	Mb No.
1.	Mr Abhishek Maithani	Uttarakhand Forest Department	7895025730
2.	Mr Ajay Kumar	BRIDCUL	7830010749
3.	Mr Amit Chauhan	BRIDCUL	8193094111
4.	Mr Anoop Kumar	NH - Public Works Department	9411717532
5.	Ms Archana	Public Works Department	7055731555
6.	Mr Arun Singh Negi	NH - Public Works Department	7895080044
7.	Mr Devender Singh	Rural Works Department	8650546631
8.	Ms Manisha Rawat	Rural Works Department	7017255707
9.	Ms Manisha Sethi	Public Works Department	8448647747
10.	Mr Mithlesh Kumar Singh	ONGC	9410391411
11.	Mr Mukesh Kumar	Uttarakhand Jal Sansthaan	9634911810
12.	Mr Narendra Kumar	ONGC	9410397425
13.	Mr Nirav Patel	ONGC	9898971914
14.	Mr Priyadarshan Singh Rawat	Uttarakhand Jal Sansthaan	8449705009
15.	Mr Rajat Kapil	Uttarakhand Forest Department	8954727625
16.	Mrs Rashmi Dhyani	Uttarakhand Forest Department	7409669553
17.	Mr Saurabh Bansal	ONGC	9427504774
18.	Mr Shahid A.M.	GCC, ICFRE	8731057504
19.	Mr Shashank Kandwal	ICAR - IISWC	9760670464
20.	Dr Siddharth Arya	GCC, ICFRE	9410554347
21.	Mr Vaibhav Kumar	Survey of India	8076623391
22.	Mr Vicky Gangoli	BSNL	9410960004
23.	Mr Manmohan Singh	ONGC	9410391611
24.	Mr Anbumani B	Survey of India	8220891042



CENTRAL ACADEMY FOR STATE FOREST SERVICE, DEHRADUN

3-Days Training of Personnel of Other Services on

“Green Infrastructure and Development”

26th to 28th November 2025

Day-wise Schedule

Time	Session	By
Day-1: 26th November 2025		
0945 – 1030 hrs	Registration	Participants
1030 – 1115 hrs	Inaugural	Prof R. Pradeep Kumar Director CSIR - Central Building Research Institute, Roorkee (UK) Mr E Vikram, IFS Principal CASFOS, Dehradun & Team
1115 – 1130 hrs	<i>Tea Break</i>	
1130 – 1300 hrs	Green Building: Concept & Guidelines	Ms Shabnam Bassi Director & Senior Fellow TERI, New Delhi
1300 – 1400 hrs	<i>Lunch Break</i>	
1400 – 1530 hrs	Waste Management towards Green Development	Mr Vinod Solanki & Mr Adison Stevenson Faculty Waste Warriors Society Dehradun (UK)
1530 – 1545 hrs	<i>Tea Break</i>	
1545 – 1715 hrs	Engineering Solutions for Environmental Actions	Dr K. Ramesh Scientist-F & Head Wildlife Institute of India Dehradun (UK)
Day-2: 27th November 2025		
0900 – 1700 hrs	Field Visit – Rajaji Tiger Reserve, UK	Dr Koko Rose (IFS) Director Rajaji Tiger Reserve (UK) Mr Ajay Lingwal ACF Rajaji Tiger Reserve (UK)



CENTRAL ACADEMY FOR STATE FOREST SERVICE, DEHRADUN

3-Days Training of Personnel of Other Services on

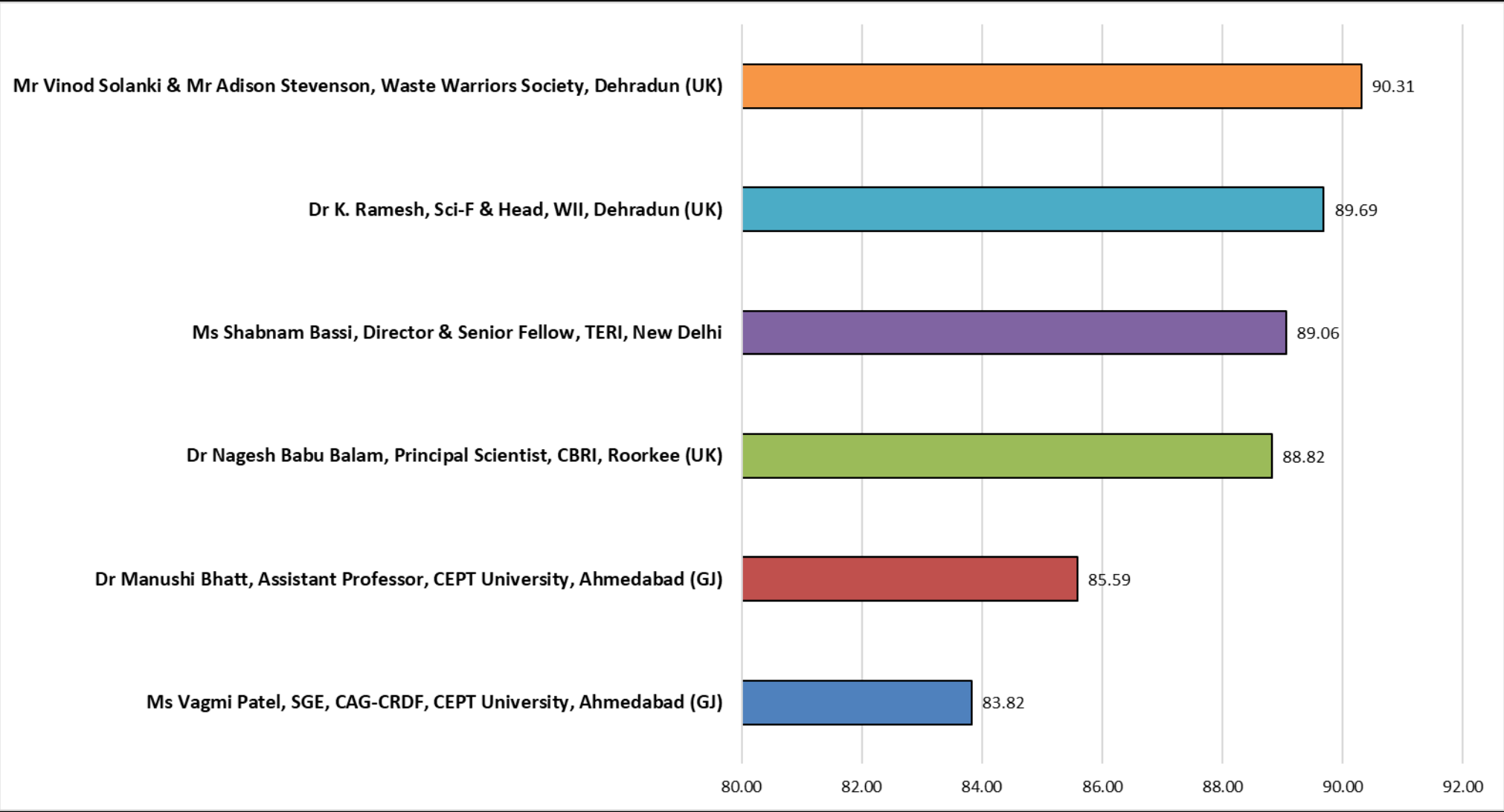
“Green Infrastructure and Development”

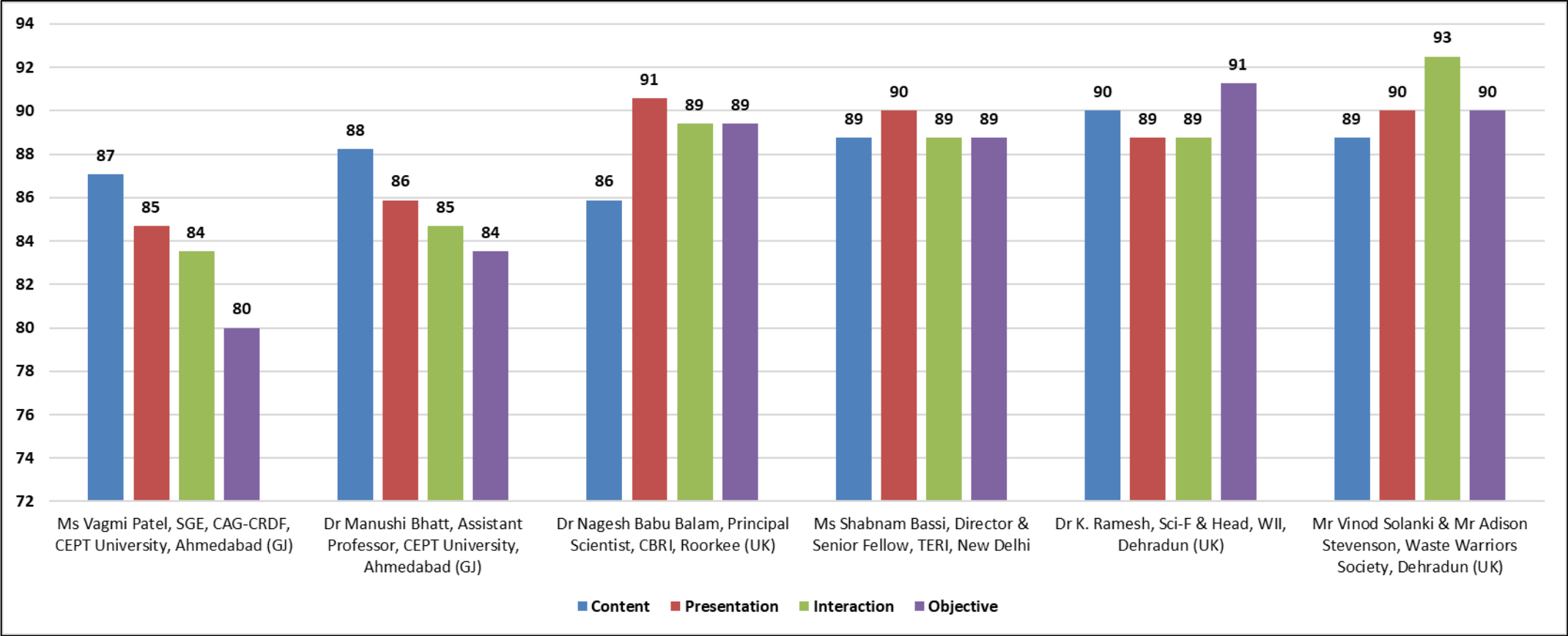
26th to 28th November 2025

Day-wise Schedule

Time	Session	By
Day-3: 28th November 2025		
0945 – 1115 hrs	Energy Efficient Design Principals of Green Building	Dr Nagesh Babu Balam Principal Scientist CSIR - Central Building Research Institute Roorkee (UK)
1115 – 1130 hrs	<i>Tea Break</i>	
1130 – 1300 hrs	Urban Planning and Smart Cities	Dr Manushi Bhatt Assistant Professor CEPT University Ahmedabad (GJ)
1300 – 1400 hrs	<i>Lunch Break</i>	
1400 – 1530 hrs	Technologies in Disaster Risk Reduction	Ms Vagmi Patel SGE, CAG-CRDF CEPT University Ahmedabad (GJ)
1530 – 1545 hrs	<i>Tea Break</i>	
1545 – 1715 hrs	Valedictory Session	CASFOS Team

Overall Feedback of Resource Persons on all Parameters





Parameter wise breakup of feedback of Resource Person

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-1)



Welcoming of the Chief Guest Prof. R. Pradeep Kumar, Director CBRI, Roorkee (UK)



Brief Introduction of the Training Program by Mr. Ankit Gupta, Scientist-C, and Course Director, CASFOS, Dehradun

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-1)



Opening remarks by Mr. E. Vikram, IFS, Principal CASFOS, Dehradun



Keynote Address by Prof. R. Pradeep Kumar, Director, CBRI, Roorkee (UK)

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-1)



Lecture session by Ms Shabnam Bassi, Director & Senior Fellow, TERI, New Delhi (DL)

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-1)



Lecturer session by Mr Vinod Solanki & Mr Adison Stevenson, Waste Warriors Society, Dehradun (UK)



Lecture session by Dr K. Ramesh, Scientist-F, WII, Dehradun (UK)

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-2)



Exposure field visit to Rajaji Tiger Reserve, Dehradun

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-3)



Lecturer session by Dr Nagesh Babu Balam, Principal Scientist, CBRI, Roorkee (UK)



Lecturer session by Dr Manushi Bhatt, Assistant Professor, CEPT University, Ahmedabad (GJ)

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-3)



Ms Vagmi Patel, SGE, CAG-CRDF, CEPT University, Ahmedabad (GJ)



Verbal feedback from the participants during Valedictory

PHOTOGRAPHS OF TRAINING PROGRAMME (DAY-3)



Certificate distribution to all participants



Group Photograph