कर्मयोगी भारत
लोकहितं मम करणीयम्

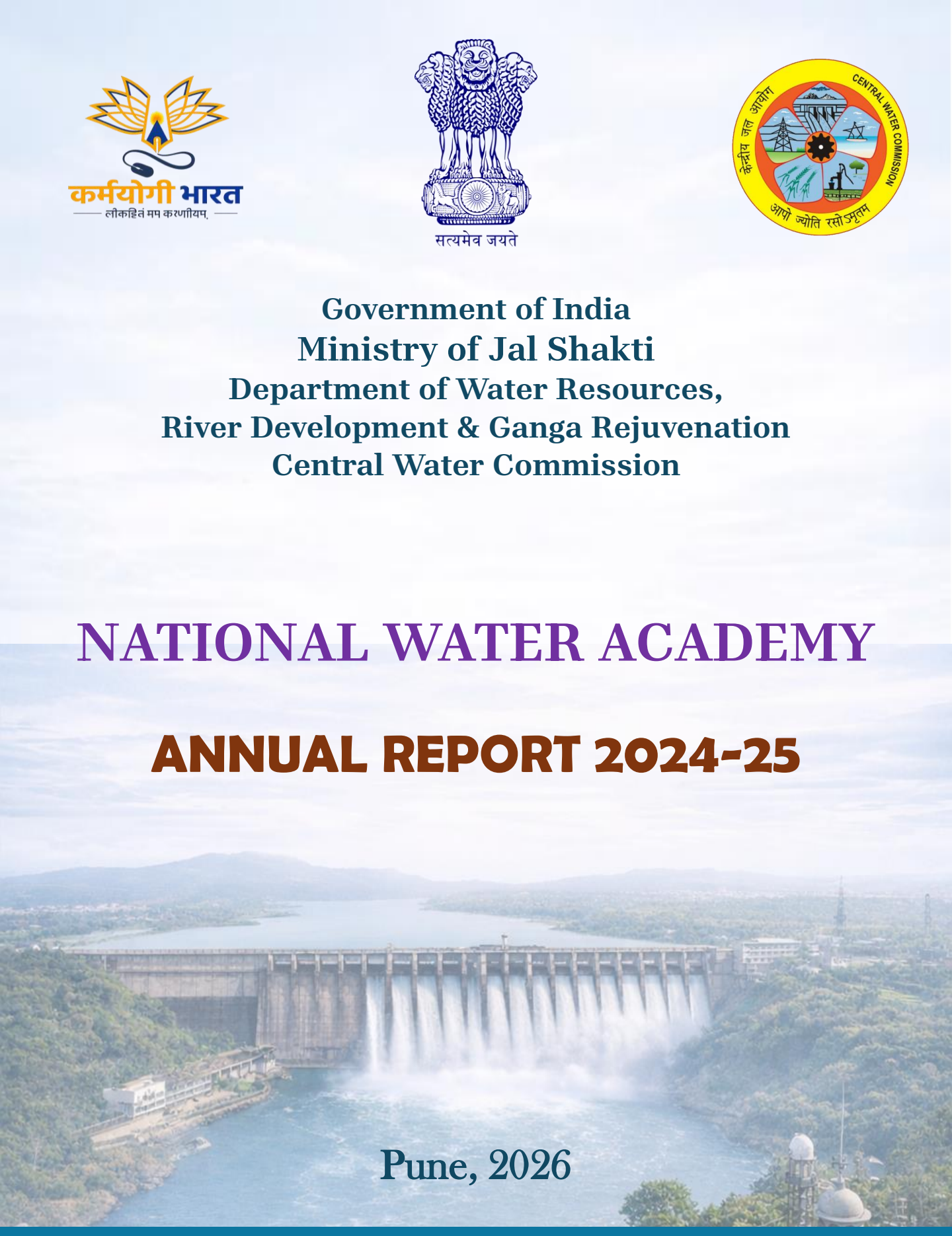
सत्यमेव जयते

केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION
आपो ज्योति रसोऽमृतम्

Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Water Commission

NATIONAL WATER ACADEMY

ANNUAL REPORT 2024-25



Pune, 2026

Serving Nation through Training and Capacity Building in Water Resources Sector

सत्यमेव जयते

Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Water Commission

ANNUAL REPORT
2024-25

National Water Academy
Pune

Table of Contents

List of Annexures

FOREWORD

It is my privilege to present the Annual Report of the National Water Academy (NWA), Central Water Commission, Pune, for the year 2024–25. The year under review stands out as a defining phase in the Academy's evolution as India's apex institution for capacity building in the water resources sector. Despite persistent constraints in faculty and support staff strength, NWA achieved its highest-ever training output in terms of **123 training weeks**, delivering **96 training programmes comprising and benefitting 10,345 officers and professionals** drawn from Central and State Governments, public sector undertakings, academic and research institutions, civil society organisations, and partner countries.

These programmes spanned the full spectrum of contemporary water sector priorities—dam safety under the Dam Safety Act, 2021; flood forecasting and urban hydrology; irrigation modernisation; water quality monitoring and data analytics; hydrological modelling; geospatial technologies; artificial intelligence and machine learning applications; and integrated water resources management. Alongside long-term cadre and induction training for CWES officers, the Academy substantially expanded its specialised technical courses, national level webinar series, distance learning programmes, and mass-awareness initiatives for Panchayati Raj Institutions, teachers, NGOs, media professionals, and community stakeholders.

A major strategic thrust during the year was the strengthening of NWA's digital training ecosystem. The expanded use of the MOODLE-based Learning Management System, large-scale thematic webinars, hybrid training models, and the operationalisation of the Training Information Management System (TIMS) have enabled evidence-based planning, wider geographical outreach, and more efficient training administration. These efforts have positioned NWA as a technology-enabled national centre of excellence for scalable and data-driven capacity building. The Academy's role as a Regional Training Centre of the World Meteorological Organization, its contribution to national flagship initiatives such as NHP and DRIP, and its delivery of international programmes under ITEC and bilateral cooperation frameworks further strengthened India's institutional footprint in global water-sector capacity development.

Equally significant were the advances in institutional development. The commencement of the long-pending underpass project for safe campus connectivity and the securing of land for a proposed international-level campus, marks important milestones in NWA's long-term infrastructure roadmap.

I place on record my sincere gratitude to the Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation; the Central Water Commission; the Capacity Building Commission; State Governments; partner institutions; international agencies; and all collaborating organisations for their continued guidance and support. I also commend the dedication, professionalism, and resilience of the officers and staff of the National Water Academy, whose commitment made this year as an exceptional one for NWA.

As India advances towards its long-term vision of water security, climate resilience, and sustainable development, NWA remains steadfast in its mission to groom competent, and future-ready professionals capable of steering the nation's water resources sector with knowledge, integrity, and innovation.

.

D. S. Chaskar
Chief Engineer & Head

Executive Summary

The Annual Report 2024–25 of the National Water Academy (NWA), Pune, presents a comprehensive account of the Academy's achievements in training, capacity building, digital transformation, institutional strengthening, and national and international collaboration in the water resources sector.

During the year, NWA recorded its **highest-ever training performance in terms of 123 training weeks**, with **96 training programmes benefitting 10,345 officers and professionals** from Central and State Government departments, public sector undertakings, academic and research institutions, NGOs, community organisations, and foreign governments.

Training and Capacity Building

The training portfolio encompassed:

- **Cadre and induction training programmes** for CWES Group 'A' and Group 'B' officers, including the flagship 34-week Induction Training Programme.
- **Specialised technical programmes** on dam safety (aligned with the Dam Safety Act, 2021), flood forecasting and modelling, urban flood management, irrigation modernisation, water quality monitoring and analysis, hydrological modelling, real-time data acquisition systems, and reservoir sedimentation.
- **Emerging technology programmes** covering geospatial applications, Google Earth Engine, Python programming, artificial intelligence and machine learning for water resources management, and decision-support systems.
- **National webinar series and distance-learning courses**, enabling large-scale outreach across all States and Union Territories.
- **Mass awareness programmes** for Panchayati Raj Institutions, school teachers, NCC cadets, NGOs, media professionals, and farmers to strengthen community-level water stewardship.

State-specific and regional programmes were conducted for the North-Eastern States, Himalayan region, Maharashtra, Telangana, Bihar, West Bengal, Ladakh, and other priority areas, ensuring contextualised capacity building.

Digital Learning and Systems Strengthening

A major institutional milestone during the year was the consolidation of NWA's digital training ecosystem through:

- Expansion of the **MOODLE-based Learning Management System**,
- Large-scale deployment of **hybrid and distance learning models**, and
- Operationalisation of the **Training Information Management System (TIMS)** for structured data management, analytics, and training performance monitoring.

These initiatives enabled wider outreach, improved programme design, evidence-based planning, and more efficient training administration, positioning NWA as a technology-enabled national centre of excellence for scalable capacity building.

National and International Engagement

NWA continued its role as:

- A **Regional Training Centre of the World Meteorological Organization (WMO)** for hydrology and hydraulic sciences,
- A key training partner under national flagship initiatives such as the **National Hydrology Project (NHP)** and the **Dam Rehabilitation and Improvement Project (DRIP)**, and
- An implementing institution for **international programmes under ITEC and bilateral cooperation**, including specialised training for officers from Nepal and Rwanda.

The Academy also contributed domain modules to the iGOT–Karmayogi platform and participated in national policy dialogues and technical forums.

Infrastructure and Institutional Development

On the institutional front, significant progress was achieved through:

- Commencement of the long-pending **underpass project** connecting the academic and residential campuses,
- Securing of land for a proposed **international-level Institutional and residential campus**, and
- Continued upgrading of classrooms, laboratories, digital infrastructure, and residential facilities.

Overall Performance

The year 2024–25 stands out as a period of:

- Record training output and national outreach,
- Diversification into advanced and emerging technical domains,
- Strong integration of digital platforms and data systems,
- Expanded stakeholder engagement at national and international levels, and
- Foundational progress towards long-term infrastructure expansion.

Through these achievements, the National Water Academy has further consolidated its position as India's apex institution for professional training and capacity building in water resources development and management. The Academy remains committed to supporting the Government of India's long-term objectives of water security, climate resilience, sustainable development, and institutional excellence.

"Leadership and learning are indispensable to each other." ….John F. Kennedy

****

Key Achievements and Highlights of the year

The year 2024–25 has been a landmark period for the National Water Academy (NWA), marked by highest training outputs, expansion of national and international collaborations, strengthened faculty capabilities, and major strides in infrastructure development. Despite significant vacancies at the faculty and support-staff levels, NWA delivered its highest number of training weeks till date in a year, reaffirming its position as the premier capacity-building institution in the water sector.

1. Training Output and Capacity-Building Impact

- 123 training weeks (the highest in NWA's history in any year).
- Conducted 96 training programs/events, including long-term residential courses, specialized technical modules, and webinars, benefitting 10,345 officers.
- Output significantly exceeded the 15-year annual average (2008-23) of 42 training programs, 67 training weeks and about 3,000 officers trained.

2. Strengthening CWES Cadre through Systematic Cadre Trainings

- Conducted 09 Cadre Training Programs for CWES Group 'A' and Group 'B' to support timely promotions.
- Successfully organized the 34th Induction Training Program (ITP)—a 34-week flagship residential training—for 32 newly appointed CWES officers, covering technical, hydrological, governance, geospatial, administrative, leadership & other competencies.

3. Capacity Building Across CWC, Attached/ Subordinate Offices & States

- Two MCTP programs for Hydrometeorological Cadre officers.
- Six Induction Training Programs for newly recruited staff of NERIWALM, CGWB, Brahmaputra Board, Farakka Barrage Project, MTS of CWC Regional offices.
- Orientation program for LDCs of CWC to strengthen office management and administrative skills.

4. Faculty Development and Competency Enhancement

- Conducted three dedicated faculty development programs, including a ToT on MOODLE and a program on Training Information Management System (TIMS).
- NWA faculty attended advanced FDPs at YASHADA Pune and SSIFS, New Delhi.
- Chief Engineer & Head, NWA participated in the seminar on "Management of RTCs" organised by WMO at Abu Dhabi and also presented NWA's RTC activities.

5. Specialized and Emerging-Area Training Programs

NWA delivered training in key contemporary areas such as:

- Pumped Storage Hydropower schemes
- Artificial Intelligence, Machine Learning & Data Science
- Coastal Zone Management

- Google Earth Engine Applications
- Python Programming for WR Sector
- Irrigation Modernization & PDN Design
- Water Pricing

These programs strengthened sector-wide knowledge in high-demand technical domains.

6. Major Expansion in Dam Safety Training and National Webinars

Aligned with the Dam Safety Act, 2021, NWA conducted:

- Eight specialized dam safety programs (Design flood review, dam-break analysis(DBA), instrumentation, DHARMA, Emergency action plan(EAP), etc.).
- 22 National level webinars with 7,760 participants, featuring experts from NDSA, State DSOs, and technical institutions.

7. New Thematic Areas: Urban Flooding & ET-Based Irrigation Assessment

- First-ever training on Urban Flood Management at NWA.
- Two programs on Evapotranspiration (ET)-based Irrigation Performance Assessment, conducted in association with NIH, World Bank, POMIO, CWC benefitting 58 officers.

8. Rapid Scaling-Up of Water Quality Data Analysis Training

As per Chairman, CWC's directive:

- 06 specialized programs on "Analysis of Water Quality Data" in a short period of 2 months
- 125 CWC officers trained (Scientific Staff to Director level)

9. State-Specific and Regional Capacity Building

- Conducted two customized programs for newly appointed Group-A officers of WRD, Maharashtra (META, Nashik).
- Four targeted programs for the North-Eastern Region and Hilly States, including DPR preparation, procurement and project management.
- Exposure-cum-training program and visits for postgraduate students from NERIWALM.

10. Contribution to National Projects: NHP, DRIP & ACBP

- Conducted five high-impact programs under NHP and DRIP, including WB procurement procedures, YWP cohort, flood forecasting, reservoir sedimentation, and RTDAS.
- Delivered programs aligned with the Annual capacity Building Plan of DoWR, RD&GR; including IWRM, flood forecasting, and WR sector overview for non-technical officers.

11. International Training Programs

On request from the Ministry of External Affairs (MEA):

- Two ITEC programs for Government of Nepal (40 officers).
- One program for Government of Rwanda (09 officers), through WAPCOS.

These programs strengthened NWA's role as a global training provider.

12. Mass Awareness and Community-Oriented Programs

Wide outreach covering:

- PRIs, Farmers, and WUAs
- School Teachers and DIET Faculty
- NGOs and Media
- NCC Cadets
- Civil Engineering Students

These programs built awareness on water resources, water conservation, floods, and water governance.

13. Distance Learning and e-Learning Expansion

- Conducted a 7-week WMO-RTC Distance Learning Course on Basic Hydrological Sciences.
- Completed one national batch of NCCPIM, training 162 stakeholders (WUA members, farmers, govt functionaries).
- Leveraged NWA's MOODLE e-learning ecosystem for programs on Python-based Jupyter modules, GEE etc.

14. National Space Day Celebrations

- Organized a 2-day technical webinar on Geospatial Technology (1,256 participants).
- Held a dedicated student webinar (194 participants).
- Successfully conducted a National Online Quiz Contest with 13,000+ participants.

15. Faculty Contributions and National Engagements

NWA faculty served as:

- Scientific Committee members and lead speakers in national seminars.
- Contributors to ABA/AARDO international training.
- Content development for iGOT modules (Water Law, Floods & Droughts, Namami Gange).
- Resource persons for Water Auditing courses and Agricultural Water Management FDPs.
- Special lectures at Maharashtra National Law University on water law & water governance.

16. National Recognition and Accreditation

NWA was accredited with a rating of "Very Good" (उत्कृष्ट) under the NSCSTI framework of the Capacity Building Commission—reflecting excellence in training design, delivery, infrastructure, digital resources and collaboration.

17. Major Infrastructure Development Initiatives

a. Underpass Construction

- Long-pending underpass project commenced in October 2024.

- MoA signed with PWD, Maharashtra for seamless execution.

b. Establishment of New International Campus

- Approval secured for transfer of 11 acres of land from CWPRS to NWA.
- Joint demarcation completed.
    - 8 acres adjacent to current office campus
    - 3 acres near the residential campus

c. Comprehensive Infrastructure Proposal

- A full layout plan for an International-Level Training & Residential Campus was prepared and presented to AS (Admin), DoWR, RD & GR.

In Summary

The year 2024–25 stands out as a period of:

✓ Record training output in terms of training weeks

✓ Introduction of new thematic areas

✓ Strengthened national & international partnerships

✓ Expansion of digital learning platforms

✓ High-impact outreach & inclusivity

✓ National accreditation (with "Very Good" rating)

✓ Foundational steps for future infrastructure growth

NWA continues to evolve as a **Center of excellence** in Water Resources Development & Management, contributing significantly to the nation's capacity-building

****

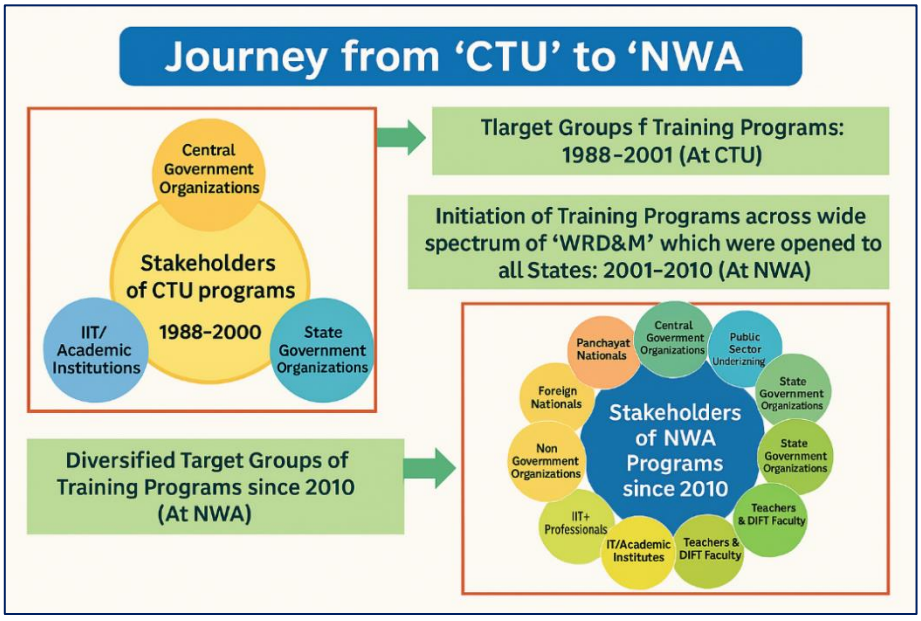
Chapter 1 : Introduction & Academy Overview

1.1 History and Background

Ministry of Water Resources (MoWR), Govt. of India established the Central Training Unit (CTU) (renamed as National Water Academy in 2001) in Central Water Commission during May 1988 in a temporary establishment of Central Water & Power Research Station, Khadakwasla, Pune. The primary objective of CTU was to impart training to the in-service engineers from Central & State organisations on the aspects of Integrated River Basin Planning & Management and to develop institutional capability at the national level for imparting training in new emerging technologies in water resources sectors on continued basis. The establishment of CTU was initially covered under the United States Agency for International Development (USAID) assisted by Water Resources Management & Training (WRM&T) Project. The USAID assistance made available the technical expertise to CTU through consultancy services from M/s Harza Engineering Company, Chicago (USA) and its associates Utah State University, Logan (USA) and M/s Consultancy Engineering Services India Pvt. Ltd, (India).

1.2 Upgradation to National Water Academy in 2001

Subsequently, the World Bank in 1993 made available grant-in-aid from the Institutional Development Fund (IDF) for upgrading the training activities and preparing conceptual plans for the CTU (now NWA). The World Bank assisted Hydrology Project which commenced in 1996 provided necessary financial support for upgradation of infrastructural facilities. Present National Water Academy came into existence in May 2001 and is being continuously upgraded in terms of infrastructure and curriculum. NWA, a 'Centre of Excellence' in Central Water Commission under Department of Water Resources, RD & GR, Ministry of Jal Shakti, Government of India is imparting training and building capacity of Water Sector professionals and other stakeholders in the country and professionals of foreign countries. After being upgraded from CTU to NWA it has widened its reach, in 2010, to include all stakeholders of water sector and now besides mandatory cadre trainings programs courses; high technology areas in water sector including Hydrology; Application of GIS in water sector; Mathematical Modelling; Design of structures; Environmental issues in water resources



development etc. programs are also being delivered on water sector for mass awareness to teachers, media professionals, NGOs, PRIs and others.

In its national role, the NWA is focusing on conducting training courses for all water sector personnel, in the specialized and emerging areas, for which the existing State or other Institutes are not equipped to meet the needs. From only one/two programs in CTU (i.e. IRBP&M and ITP), NWA is now targeting more than 70 programs per annum in the wide spectrum of topics related to water sector. Major beneficiaries of these programs are State Govt officers, Officers of Central Water Commission, Central Organisations, School Teachers, Media Professionals, NGOs & Panchayati Raj functionaries and also Foreign Nationals etc

1.3 Mandate and Role of National Water Academy

NWA, Pune is a Central Training Institute (CTI), primarily mandated to conduct Induction Training Program for Central Water Engineering Services Group 'A' & Group 'B' Officers and Scientific cadre officers; Mandatory Cadre Training Programs for all levels of Group A & Group B Officers; Capacity Building for Stakeholders in field of Water Resources Development and Management (mainly comprising of in-service professionals from State Government/Central Government/ PSUs & Private etc.); core area trainings; training on areas of emerging technologies, purpose-oriented training; Mass Awareness Programs; Demand Based Programs for Indian and Foreign Nationals etc. In addition, objectives include assistance to state govt institutes for their specific training needs and collaboration with international agencies like WMO, COMET, ICID etc. for training & other purposes.

1.4 Mission & Vision

The Mission of Central Water Commission (CWC) is "to promote integrated and sustainable development and management of India's water resources by using state-of-art technology and competency and by coordinating all stakeholders".

Furthering the mission of CWC, the vision of the National Water Academy is to provide quality training for building capacity of water resources professionals and responsive engineering services. Its mission is to educate all stakeholders to manage water resources issues and to overcome them in an

integrated and sustainable manner. NWA is to act as an umbrella organization for Capacity Building of all stakeholders of Water Sector in the country.

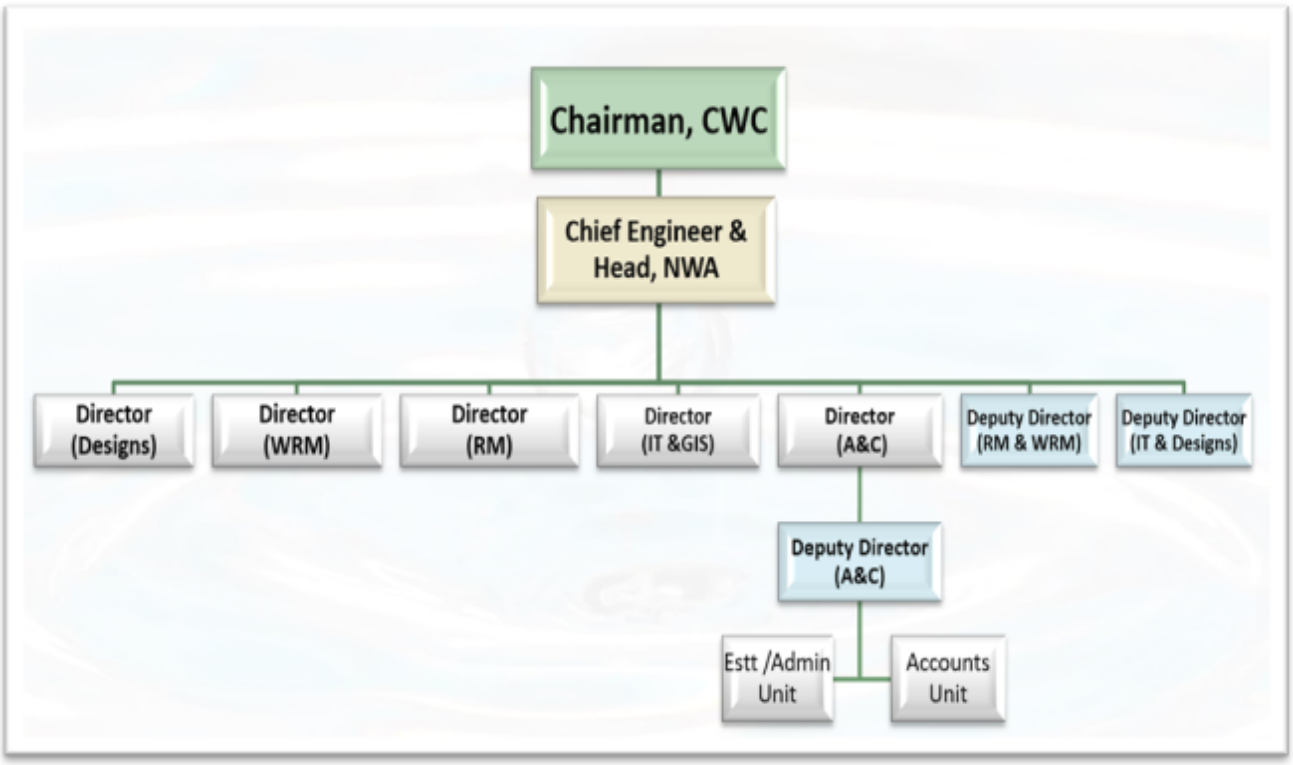
1.5 Objectives and Functions of NWA

Objectives	• Keeping up-to-date and enhancing professional knowledge and skills required for better performance and competency growth of individuals and organizations; • Orienting participants to various emerging issues in Water Resources Sector, with underlain philosophy, values, principles and priorities as per requirements of the organizations where they are likely to work during their service tenure; • Inculcating better understanding of engineering/professional requirement as well as sensitization to socio-economic environment; • Bringing about right attitudinal orientation and transformation to build professionalism, commitment and nurture water resources engineers to become responsive & responsible; • Establishing linkages with leading Institutions in India and Abroad in water resources sector for sharing and enriching the expertise with associated confidence building.
Functions	• Induction Training Programs (ITP) for newly appointed CWE S Group 'A' & Group 'B' Officers; • Mandatory Cadre Training Programs (MCTP) for CWE S Group 'A' & Group 'B' Officers; and Scientific Cadre at all levels • Specialized/Core Area Courses for officers of Central and State agencies on various aspects of Water Resources Development and Management; • Flagship Schemes of Ministry for skill development and awareness; • New emerging technologies in water sector; • Develop training modules/case studies including on RS & GIS applications in water resources etc.; • Assistance to Central/ State Government organizations and their training institutes on their specific training needs; • Non-Technical Programs; • Distance Learning Programs; • National / International Seminars and Workshops on issues related to water resources development/ related subject areas for the benefit of Central / State agencies; • Faculty Development Programs • Customised Trainings to professionals of other countries

Chapter 2 : Governance and Organizational Structure

2.1 Administrative Setup

The NWA is headed by a Chief Engineer and has five Directors and three Deputy Directors as core faculty. The core faculty is drawn from CWES (Central Water Engineering Services-Group A) cadre who have long practical experience in Water Resources Development and Management. The guest faculty comprises of academicians and scientists of eminence from premier Research Centres and Universities in India, as well as practicing professionals and specialists drawn from other organizations and agencies. The present organogram is as follows :



The present sanctioned staff strength of NWA is 32 (as given in Annex-I). The need for strengthening of NWA with additional manpower and infrastructure facilities was recognized much earlier in 2003-04. However, the human resources strength continues to be very limited.

2.2 Faculty Resource Pool

The training programs conducted at NWA focuses on applied learning and are multi-disciplinary nature. Apart from the NWA Core faculty the invited guest faculty comprises of subject matter experts drawn from the various organisations as below :

i. **Central Water Engineering Services Group A Officers are the major resource pool imparting training with a focus on Applied Learning**
ii. Central and Central PSUs etc.
iii. State WRDs, WALMIs, IMTIs etc

iv. Academicians and scientists of eminence from premier Research Centers and Universities in India,
v. Practicing professionals and specialists drawn from other organizations and agencies,
vii. Eminent Retired Experts;
viii. Experts from Private Organisations and Non-Governmental Organisation are invited for guest lectures.

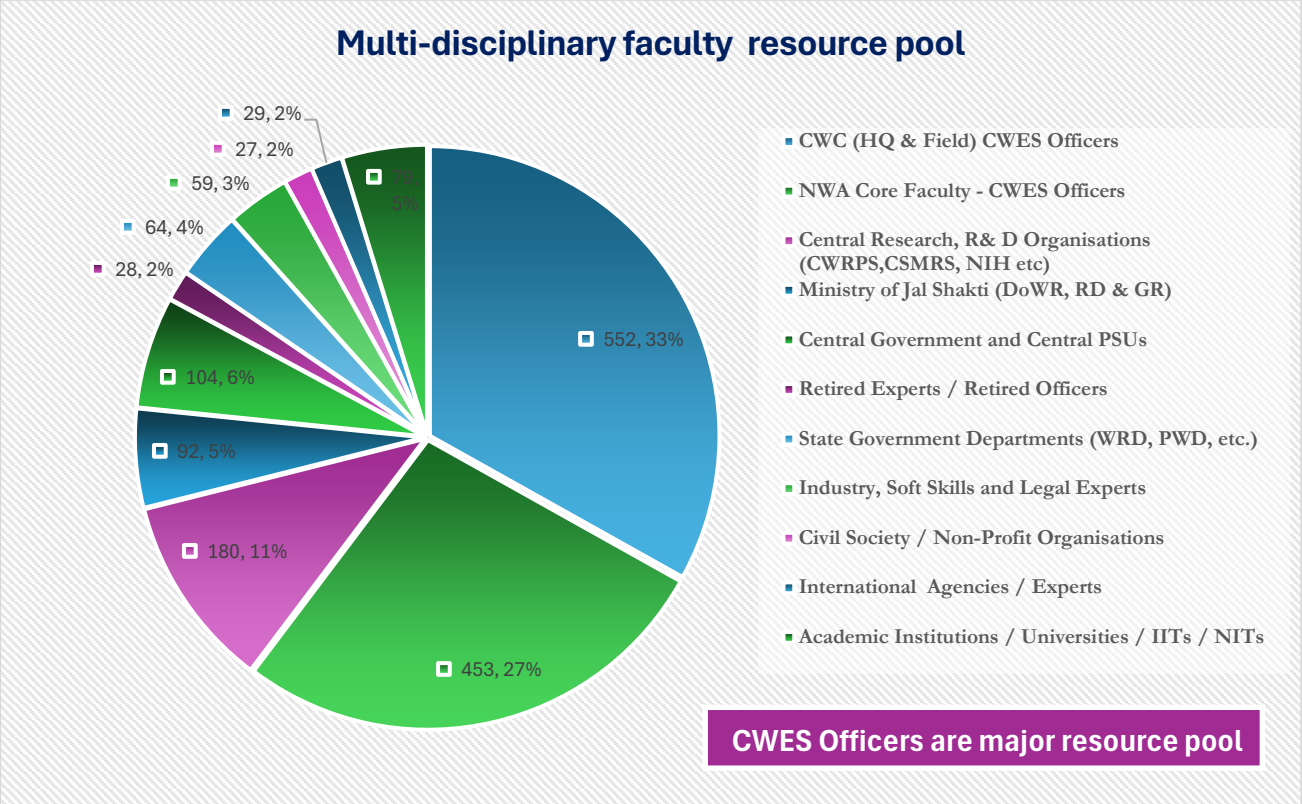
During 2024–25, the National Water Academy (NWA) leveraged this most diverse and multidisciplinary faculty resource pools in the water sector. Expert faculty were drawn from Central Government organisations, State departments, premier academic institutions, national research organisations, international agencies, public sector undertakings, industry, and retired domain specialists.

NWA continued to rely on the strong technical foundation of the Central Water Engineering Services (CWES), with experts from both the Central Water Commission (CWC) and the Academy itself forming the core resource group. This was supplemented by faculty from leading academic institutions such as IITs, IIMs, NITs, universities, and national-level centres of excellence.

Specialised technical ministries and departments—including those dealing with water resources, earth sciences, environment, health, power, and urban development—provided experienced professionals from their respective organisations and autonomous bodies. Research institutions and R&D centres further enriched the pool with experts in hydrology, hydraulics, geotechnical engineering, remote sensing, and allied domains.

NWA also benefited from contributions by ISRO-affiliated centres, industry leaders, soft-skill and legal professionals, NGOs, civil society organisations, and eminent retired officers who brought practical experience and field-level insights. The Academy strengthened its international interface through experts from global organisations and multilateral development partners, enhancing exposure to international best practices and policy frameworks. State government departments dealing with water resources and public works also played a crucial role by contributing practitioners with extensive field experience, thereby strengthening the practical relevance of NWA's training programs.

This comprehensive and multi-institutional faculty ecosystem ensured that NWA's training programs remained contemporary, practice-oriented, and aligned with both national priorities and global trends—significantly enhancing the quality, outreach, and impact of capacity-building initiatives during the year.. During the year 2024-25, about 1660 experts were invited as an expert faculty from the various Category of the organizations.



2.3 Monitoring Mechanism

The National Water Academy, Pune is being guided by the following Boards /Committee:

Sr. No.	Name of Board/ Committee	Terms of Reference
1	Advisory Board: Chaired by Secretary, DoWR, RD & GR	• To provide guidance and recommendations for carrying out the training programs within the framework of Water Resources Policies and Activities in India • To review the on-going training programs and to suggest the content and process of conducting training in the Academy, including infrastructure development required to create a learning environment
2	Program Advisory Committee: Chaired by Chairman, CWC	• To devise Sessions plan in line with Training Policy. • Formulation of individual Training programs • Selection/Recommendation of Expert faculty • Suggestion of selection of indicators for Training Impact Assessment

3	WMO Advisory Committee: Chaired by Chairman, CWC	• To facilitate smooth functioning of the Regional Training Centre (RTC). • To advice and oversee the distance learning training programs conducted in association with WMO. • To place the work done to Advisory Board for information.
4	Training Oversight Committee	Chaired by Joint Secretary (Admin & GW) with Heads of the three training institutes as members (NWA/ NERIWALM/ RGI) : To prepare a standardized Training Module on Water Sector, prepare and update the induction training material of the Department, dovetail Department's training programmes to Mission Karmayogi and to oversee the content of the training programmes of the Department to achieve integration and shall periodically seek feedback from trainees and other stakeholders to review the training activities on a regular basis.

Chapter 3: Training Development Process

3.0 Training Program Development Process

3.1 Structured Approach to Training Development

NWA follows a **scientific and standardized** approach to developing training programs. The training cycle includes:

- **Training Needs Assessment (TNA):** Conducted through stakeholder consultations, feedback mechanisms, and advisory board recommendations.
- **Program Planning & Design:** Based on TNA inputs, a structured **Annual Training Plan** is formulated.
- **Program Implementation:** Training is delivered using a mix of classroom sessions, hands-on training, and digital learning.
- **Feedback & Evaluation:** Continuous feedback is collected to refine and enhance training effectiveness.

3.2 Competency-Based Training Framework

NWA aligns its training programs with the **National Training Policy (2012) and Mission Karmayogi**, focusing on three key competencies:

- **Domain Competencies:** Technical expertise in hydrology, dam safety, flood forecasting, and GIS applications
- **Functional Competencies:** Managerial and strategic skills for decision-making and policy implementation.
- **Behavioural Competencies:** Soft skills such as leadership, communication, and teamwork..

3.3 Categories of Training Programs

NWA offers training programs in the following broad categories:

Category	Competency Focus
Cadre Training (CWES Group A & B)	Domain, Functional, Behavioural
Other Cadre Training for CWC/DoWR,RD & GR	Domain, Functional, Behavioural
Faculty Development Programs	Functional, Behavioural
Core Technical Programs	Domain
Specialized Programs (DRIP, NHP)	Domain
Customized/Demand-Based Training	Domain
Non-Technical Programs	Domain, Functional
Mass Awareness Programs	Domain
Distance Learning (Certificate Courses)	Domain

3.4 Training Plan Formulation & Implementation

The Annual Training Plan is developed based on:

- Inputs from **Advisory Board & Program Advisory Committee as and when they meet**.
- Feedback from **state governments, ministries, and stakeholders**.
- Directions from **Central Water Commission (CWC) & Ministry of Jal Shakti**.

A **Standard Operating Procedure (SOP)** ensures effective training execution, covering aspects such as faculty selection, logistics, and quality assurance.

3.4 Training Methodology (Andragogy)

NWA employs a **blended learning approach**, incorporating classroom instruction with e-learning modules.

- **Hands-on Training & Field Visits** – Real-world exposure to water resource infrastructure.
- **Problem-Based Learning (PBL)** – Engaging participants in solving actual water sector challenges.
- **Interactive Case-Based Learning** – Analyzing best practices in water management.
- **Technology-Enhanced Learning** – Utilizing GIS, AI, and remote sensing tools for advanced training.
- **Peer Learning & Mentorship** – Encouraging collaboration and expert guidance.

Chapter 4 : Broad Categories, Areas & Types of Training Offered

4.1 Broad Categories of Training

NWA offers training programs under the following Broad Categories:

i. **Cadre Training for CWES Officers** – Mandatory training for Central Water Engineering Services (CWES) Group A and Group B officers at different career levels.

ii. **Other Cadre Training Programs** - for various cadres of CWC and cadres of other organisations of DoWR, RD & GR

iii. **Faculty Development Programs (FDP)** – Enhancing teaching skills for trainers in the water sector.

iv. **Core Area /Technical Training Programs including Workshops, Webinars etc** – Specialized programs on water resources engineering and management.

v. **Programs under the Flagship Scheme of DoWR,RD &GR** – Programs under projects like AIBP, CAD, NHP, DRIP etc

vi. **As per the Annual Capacity Building Plan of DoWR, RD & GR prepared by Capacity Building Commission**

vii. **Training Programs under aegis of India Europe Union Water Partnership (IEWP) - NWA is identified as Nodal for capacity building under IEWP.**

viii. **Customized and Demand-Based Training** – Tailor-made programs for organizations.

ix. **Non-Technical Trainings** - Management Development Program etc specifically for Non-Technical Officers of CWC & organisations under DoWR, RD & GR.

x. **Mass Awareness**– Outreach programs for School Teachers & DIET Faculty, NGOs, media professionals, PRIs etc.

xi. **Distance Learning** – NWA is recognized as Regional Training Centre of WMO since 2012, NWA regularly conducts DL Programs in association with WMO. A Certificate Course on PIM in association with IndiaPIM is also conducted. There are numerous modules which are conducted in DL Mode.

xii. **Collaborative Programs with WALMIs/IMTIs**

xiii. **Training Program for Foreign Nationals** as per the need.

4.2 Broad Areas of Training

The training programs cover various disciplines in water resource management, categorized as follows:

Broad Area	Topics Covered
Design & Structural Engineering	Dam design, Barrage & Weir design, FEM & advanced modeling techniques.
Project Planning & Development	Survey & Investigation, DPR preparation, Project appraisal.
Hydrology & Flood Management	Hydrological modeling, Real-time flood forecasting, Climate resilience.
Irrigation & Agriculture	Participatory irrigation management (PIM), Micro-irrigation, Canal automation.
Hydropower Engineering	Design of hydropower structures, Pumped storage hydropower projects.
Water Policy & Governance	National Water Policy, Water laws, River basin governance.
Information Technology & GIS	GIS-based decision support, AI & ML applications in water management.
Environmental & Social Aspects	Climate change impacts, Sustainable water management.
Mass Awareness & Non-Technical Areas	Water conservation campaigns, Public engagement in water management.

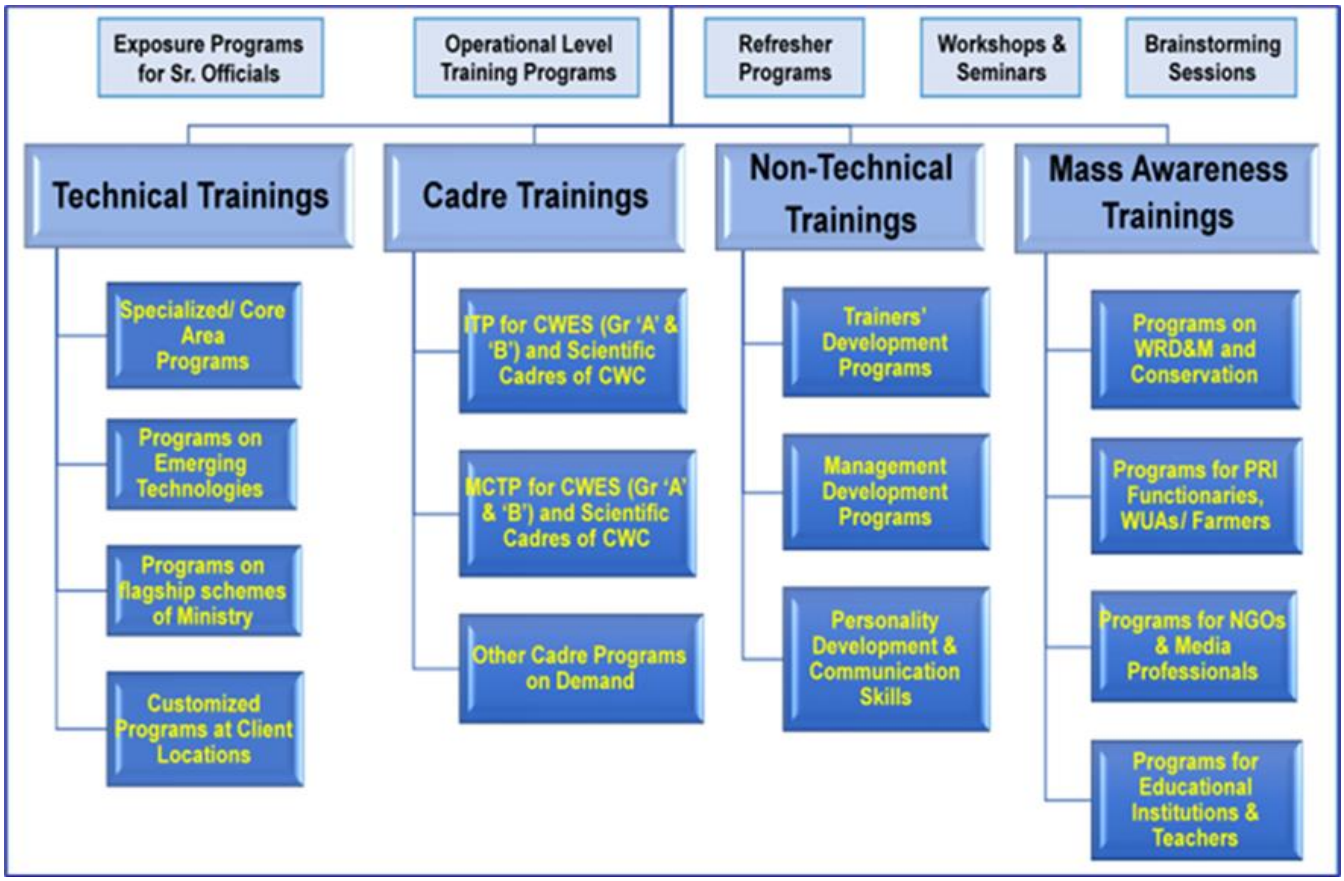
4.3 Types of Training Programs Offered

On any given topic, course content is designed depending on the level of participants. The type of programs offered by NWA can be divided to following six broad categories:

- **Exposure Programs :**These are intended for exposing senior technocrats to what is new. These are not training programs, in the sense the participants are not expected to learn & how to do it; but only appreciate what is the state of art, so that they can take strategic decisions to use it in their own departments. These are short duration programs, covering 4 to 6 topics over 3 days.
- **Operational Level Training Programs :**In this category different programs are designed for Junior Level Officers (separately), where the participants are trained at operational level in the given topic. These are 5 days to 15 days duration and focus on one topic only.
- **Refresher programs :**In separately designed programs for Middle / Junior Level, refresher programs are intended to bring the participants up-to-date on latest developments in the given topic and brush up forgotten concepts. These are short programs of about 3-days and address more than one topic. The difference between this category and Exposure programs is, in Refresher Programs the participants are expected to be already well versed with the subject, and are brought up to date with the latest developments, whereas in Exposure Program new ideas are introduced.

- **Brain Storming Sessions :** These are for Senior Level Officers These are short (3-days) programs where there is no "faculty" and no "teaching". The format is that of open discussion in brain storming mode to "take the thinking forward" and create a "think tank". 4 to 6 topics are discussed over a 3-day period.
- **Customized Programs** : In addition, NWA also takes up custom-made training programs as per the requirements of client Organisations on any topic related to water resources development and management.

NWA's diverse training portfolio ensures that professionals across the water sector gain relevant expertise, thereby contributing to improved water resource management and policy formulation. With an emphasis on technical excellence, practical applications, and policy integration, NWA remains committed to fostering a well-trained workforce for the sustainable development of India's water resources.



Chapter 5 : Training Program Evolution

Being a premier institute, NWA conducts training courses on all aspects of water resources development and management; and also on administration and management. Since October 2010, the Academy has opened its doors also to Public Sector Undertaking, Private Sector, Foreign Nationals, Media Personnel's, NGOs, individuals, in fact virtually covering every one.. During the last few years NWA has taken number of initiatives to increase its visibility among the target audience and also to add more activities to its portfolio. NWA has made open its regular training program to all. On an average, NWA now conducts more than 70 training program in year and it includes regular training programs at NWA and custom-made training program based on the client's demand at the client's location or at NWA.

Further, NWA is a Central Training Institution (CTI) mandated to conduct Induction Training Program (ITP) for CWES Group 'A' officers. Apart from cadre and technical training programs, NWA also offers non-technical programs and mass awareness programs. NWA's activities include organizing workshops, seminars, and conferences to promote integrated and sustainable development and management of water resources. Also, assistance is extended to Central/ State Government organizations and their training institutes for addressing their specific training needs. NWA, for over last 39 years, is addressing the wider training needs of water resources professionals both technical (Engineering) and non-technical (non-Engineering).

In its national role, the NWA is concentrating on conducting training courses for all water sector professionals, in the specialized and emerging areas. NWA since its inception till 31 March 2025, a total of 1067 programs have been conducted benefiting about 62000 participants.

Major beneficiaries of these programs are State Govt officers, officers of Central Water Commission, Central Organisations, School Teachers, Media Professionals, NGOs & Panchayat Raj functionaries, Foreign Nationals etc. National Water Academy (NWA), Pune, under Central Water Commission (CWC), is functioning as a 'Centre of Excellence' in the field of training and capacity building of professionals and other stakeholders in the water resources sector.

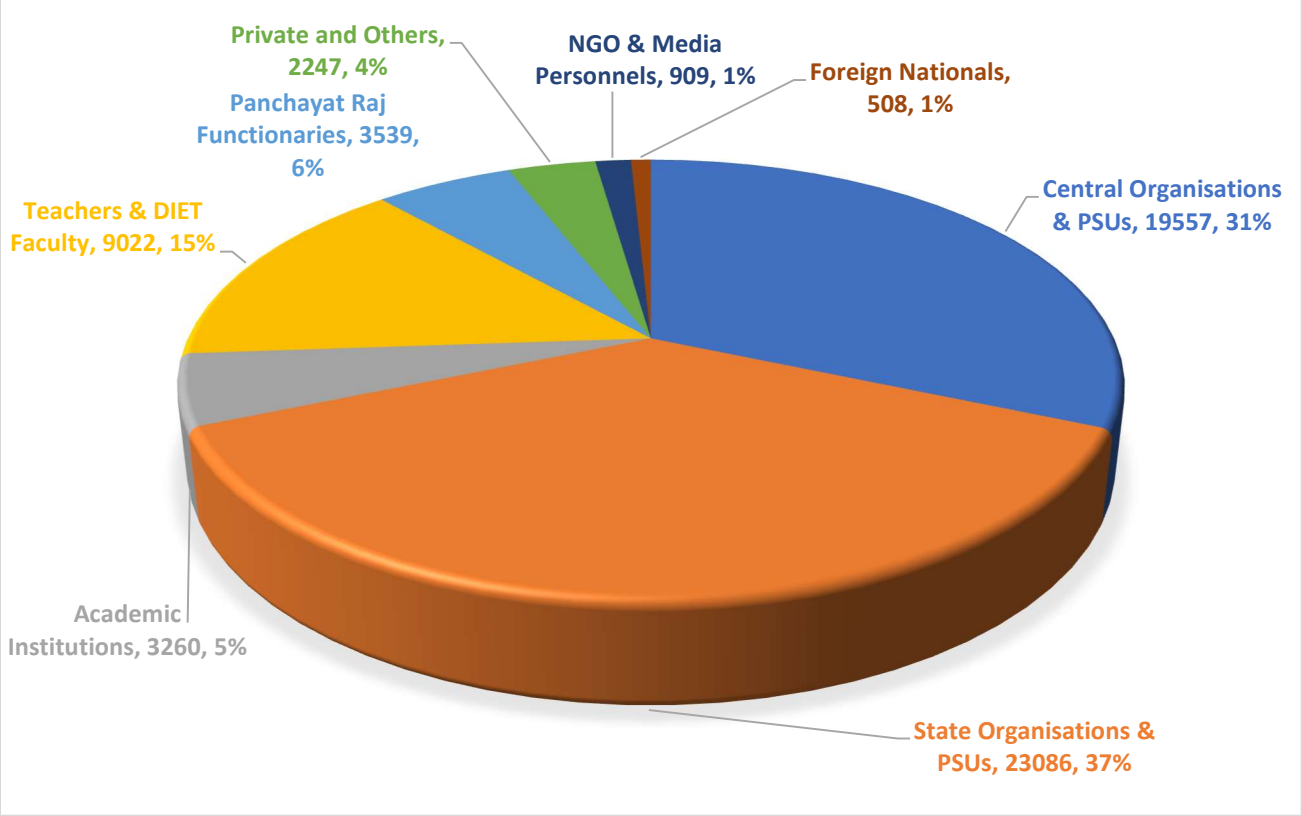
Performance Analysis

Physical Achievement of Training Activities : Summary of Training Programs 1988-2025

Year	*No. of trainings*	*Officers Trained*	*Training Weeks*	*Man-weeks of Training*	*Training Days*	*Man-days of training*
1988-89	1	29	13.0	377	65	1885
1989-90	2	59	26.0	785	130	3925
1990-91	1	33	48.8	1356	244	6780
1991-92	1	17	45.4	826	227	4131
1992-93	1	21	42.0	882	210	4410
1993-94	1	17	42.0	714	210	3570
1994-95	1	17	42.0	714	210	3570
1995-96	3	58	53.6	874	268	4369
1996-97	5	167	41.2	903	206	4515
1997-98	4	65	36.6	618	183	3092
1998-99	8	135	13.6	229	68	1143
1999-2000	7	97	46.0	562	230	2810
2000-01	10	162	31.6	438	158	2188
2001-02	25	515	53.4	1109	267	5544
2002-03	34	805	54.8	1126	274	5630
2003-04	32	852	76.8	1787	384	8935
2004-05	23	556	73.6	1893	368	9467
2005-06	28	661	65.2	1613	326	8066
2006-07	35	799	55.6	1175	278	5876
2007-08	31	742	52.6	1021	263	5107
2008-09	28	600	52.4	1001	262	5004
2009-10	37	954	47.5	1085	238	5425
2010-11	39	880	52.8	989	264	4943
2011-12	34	783	40.4	929	202	4647
2012-13	34	788	61.0	1534	305	7669
2013-14	36	898	81.4	2124	407	10619
2014-15	31	770	83.8	2786	419	13932
2015-16	35	996	76.4	2571	382	12857
2016-17	29	782	78.2	2060	391	10299
2017-18	42	1227	53.6	1857	268	9286
2018-19	32	1005	78.6	2661	393	13303
2019-20	29	770	59.5	2102	298	10512
2020-21*	83	8621	114.4	9467	572	47337
2021-22*	87	14375	76.5	10571	383	52856
2022-23	45	3462	77.0	2840	385	14199
2023-24	101	9065	122.2	6304	611	31522
2024-25	96	10345	122.8	7955	614	39773
Total	**1071**	**62128**	**2192**	**77807**	**10962**	**389035**

*** During 2020-22, due to COVID Pandemic all programs/events were conducted in online mode only and the number of officers trained, are the number of online participants.**

Beneficiaries of NWA Programs



Total Beneficiaries :62128
Total Man-days of Training : 389035

About 62000 stakeholders of Water Resources Sector have been trained by NWA, nationally and internationally (till March 2025)

Central Organisations & PSUs	19,557
State Organisations & PSUs	23,086
Academic Institutions	3,260
Teachers & DIET Faculty	9,022
Panchayat Raj Functionaries	3,539
Private and Others	2,247
NGO & Media Personnels	909
Foreign Nationals	508
Total Beneficiaries till March 2025	62128

Chapter 6 : Training, Capacity Building Initiatives -2024-25

6.1 Development of Training Plan for the year 2024-25

Over the years, NWA has institutionalized a well-structured and standardized training development framework. Training Needs Assessments (TNAs) are conducted in a systematic manner through structured engagement with a broad spectrum of stakeholders, ensuring that training programs remain aligned with the evolving requirements of various organizations under the Department. Further, NWA's training initiatives are designed to ensure pan-India representation, catering to participants from diverse backgrounds and varying levels of professional expertise.

To continuously enhance its training programs, NWA implements a robust feedback mechanism. At the conclusion of each training session, participants provide structured feedback, highlighting key insights and future training requirements. This feedback serves as a critical input for assessing and refining the training curriculum, ensuring its relevance and effectiveness in addressing contemporary challenges in the water resources sector.

Moreover, NWA serves as the Nodal Agency for implementing:

(i) All Mandatory Cadre Training Programs for CWES (Group A and B) officials and other departmental cadres;
(ii) Training and capacity-building needs under the National Hydrology Project and other flagship schemes of the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR);
(iii) Training programs catering to the needs of State Government organizations and other stakeholders;
(iv) Training under the India-EU Water Partnership (IEWP); and
(v) Demand-based training programs.

NWA is also recognized as a Regional Training Centre by the World Meteorological Organization (WMO), particularly for training in hydrology and hydraulic sciences.

Thus, the NWA training plan for the year 2024-25 was formulated by considering:

(i) The Training Policy of CWC/DoWR, RD & GR, which includes inputs for the Cadre Training Plan for CWES Group A & B, non-technical programs, and specific requirements from the Design & Research, River Management, Water Planning & Projects, and Human Resource Management wings;
(ii) Regular training areas traditionally covered by the Academy;
(iii) Inputs from the Training Oversight Committee to foster synergy
(iv) Capacity-building needs of the North Eastern States, in collaboration with NEHARI;
(v) Specific training needs identified during interactions with senior sector offi21cers and faculty meetings;
(vi) Directions received from the Ministry of Jal Shakti and CWC from time to time;
(vii) Training needs of other stakeholders, covering core technical aspects such as the National Hydrology Project (NHP) and the Dam Rehabilitation and Improvement Project (DRIP);
(viii) Training requests from WALMIs/IMTIs to strengthen and synergize water education; and
(ix) Mass awareness programs targeting school teachers, NGOs, and media professionals.

The Training Plan for year 2024-25 was prepared and approval of competent authority in the Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation, was received.

The approved Training Plan for the year 2024-25 comprised of total of 71 programs to be implemented under the following broad categories:

#	Category of Training Program	Approved Numbers
1	Cadre Training Programs of CWES Gr-A & Gr – B Officers	09
2	Other Cadre Training Programs for officials of CWC/DoWR, RD & GR	08
3	Faculty Development Programs	02
4	Core Area Programs (Trainings / Webinars/ Workshops)	06
5	Training Programs related to Dam Safety Aspects	14
6	Training Programs under NHP	07
7	As per the Annual Capacity Building Plam of DoWR, RD &GR prepared by CBC	04
8	Training Programs under the aegis of IEWP	03
9	Customized / Demand Based Programs	06
10	Non-Technical Programs	02
11	Mass Awareness	04
12	Distance Learning (Certificate Course)	02
13	Collaborative Programs with WALMIs/IMTIs	02
14	Training for foreign Nationals	02
	Total	**71**

6.2 Implementation Plan (2024–25)

National Water Academy (NWA) conducted a wide range of training programs during 2024–25 specifically targeted at States and Union Territories, covering key aspects of Water Resources Development and Management. These programs were systematically planned, conceptualized, and implemented as follow-up actions arising from the following initiatives and directives:

- The training needs identified during the Workshop on Training Need Assessment (TNA) conducted in New Delhi, which was the first initiative of its kind to comprehensively assess the capacity-building requirements of stakeholders in the Water Resources Sector.
  - The initiatives of the Chairman, Central Water Commission (CWC), aimed at developing an action plan to address short-term, medium-term (2030), and long-term (2047) challenges in the Water Resources sector, with a specific emphasis on capacity building and training of officers from special focus regions such as the North-Eastern States and other States & UT.
  - Directions issued by the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti, to address the capacity-building needs

of Water Resources professionals, with particular focus on Dam Safety–related training, especially for the Himalayan region of India.

- Inputs and guidance received from the Chairman, CWC, during interactive sessions held with State Government organizations, which were duly incorporated into the design and delivery of training programs.
- Implementation of collaborative training initiatives in pursuance of the Memorandum of Understanding (MoU) signed between NWA, CWC, and the Maharashtra Engineering Training Academy (META), Water Resources Department, Government of Maharashtra.

The Annual Training Plan for 2024–26 was prepared after due consideration of the existing faculty strength of NWA. Program scheduling was undertaken keeping in view Parliamentary sessions and other important national events to ensure smooth and effective implementation.

Cadre-based training programs, including Induction Training Programs (ITPs) and Mandatory Cadre Training Programs (MCTPs), were scheduled based on eligibility lists and nominations provided by the HRM Wing. Customized and demand-based training programs were accommodated on a rolling basis, subject to receipt of requests and availability of resources. Collaborative programs with Water and Land Management Institutes (WALMIs) and Irrigation Management Training Institutes (IMTIs) were finalized through mutual consultation and coordination.

6.3 Achievements of Training Activities

During 2024-25, NWA conducted a variety of training programs covering key aspects of water resource management, including river basin planning, dam safety, irrigation management, flood forecasting, and water quality monitoring etc. Specialized training on emerging technologies such as Remote Sensing, GIS applications, and the use of software tools were offered, catering to the needs of both beginners and advanced professionals. The academy organized webinars on emerging topics of dam safety with participation from leading experts in the field. Tailored programs were designed to meet the specific needs of state water resources departments, enhancing their technical capabilities in water management and infrastructure development. These training sessions included practical hands-on exercises and case studies relevant to regional challenges, ensuring practical knowledge transfer. Recognizing the growing importance of digital learning, NWA expanded its online training portfolio, offering webinars, e-learning modules, and virtual workshops. These initiatives allowed wider participation from professionals across the country, including those in remote areas. The NWA continues to expand its outreach through training programs conducted in distance learning mode via its MOODLE-based Learning Management System (LMS), as well as in hybrid and blended formats. S

During the financial year 2024–25, NWA organized 96 training programs with a total of 123 weeks of training, including residential courses (both at NWA and at external venues), hybrid programs, webinars and online courses through distance learning mode. These programs benefitted 10,345 officers and professionals from Central and State Government Departments, PSUs, Academic and Research Institutions, Schools, NGOs, and other organizations etc. The mode-wise distribution of training programs is as follows:

Mode of Training	No. of Programs	Remarks
Residential Programs	**67**	**At NWA: 62; Outside NWA: 5**
Hybrid (DL + Residential)	**2**	
Distance Learning (Online)	**5**	**Through LMS (MOODLE)**
Webinars	**22**	**Webinars**
Total	**96**	

NWA's achievement for 2024-25 in terms of number of training weeks is highest till date. This output is achieved in spite of vacancies at faculty and support staff level. The achievement of NWA for 2024-25 vis-a-vis average of last 15 years is as given below:

Achievement of NWA	Training Programs/Events	Training Weeks	Officers trained
Annual Average of last 15 years (2008-09 to 2022-23)	42	67	2461
Achievement of 2023-24	101	122	9065
Achievement of 2024-25	96*	123**	10345

*(*4 long-term programs spill over into 2025–26)(** Highest number of training weeks in a year, till date)* NWA conducted a diverse range of 96 training programs covering various categories, benefiting a 10345 number of participants. The details are as follows:

Category of Training	No. of Programs	Total Beneficiaries	Remarks
Cadre Training Programs of CWES Gr-A & Gr – B Officers	9	295	3 MCTP for CWES Group A ; 2 MCTP for Group B; 3 ITP for Group B & 34 ITP for CWES Group A on-going which concluded on 06 June 2025.
Other Cadre Training Programs for officials of CWC/DoWR, RD & GR	10	248	1 NERIWALM, 2 CGWB, 1 BB, 1 FB, 2 Hydromet Cadre, 1 MTS, 1 LDC, (MTS program was continued during 2025-26).
Faculty Development Programs	3	77	FDP, MOODLE LMS & TIMS
Core Area Programs (Trainings / Webinars/ Workshops)	16	879	Six batches of Analysis of quality of Water Quality (WQ) Data; Irrigation Modernization and PDN; Water Quality Monitoring & Assessment; Pumped Storage HE Project; AI & ML etc

Training Programs related to Dam Safety Aspects	28	6475	9 Programs on the various aspects of Dam Safety Viz DHARMA, Instrumentation, Design Flood Analysis, Dam Break Analysis, EAP, Structural Safety, Sedimentation etc. & 19 Webinars broadly covered all the topics pertaining to DSA 2021.
Training Programs under NHP	8	1222	GEE & Application of WRM; Webinar on Geospatial Technology for WRD&M; Introduction to Python Programming & Applications in WRM; Hydrological Modeling using Free Tools; RTDAS, Young Water Professional (YWP) Cohort-II Program; ET-based Irrigation Performance Assessment Tools etc.
As per the Annual Capacity Building Plam of DoWR, RD &GR prepared by CBC	2	55	Residential Training on IWRM, Conventional Flood Forecasting (as per CBC) ACBP
Customized / Demand Based Programs	8	312	Government of Maharashtra, CWC, NEHARI, Himachal Pradesh, Students of College, MTech Students of NERIWALM
Non-Technical Programs	3	59	MDP, Overview of WRs, Post Retirement, etc
Mass Awareness	4	404	For School Teachers, NCC Cadets & Others Stakeholders etc
Distance Learning (Certificate Course)	2	270	NCCPIM Completed , DL WMO was continued during 2025-26
Training for foreign Nationals	3	49	Government of Nepal and Govt of Rwanda officials
Total	**96**	**10345**	

During 2024–25, NWA implemented a multi-modal training delivery framework comprising Distance Learning (DL), Hybrid, and Residential (face-to-face) programs, designed to maximise outreach while ensuring depth of learning.

During the year, **Distance Learning (DL) program**s, including structured online courses and a large number of national-level webinars and webinar series, accounted for the largest outreach, enabling participation of several thousand officers and stakeholders across the country. These DL initiatives were particularly effective for disseminating domain knowledge on dam safety, hydrology, geospatial technologies, irrigation management, and emerging tools such as Python, AI/ML, and decision-support systems, while minimising travel and time constraints. Long-duration DL programs, such as national certificate courses and hydrology modules, further strengthened sustained capacity building.

Hybrid programs, combining online instruction with focused residential components, were strategically adopted for selected Mandatory Cadre Training Programs (MCTPs) and long-duration professional courses. This mode ensured flexibility through online learning while retaining the rigour of in-person discussions, assessments, and practical exposure. Hybrid programs catered primarily to Group 'B' officers,

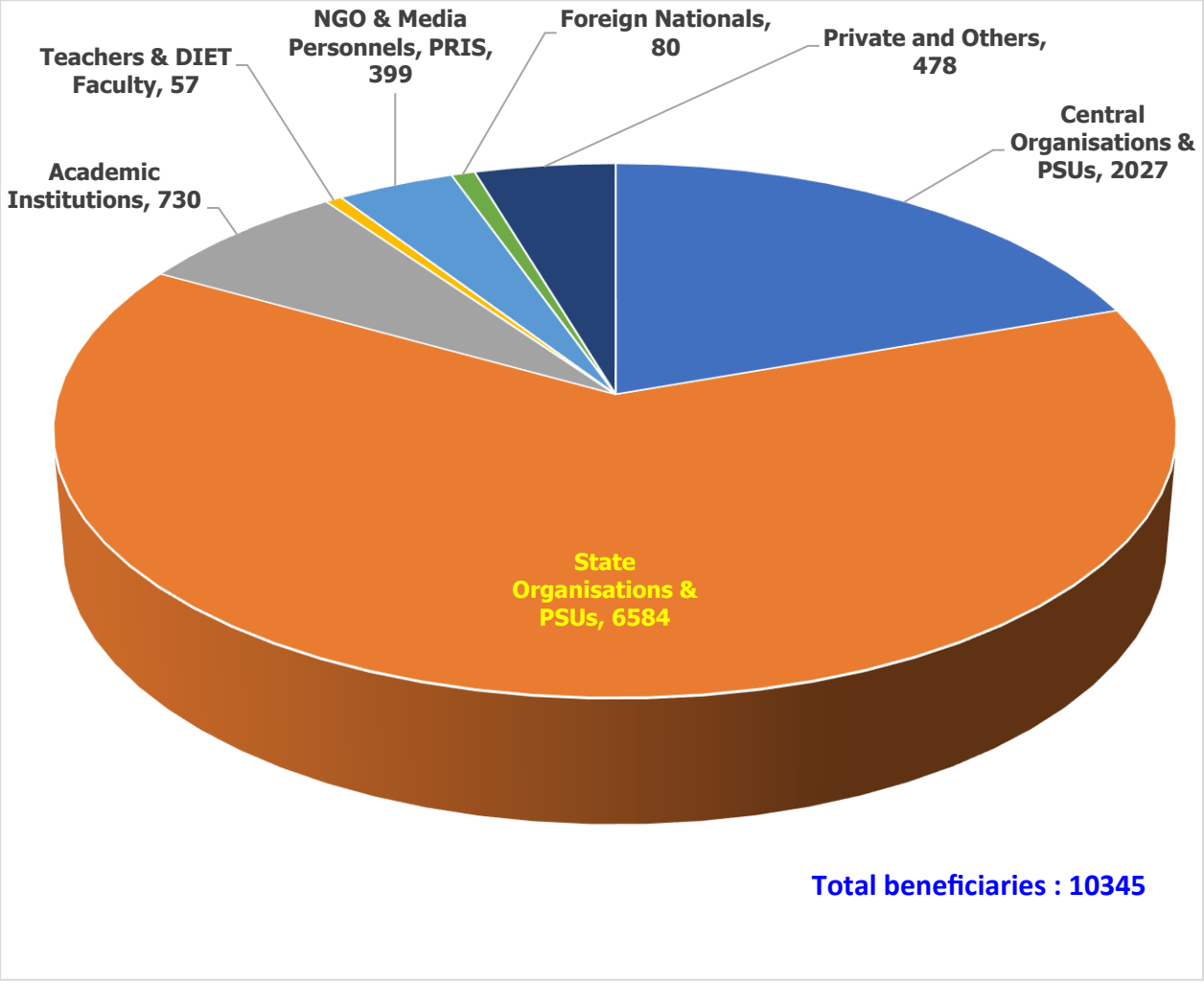
and were particularly useful for competency-based cadre training aligned with the Competency Framework.

Residential programs formed the core of intensive capacity building, covering induction training programs, cadre training, specialised thematic courses, international training programs, workshops, and exposure visits. These programs enabled hands-on learning, field visits, laboratory sessions, simulations, and peer-to-peer interaction, and accounted for a substantial share of total training days and man-days. Residential programs catered to several thousand participants over the year, reflecting NWA's continued emphasis on experiential and practice-oriented learning.

Overall, the balanced mix of DL (high outreach), Hybrid (blended depth and flexibility), and Residential (intensive, hands-on) programs enabled NWA to train over 10,345 participants with 123 weeks of training during 2024–25, ensuring both scale and quality in capacity building across the water resources sector .

6.3 Analysis of Training Programs Conducted by National Water Academy (NWA), CWC, Pune during 2024-25

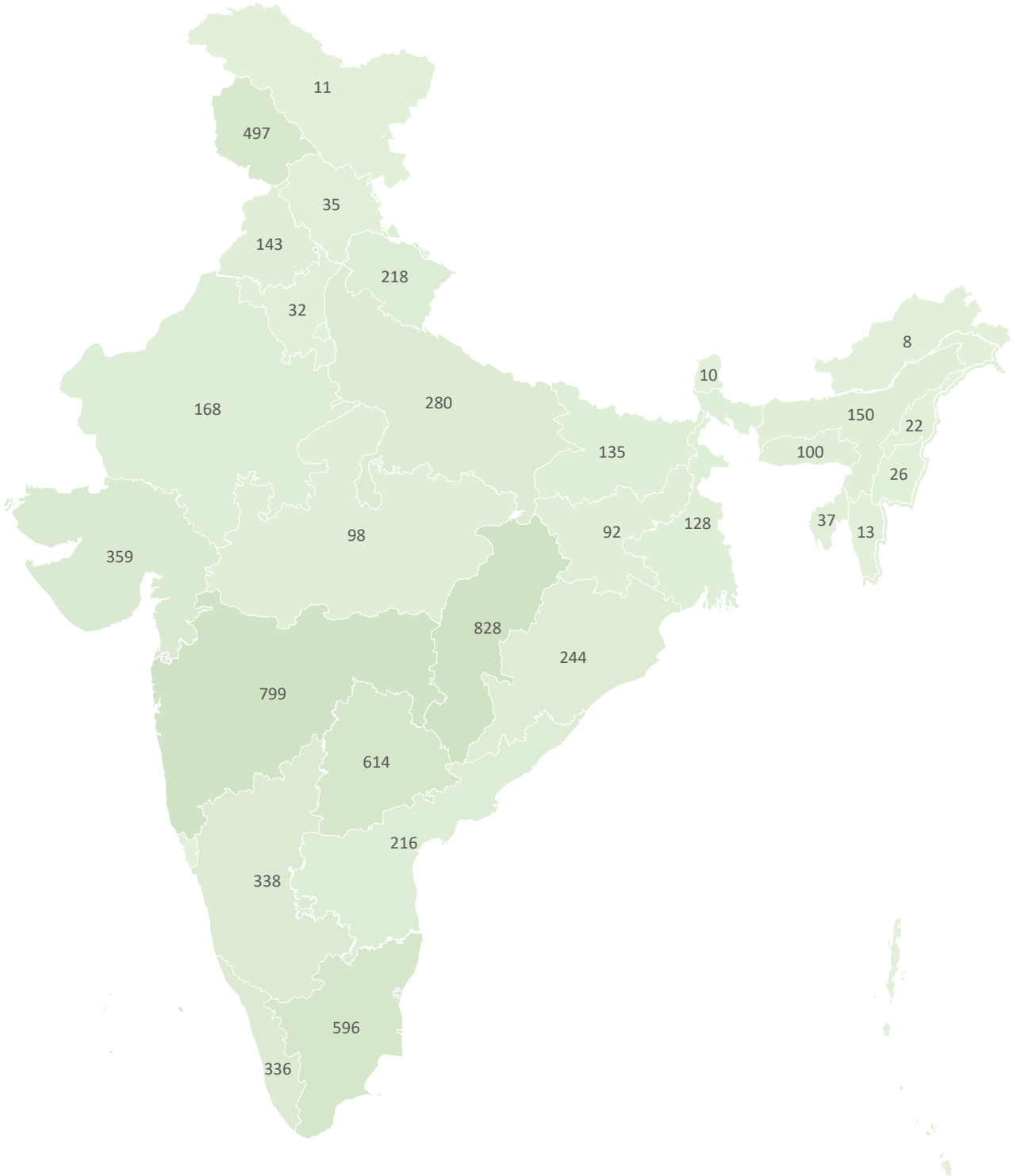
i. Stakeholder-wise Participation (2024-25)



i. State-wise Participation in all Training Modes (2024-25)

State / Union Territory	Participants of the Webinars	Participants of the DL Programs	Participants of Residential Programs	Total No. of participants
Chhattisgarh	764	22	42	**828**
Maharashtra	290	0	509	**799**
Telangana	536	6	72	**614**
Tamil Nadu	453	5	138	**596**
Jammu & Kashmir	420	0	77	**497**
Gujarat	226	0	133	**359**
Karnataka	207	1	130	**338**
Kerala	227	1	108	**336**
Uttar Pradesh	207	1	72	**280**
Odisha	99	0	145	**244**
Uttarakhand	151	0	67	**218**
Andhra Pradesh	127	19	70	**216**
Rajasthan	114	4	50	**168**
Assam	32	0	118	**150**
Punjab	85	18	40	**143**
Bihar	89	0	46	**135**
West Bengal	94	0	34	**128**
Meghalaya	54	3	43	**100**
Madhya Pradesh	47	0	51	**98**
Jharkhand	60	0	32	**92**
Tripura	20	0	17	**37**
Himachal Pradesh	4	2	29	**35**
Haryana	22	0	10	**32**
Manipur	10	1	15	**26**
Goa	18	0	7	**25**
Delhi	0	0	25	**25**
Nagaland	9	0	13	**22**
Mizoram	7	0	6	**13**
UT Ladakh	4	0	7	**11**
Sikkim	4	0	6	**10**
Arunachal Pradesh	2	0	6	**8**
UT Andaman Nicobar	0	0	1	**1**
Total	**4382**	**83**	**2119**	**6584**

State-wise total Participants in 2024-25



During 2024–25, NWA achieved pan-India outreach through its training and capacity-building programs, with a total participation of 6,584 officers and stakeholders from all States and Union Territories. The participation pattern highlights the Academy's role as the national apex institution for training and capacity building in the water resources sector and reflects the effectiveness of its multi-modal training delivery framework.

Webinars emerged as the primary vehicle for large-scale outreach, with 4,382 participants, enabling quick dissemination of policy, technical, and emerging knowledge themes across the country. Chhattisgarh recorded the highest overall participation (828 participants), followed by Maharashtra (799), Telangana (614), and Tamil Nadu (596), demonstrating strong engagement from both central and state-level institutions. The widespread adoption of webinars highlights the success of digital platforms in extending training access to officers across diverse geographies.

Residential training programs, with 2,119 participants, continued to be a foundation of NWA's capacity-building mandate, particularly for advanced, hands-on, and field-oriented learning. States such as Maharashtra, Tamil Nadu, Odisha, Assam, Karnataka, Gujarat, and Kerala showed robust participation in residential programs. Importantly, substantial participation from Jammu & Kashmir, the North-Eastern States, and UT Ladakh signifies success of focused institutional outreach of NWA to geographically sensitive regions, in alignment with national priorities.

Distance Learning (DL) programs accounted for 83 participants during the year. While relatively modest in scale, these programs represent a growing vertical in NWA's training portfolio and provide a scalable foundation for future expansion of self-paced and blended learning modules.

The participation trends affirm NWA's pivotal contribution to strengthening institutional capacities in the water resources sector and its continued alignment with the capacity-building objectives of the Government of India.

The list of training courses, workshops and seminars organized/ conducted by NWA during 2024-25 is given at Annex-I

6.4 Training and Capacity Building Activities planned visa-a-vis conducted during the Year 2024-25

The mandate of the Academy is that of organising/conducting training courses and workshops mostly in accordance with the training calendar prepared for every financial year (April to March). During the year 2024-25, 96 training programs were organised by the NWA benefitting 10345 officials from various parts of the country.

A summary of the courses planned in the Training Calendar and those conducted by the Academy during the year is as below, Each course is coordinated by a faculty designated as Course Director under the overall direction, guidance & supervision from Chief Engineer & Head.

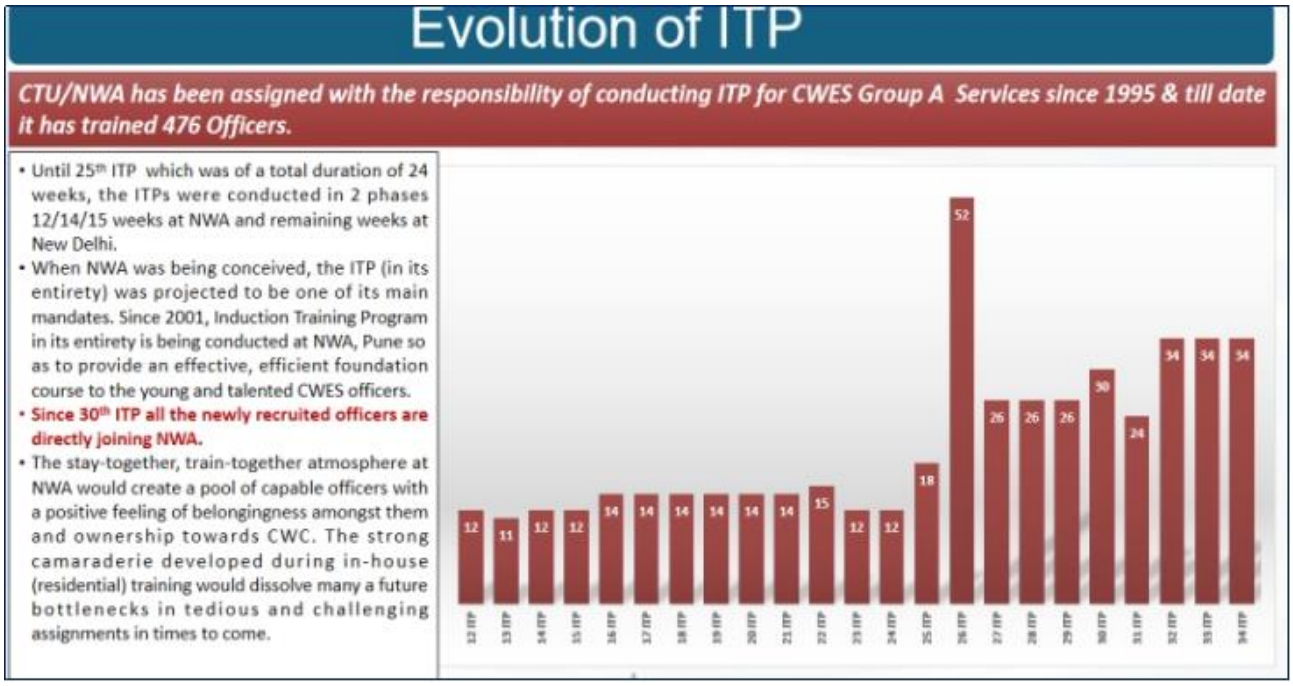
#	Category of Training	Approved	Conducted	Remarks about the program conducted during 2024-25
1	Cadre Training Programs of CWES Gr-A & Gr – B Officers	09	09	3 MCTP for CWES Group A ; 2 MCTP for Group B; 3 ITP for Group B & 34 ITP for CWES Group A on-going
2	Other Cadre Training Programs for officials of CWC/DoWR, RD & GR	08	10	1 NERIWALM, 2 CGWB, 1 BB, 1 FB, 2 Hydromet Cadre, 2 MTS, 1 LDC cadre of CWC
3	Faculty Development Programs	02	03	FDP, MOODLE LMS & TIMS
4	Core Area Programs (Trainings / Webinars/ Workshops)	06	14	Increase mainly due to programs on water quality for CWC officers.
5	Training Programs related to Dam Safety Aspects	14	28	Programs on Dam Safety Aspects under DRIP, Webinar Series, etc. (increase in numbers mainly due to 18 numbers of weekly webinars), ET Based Irrigation Performance Assessment Tool (2 Nos)
6	Training Programs under NHP	07	09	As per the requirement under NHP
7	As per the Annual Capacity Building Plam of DoWR, RD &GR prepared by CBC	04	03	Training on IWRM, WR of India, Conventional Flood Forecasting (as per ACBP), Program on Water law was postponed due to less nominations received.
8	Training Programs under the aegis of IEWP	03	-	No Demand received for programs under IEWP
9	Customized / Demand Based Programs	06	06	Government of Maharashtra, CWC, NEHARI, Himachal Pradesh
10	Non-Technical Programs	02	02	MDP, Overview of WR, program for Retiring officers, etc
11	Mass Awareness	04	06	For School Teachers & Other Stakeholders
12	Distance Learning (Certificate Course)	02	02	NCCPIM Completed, DL WMO on-going
13	Collaborative Programs with WALMIs/IMTIs	02	01	PRI Functionary at Rui, Baramati
14	Training for foreign Nationals	02	03	For Govt of Nepal officers under ITEC Scheme & Govt of Rwanda
	Total	**71**	**96**	Out of these 96 programs 4 are getting continued in 2025-26.

6.4.1 CTP: Induction Training Program (ITP) for CWES Group 'A' Probationary Officers

➢ **Background**

The National Water Academy (NWA), erstwhile Central Training Unit, has been entrusted with the mandate of conducting the ITP for Central Water Engineering Services (CWES) Group 'A' Probationary Officers since 1995. Following the establishment of NWA in 2001, ITP's have been conducted at NWA, Pune, providing newly recruited officers with a structured, residential, and immersive learning environment.

Since 2018, CWES Group 'A' Probationary Officers selected through the Engineering Services Examination conducted by the Union Public Service Commission have been joining & reporting directly to NWA for induction training. From its inception till date, programs for 23 batches (12th to 34th) have been successfully conducted , making it one of the most enduring and impactful flagship capacity-building initiatives of the National Water Academy. The residential training ecosystem at NWA played a pivotal role in fostering institutional belongingness, esprit de corps, and professional camaraderie among young officers—an essential foundation for effective performance in demanding field and headquarters assignments in the water resources sector.



ITP have been designed to develop competent, ethical, and future-ready water resources professionals, capable of leading the integrated and sustainable development and management of India's water resources.

The key objectives of the Program are to:

- Build strong professional competencies for enhanced individual and organizational effectiveness

- Orient probationary officers to emerging challenges, values, principles, and priorities of the water resources sector
- Develop a sound understanding of engineering standards, project planning, and socio-economic considerations
- Strengthen leadership, managerial capability, and structured decision-making skills
- Inculcate professionalism, integrity, responsiveness, and public service ethos

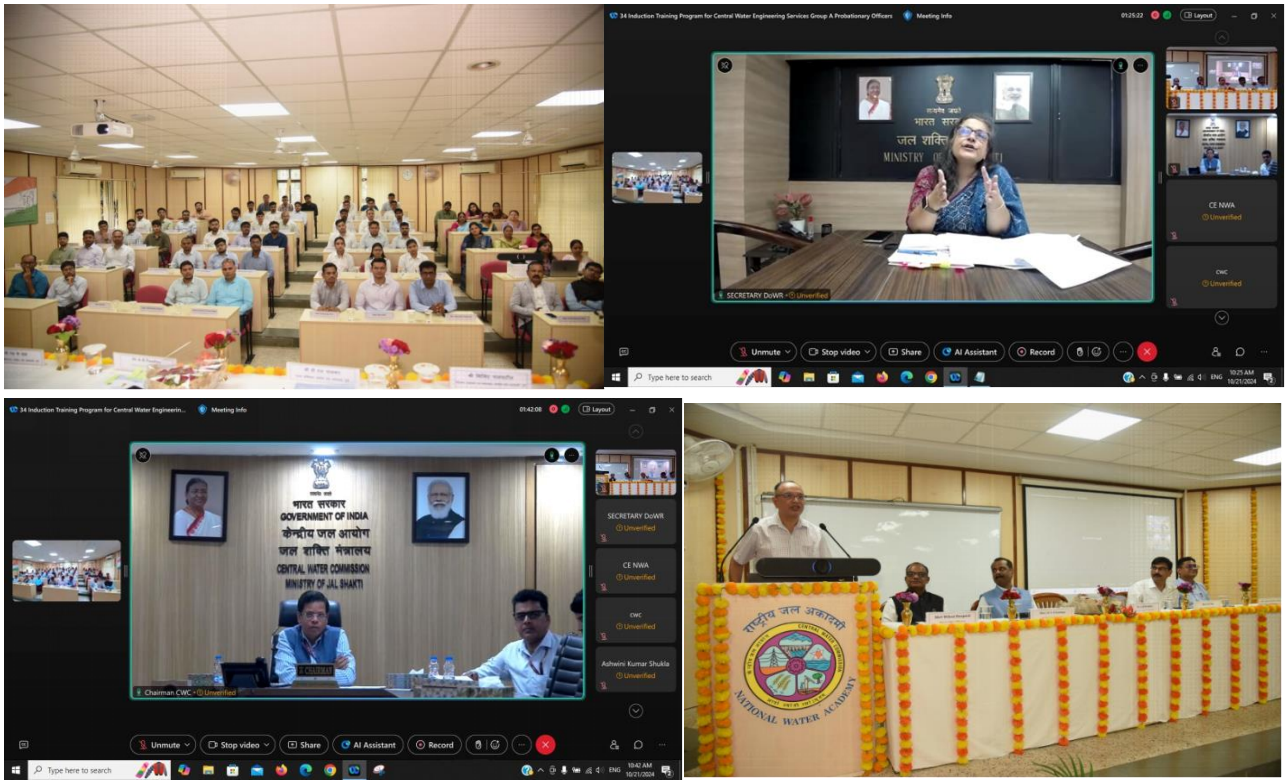
The Program emphasis on contemporary issues such as climate resilience, water governance, dam safety, river basin management, inter-state coordination, and technological innovation, thereby transforming engineers into holistic water resources managers.

➢ **Overview of the 34th ITP (2024–25)**

During the year 2024–25, 34th ITP for CWES Group 'A' Probationary Officers was successfully conducted by NWA. The Program was organized over a duration of 34 weeks, from 21 October 2024 to 06 June 2025, and was attended by 32 Probationary Officers, comprising 08 officers from Engineering Services Examination (ESE)-2022 and 24 officers from ESE-2023. This batch represented the fourth cohort of officers reporting directly to NWA for induction training under the revised reporting mechanism, further reinforcing the Academy's role as the central institution for foundational training of Central Water Engineering Services officers.

Since its inception, the ITP Program has evolved to meet the dynamic and emerging needs of the water resources sector by incorporating a holistic blend of technical, managerial, social, and policy-related dimensions of water resources development and management. The content and structure of the Program, approved by Program Advisory Committee constituted under the chairmanship of Chairman, Central Water Commission (CWC), follows a structured curriculum covering the core functional domains of the

water sector. The detailed module coverage and curriculum structure are enclosed at **Annex–II. Some of the glimpses from inaugural function are provided below.**



➢ Curriculum Structure and Training Modules

The ITP curriculum was meticulously structured into a series of integrated modules to ensure a comprehensive, multidisciplinary, and practice-oriented learning experience for CWES Group 'A' Probationary Officers. The curriculum was designed to impart both domain-specific technical competencies and cross-cutting managerial and leadership skills essential for effective functioning in the water resources sector. The key modules of the Program included:

- Orientation to Perspectives in the Water Resources Sector
- Human Resource Management (HRM)
- River Management, including field attachment with Central Water Commission Division Offices
- Water Planning and Projects
- Design and Research
- Project Work aligned with River Management, Water Planning and Projects, and Design and Research
- Project Appreciation Visits to major national water resources projects
- Customized technical modules conducted at external institutions

Customized training modules at external institutions included:

- Rajiv Gandhi National Ground Water Training & Research Institute (RGNGWT&RI), Raipur – Groundwater Management
- North Eastern Regional Institute of Water and Land Management (NERIWALM), Tezpur – Soil–Crop–Water Management and Agricultural Engineering
- Indian Institute of Remote Sensing (IIRS), Dehradun – Applications of Remote Sensing and GIS in the Water Sector

➢ Field Attachments and Project Appreciation Visits

Through extensive field attachments and Project Appreciation Visits, Probationary Officers gained first-hand exposure to large-scale water resources projects across diverse hydro-climatic and socio-economic settings. This exposure enhanced their understanding of project implementation challenges, inter-disciplinary coordination, operation and maintenance issues, and stakeholder engagement in river basin management and infrastructure development. The field-based learning ensured a strong linkage between classroom instruction and ground realities.

As part of the field attachment component, officers were attached to field divisions of the Central Water Commission, where they gained hands-on exposure to real-time hydrological data collection, site-level operations, and official administrative processes. A dedicated attachment was also organized in the North-Eastern Region to familiarize officers with water resources management challenges associated with difficult terrain and region-specific conditions.

Visit to Hiware Bazar, Ahmednagar – a Model Village for watershed development, water conservation, and participatory rural governance.

Visit to Farakka Barrage Project

Field Attachment with CWC Division Office

Visit to KVK Baramati, DBSKV Dapoli & Basin Simulation Division, WRD, GOM

Project Appreciation Visits were undertaken to major national water resources projects, including Farakka Barrage, Polavaram Project, Koyna Hydroelectric Project, and Sardar Sarovar Project. The proposed visit to the Tehri Project was dropped due to security considerations. This exposure enhances their understanding of project implementation challenges, inter-disciplinary coordination, operation and maintenance issues, and stakeholder engagement in river basin management and infrastructure development. The field-based learning ensures a strong linkage between classroom inputs and ground realities.

Visit to Polavaram Project

- **Leadership Development, Soft Skills and Behavioural Training**

Recognizing the leadership role of CWES officers in public service, the Program was systematically designed to equip probationary officers with essential managerial and leadership competencies required for effective functioning within complex institutional, regulatory, and governance frameworks. The Program sensitized officers to structured decision-making processes, inter-agency coordination, human

resource management, ethics in public administration, and accountability mechanisms, thereby preparing them for progressively higher levels of responsibility within the organization. These competencies were developed through carefully curated training interventions, including focused workshops on communication and interpersonal skills conducted at the NWA, outbound management development Programs organized at external training facilities, and structured modules on leadership development, team building, and competency enhancement.

Soft Skills and Behavioural Training formed a key component of the leadership development framework. Structured workshops on communication skills, ethics in public service, team building, and time management were conducted through outbound and experiential learning Programs at Initiatives of Change, Panchgani and Garudmachi. These Programs provided officers with practical exposure to collaborative leadership, self-reflection, and value-based decision-making.

In addition, leadership and coordination-oriented initiatives were implemented during the Program. Batch Representatives were selected from among the officer trainees to nurture leadership qualities, strengthen coordination capabilities, and promote effective team management through active responsibility-sharing. An Escort Officers system was also implemented to facilitate structured and informal interaction with guest faculty, support academic session coordination, and ensure the smooth conduct of training activities, thereby enhancing professional engagement and overall learning outcomes.

- **Project Work and Mentoring Framework**

Structured project work formed a core component of the Program, promoting team-based learning, applied research, and problem-solving on real-world water resources issues. The project work component, introduced in the 32nd ITP, was continued during the 34th ITP.

Six multidisciplinary groups worked on themes aligned with the functional domains of the three major wings of the Central Water Commission—River Management, Water Planning and Projects, and Design and Research—under the guidance of External Faculty and Core Faculty of the National Water Academy.

Each group was assigned a defined topic and was required to undertake detailed analysis, culminating in the submission of comprehensive project reports and formal presentations, which formed part of the evaluation process. In addition, officers submitted structured reports and made presentations following field visits and modules to assess learning outcomes and practical understanding.

To further strengthen learning outcomes, faculty mentors were assigned to officer trainees, facilitating informal mentor–mentee interactions that enabled open discussions, exchange of ideas, and professional guidance. Collectively, this structured approach enhanced officers' analytical capabilities, teamwork, professional documentation, and presentation skills essential for effective functioning in technical and multidisciplinary organizations.

- **Exposure to Contemporary Technologies and External Institutions**

The Program integrated structured exposure to contemporary technologies and analytical tools, including hydrological and hydraulic modelling, decision support systems, remote sensing and GIS applications, and data-driven planning methodologies. Officers' perspectives were further enriched through focused interactions with specialized national institutions, enabling a deeper understanding of groundwater management, agricultural water use, and integrated water resources management.

Module at NERIWALM

- **Extra-Curricular Activities and E-Learning Support**

In addition to the formal academic and technical curriculum, the ITP incorporated a range of extra-curricular and wellness-oriented activities, including yoga, trekking, swimming, group discussions, cultural

Programs, and music sessions. These activities were aimed at promoting physical well-being and supporting the holistic personality development of the officer trainees.

To document and celebrate the collective learning journey, an electronic souvenir was compiled, capturing the creativity, reflections, and shared experiences of the batch. Further, all academic content, session materials, and training resources were systematically uploaded on the National Water Academy's Moodle-based Learning Management System (LMS), ensuring seamless access to learning materials both during the Program and for continued reference thereafter.

- **Sessions, Faculty and Evaluation**

During the 34th ITP, approximately 370 classroom sessions at NWA were conducted, reflecting the comprehensive and intensive nature of the training. Of these, around 70 sessions were delivered by the Core Faculty of the National Water Academy, while nearly 300 sessions were conducted by distinguished guest faculty drawn from a wide spectrum of institutions, including the Central Water Commission (Headquarters and field formations), premier technical and research organizations such as CWPRS, CSMRS, NIH, IIRS, Survey of India and GSI, Central Ministries, River Boards, WALMIs, NWDA, State Government departments, private sector organizations, non-governmental organizations, and eminent retired experts from the water resources sector. Select sessions were also conducted in hybrid mode.

A structured system of continuous evaluation and feedback was followed throughout the Program. Feedback was collected at the end of each module, field visit, and outbound training Program. Formal evaluations were conducted after completion of each module, field visit, and external training Program, with the total assessment carrying a weightage of 1200 marks.

A Committee comprising members from NWA Core Faculty and external experts was constituted to recommend postings of officers upon completion of the Program, based on overall performance during the ITP, personality assessment through interviews, and preferences indicated by the officers.

The 34th ITP at National Water Academy served as a transformational journey for CWES Group 'A' officers. By integrating rigorous technical training, structured leadership development, extensive field exposure, and ethical orientation, the Program ensured that officers were well-equipped to address complex and emerging water resources challenges, respond effectively to evolving sectoral demands, and contribute meaningfully to sustainable water resources development and management in the country.

6.4.2 CTP –Mandatory Cadre Training Program for CWES Group A

The Government of India has adopted a comprehensive policy framework to impart structured training at various stages of an officer's career, with the objective of enhancing professional competence through modern approaches to governance and equipping officers to effectively respond to the evolving requirements of the water sector. In pursuance of this policy, a comprehensive Mandatory Cadre Training Plan (MCTP) has been prescribed for Central Water Engineering Services (CWES) Group 'A' officers to ensure systematic and continuous capacity building across different stages of service.

Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) has issued detailed guidelines for the implementation of the MCTP vide Office Memorandum No. A-33025/13/2017-E.I dated 27.02.2019. Since 2019, the National Water Academy (NWA) has been mandated to plan, organise, and conduct the approved MCTP programs for CWES Group 'A' officers.
The MCTP has been structured and implemented for four levels, namely: Level-1 (Junior Time Scale), Level-2 (Senior Time Scale), Level-3 (Junior Administrative Grade – JAG), and Level-4 (Senior Administrative Grade – SAG), as per the approved structure as enumerated below :

Sr. No.	MCTP Level	Target Level	Brief Coverage
1	Level 1	JTS (AD/AEE/ACs) (4 Weeks)	• Development of Human Resource & Financial • Management and Core Competency – 2 Weeks at NWA • Development of Managerial Competencies – 1 Week at IIM Ahmadabad • Latest and New Technology – 1 Week at IIT Roorkee
2	Level 2	STS (DD /EE /DC) (3.6 Weeks)	• Refresher Course – 1 Week at NWA • Latest & New Technology – 1 Week at IISC, Bangalore • Management Training – 1 Week at IIM Bangalore • Foreign Training at Asian Institute of Technology, Bangkok – 1 Week • 3 days at the end for Course Evaluation and Feedback
3	Level 3	JAG (Director /SE/SJC) (3.6 Weeks)	• Refresher Course – 1 Week at NWA • Water Governance – 1 Week at IIM Calcutta • Latest Trend in Water Sector – 1 Week Foreign Training at IHE, Delft, The Netherlands • 3 days at the end for Course Evaluation and Feedback
4	Level 4	SAG (CE/ Commissioners) (1 Week)	• "Management in Government" at IIM, Ahmedabad

During the year 2024-25, 3MCTPs viz MCTP Level 2 (1 No.), MCTP Level 3 (1 No.), and MCTP Level 4 (1 No) were conducted.

6.4.3 CTP –Mandatory Cadre Training Program for CWES Group B

A Comprehensive Mandatory Career Training Plan (MCTP) for Central Water Engineering (Group B) Service has also been introduced in Central Water Commission. CWC vide OM No.A-33025/8/2019-TRNG DTE-Part(1) dated 10.01.2023 has issued detailed guidelines along with approved course content/duration. NWA is also mandated to conduct MCTP for CWES Group B officers. The approved MCTP are to be conducted at two levels as enumerated as under :

Sr. No.	MCTP for	Duration	Brief Coverage
1	Junior Engineers	4 Weeks	1st week: Establishment, Administrative & Financial Management. 2nd week: Personality Development. 3rd week: Hydrological Observations and data Management and 4th week: Development of Core Technical skills.
2	AD-II/SDEs	4 Weeks	1st week: Establishment, Administrative & Financial Management, Personality Development. 2nd week : Hydrometry and Survey & Investigation. 3rd week Hydrology, Flood management & GIS and 4th week Design of water resource Projects, Appraisal & Monitoring.

During the year 2024-25, 2 MCTPs viz MCTP for JEs – 1 No; MCTP AD-II/SDEs – 1No. were conducted in a time bound manner so as to facilitate timely promotions.

6.4.4 CTP –Induction Training Program for Newly Recruited Junior Engineers of CWC

Under the CTP, framework, the Induction Training Program for newly recruited Junior Engineers of the Central Water Commission (CWC) was conducted with the objective of familiarising probationers with the organisational structure, functional mandates, and core technical responsibilities of the Commission. The program was designed to provide a strong foundation in basic engineering principles relevant to water resources development and management, while also orienting the trainees towards the professional standards, codes of conduct, and work culture of a premier technical organisation of the Government of India. ITP is designed to build technical competence, professional confidence, and institutional understanding among newly recruited Junior Engineers, thereby preparing them for effective and responsible discharge of their duties within the Central Water Commission.

During the year 2024-25, 3 ITPs for JEs were conducted in a time bound manner so as to facilitate timely promotions.

A total of 09 Cadre Trainings were conducted with a participation of 295 officers, against approved 09 Nos. as detailed below :

#	Details	Date of Program	Number of Participants	Duration in Weeks
1.	Mandatory Cadre Training Program (MCTP) for SAG CWES A	08-12 April 2024	14	1
2.	Mandatory Cadre Training Program for Junior Engineers of CWC" under Special Arrangement	24 June-19 July 2024	5	4

3.	Mandatory Cadre Training Program (MCTP) Level-3 for Junior Administrative Grade (JAG) Officers of CWES (Gr-A)	14-25 October 2024	30	2
4.	**Induction Training Program (ITP) for the officers of Central Water Engineering (Group A) Services ***	**21 October 2024- 06 June 2025**	**32**	**34**
5.	Mandatory Cadre Training Program for AD-II	11 Nov 24-06 Dec 24	23	4
6.	Batch-IV Level-2 Mandatory Cadre Training Program (MCTP) for STS Officers of CWES Gr 'A'	23 Dec 2024-10 Jan 2025	28	3
7.	ITP for Newly Recruited Junior Engineers of CWC	06-24 January 2025	54	3
8.	ITP for Newly Recruited Junior Engineers of CWC	27 January - 14 February 2-25	53	3
9.	ITP for Newly Recruited Junior Engineers of CWC	10 -28 February 2025	56	3
		Total	**295**	

6.4.6 Other Cadre Training Programs of Officials from CWC /DoWR, RD & GR and other Organisations of DoWR, RD & GR

NWA in addition to the Cadre Training Programs for CWES Group-A and Group-B officials of CWC/ DoWR, RD & GR is also mandated to conduct Cadre Training Programs of other Cadre of CWC and for the organization functioning under DoWR, RD & GR..

During the year, NWA conducted a range of Other Cadre Programs to cater to the training requirements of various cadres and organisations associated with the water resources sector. These programs aimed at providing basic orientation, enhancing functional competencies, and familiarising officials with institutional roles, rules, and sectoral challenges.

Orientation and induction programs were organised for LDCs and MTS, focusing on office procedures, service conduct rules, e-governance systems, and an overview of the water resources sector to enable effective administrative support. Specialised induction training was also conducted for officials of the Brahmaputra Board, with emphasis on region-specific water resources issues, flood management, and basin-level planning.

In addition, multiple batches of the programs on "Overview of Water Resources Sector of India" were conducted for the officials of CGWB and NERIWALM to provide participants with a broad understanding of the sectoral framework, policies, and emerging challenges.

As mandated in RR for Hydromet Cadre, MCTP Level II and Level III programs for the Hydromet Cadre were organised to strengthen technical knowledge and skills in hydrometeorological observations, data management, and modern applications.

During the year 2024-25, 10 other Cadre Training Programs were conducted benefitting 256 numbers by NWA against the approved 08 as detailed below :

#	Details	Date of Program	Number of Participants	Duration in Weeks
1	Orientation Program of LDCS of CWC	20-24 May 2024	38	1
2	Induction Program on "Overview of Water Resources Sector in India" for NERIWALM	24-28 June 2024	8	1
3	Induction Training Program for Brahmaputra Board	15 July -02 Aug 2024	32	3
4	lnduction Training Program	07-11 October 2024	18	1
5	MCTP Level III for Hydromet Cadre	25 November - 03 Dec 24	10	1.4
6	MCTP Level II for Hydromet Cadre	25 November - 06 Dec 24	5	1.4
7	Induction Training Program for MTS of CWC	30 Dec 2024- 10 January 2025	42	2
8	Overview of Water Resources Sector of India - BatchI for CGWB	06-10 Jan 2025	27	1
9	Overview of Water Resources Sector of India - Batch II for CGWB	13-17 January 2025	29	1
10	Induction Training Program for MTS of CWC	24 March 2025 - 05 April 2025	47	2
		Total	**256**	

6.4.7 Faculty Development Program as a follow-up of TNA Workshop

As a follow-up to the Training Needs Assessment (TNA) Workshop, Faculty Development Programs (FDPs) aimed at capacity building and professional development of trainers have been introduced at the NWA since 2023.

During the year, three such programs were conducted, namely: (i) a Faculty Development Program for Capacity Building and Professional Development of Trainers, (ii) a Training of Trainers (ToT) program on the MOODLE-based Learning Management System (LMS) for trainers from Central and State Training Institutes, WALMIs/IMTIs and similar institutions, and (iii) a program on the Training Information Management System (TIMS) for in-house faculty.

These programs were designed to equip trainers and professionals engaged in training activities in the field of water resources management with the knowledge and competencies required for effective planning, delivery, and evaluation of training programs. The curriculum covered a wide range of critical topics, including trainer development and the concept of Training of Trainers, differentiation between training and education, principles of adult learning, and a systematic approach to training encompassing training needs assessment, appropriate training methodologies, and the design of effective training programs and learning units.

As part of the Capacity Building and Professional Development of Trainers initiative, a three-day Training of Trainers program on the Moodle Learning Management System (LMS) was conducted in hybrid mode. The training provided a comprehensive understanding of the Moodle LMS and its application in e-learning, with a focus on enabling participants to effectively plan, deliver, and evaluate online and blended training programs in the water resources sector.

Overall, these initiatives contributed significantly to strengthening pedagogical skills, enhancing digital training capabilities, and improving systems and mechanisms for training planning, delivery, and monitoring at NWA and allied training institution**s.**

During the year 2024–25, three (03) Faculty Development Programs were conducted, benefiting a total of 77 officials, as against the approved two (02) programs, as detailed below:

#	Details	Date of Program	Number of Participants	Duration in Weeks
i.	Faculty Development Program	22-26 July 2024	27	1
ii.	Online Training of Trainers (ToT) on Moodle (for Capacity Building and Professional Development of Trainers)	10-12 September 2024	25	0.6
iii.	Training-cum-Workshop "Training Information Management System"	06 December 2024	25	0.2
		Total	**77**	

6.4.8 Core Area Programs (Trainings / Webinars/ Workshops)

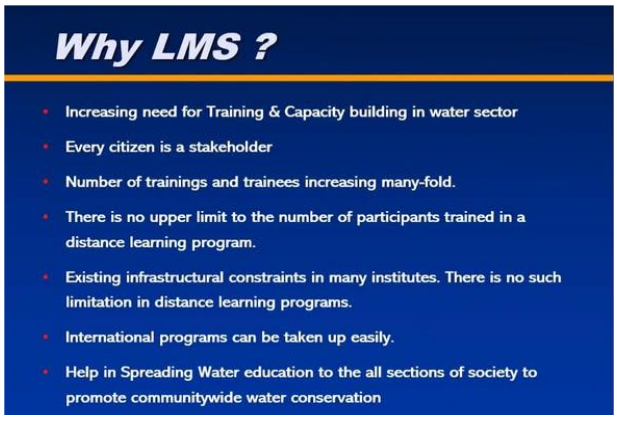
During the year 2024–25, NWA continued to play a pivotal role in strengthening institutional capacity in the water resources sector through conducting various Core Area Training Programs.

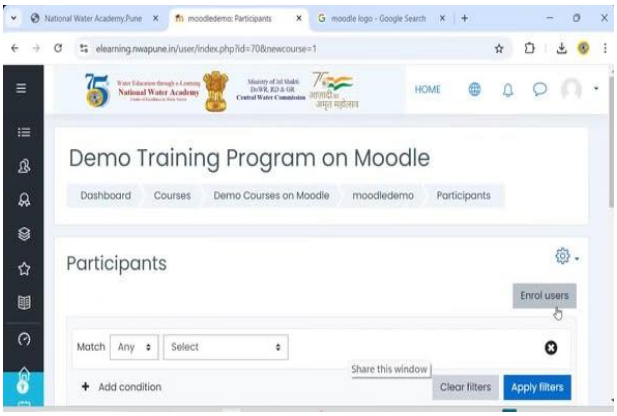
Key Achievements – Core Area Capacity Building

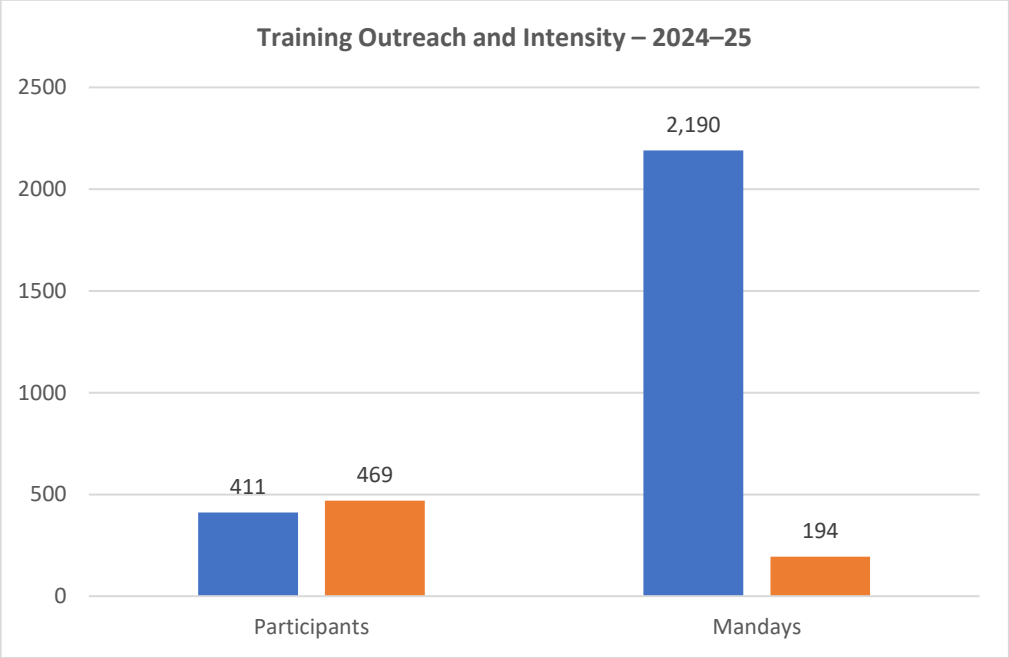
- 16 Core Area Training Programs successfully conducted
- 880 officers and professionals trained across Central and State Governments and other Stakeholders
- 2,384 mandays of structured capacity building delivered
- Programs aligned with CBC competency framework (Domain & Functional)
- High-demand subjects addressed through multiple batch-wise programs
- Advanced themes introduced, including AI/ML, data-driven decision making, and space technology applications
- Balanced delivery through residential trainings and national-level webinars

This reflects a substantial training outreach, both in terms of participant coverage and training efforts.

Program Type	No. of Programs	Participants	Training Days	Mandays
Residential Training	13	411	53	2,190
Webinars (DL Mode)	3	469	0.5	194
Total	**16**	**880**	**53.5**	**2,384**







Thematic Focus of Core Area Training

The programs covered a wide spectrum of priority and emerging areas in water resources management, including:

- Water Pricing
- Water Quality Monitoring, Assessment and Data Analysis (multiple batch-wise programs to address high demand)
- Irrigation Modernization and Piped Distribution Network (PDN) Design
- Pumped Storage Hydroelectric Projects
- Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) and Data-Driven Decision Making
- Urban Flood Management
- Coastal Erosion Protection and Coastal Zone Management
- Reservoir Sedimentation Assessment and Management
- Application of Space Technology in the Water Sector

Broad Theme	No. of Programs
Water Quality & Monitoring	8
Irrigation & Hydropower Systems	3
Flood & Coastal Management	2
Digital / AI / Space Applications	2
Water Governance & Pricing	1
Total	**16**

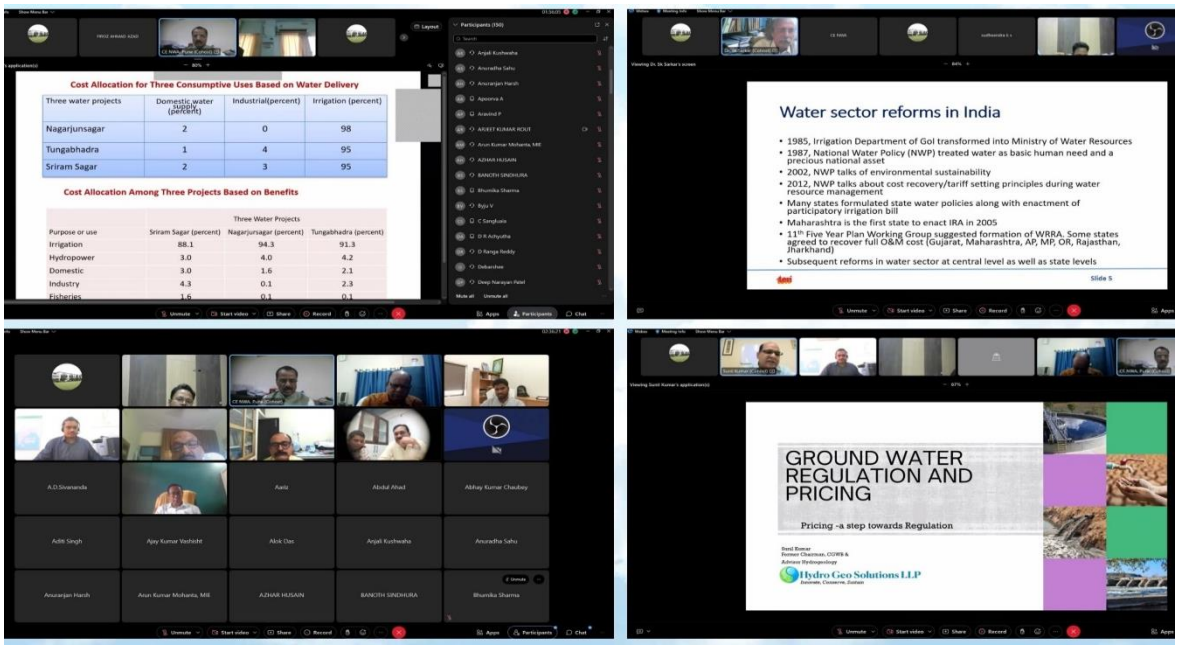
Sl. No.	Name of Training Program	Dates	Competency Skills (as per CBC)	No. of Trainees	Duration (Weeks / Months)	Man-weeks	Training Days	Man-days	Mode of Delivery
1	Webinar on Water Pricing	04–05 April 2024	Domain	275	0.4	110.0	2.0	550	Distance Learning
2	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-1	06–07 May 2024	Domain	15	0.4	6.0	2.0	30	Residential
3	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-2	07–08 May 2024	Domain	18	0.4	7.2	2.0	36	Residential
4	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-3	08–09 May 2024	Domain	18	0.4	7.2	2.0	36	Residential
5	Irrigation Modernization & PDN Design	20–24 May 2024	Domain	52	1.0	52.0	5.0	260	Residential
6	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-4	27–28 May 2024	Domain	23	0.4	9.2	2.0	46	Residential
7	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-5	28–29 May 2024	Domain	21	0.4	8.4	2.0	42	Residential
8	Training Program on Analysis of Quality of Water Quality (WQ) Data – Batch-6	29–30 May 2024	Domain	25	0.4	10.0	2.0	50	Residential
9	Pumped Storage Hydroelectric Projects	10–19 June 2024	Domain	44	2.0	88.0	10.0	440	Residential
10	Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) & Data-Driven Decision-Making for Government	11–13 June 2024	Domain	22	0.6	13.2	3.0	66	Residential
11	Training Program on Urban Flood Management	01–04 July 2024	Domain	56	0.8	44.8	4.0	224	Residential
12	Training Program on Coastal Erosion Protection & Coastal Zone Management	01–05 July 2025	Domain	36	1.0	36.0	5.0	180	Residential
13	Training Program on Analysis of Quality of Water Quality (WQ) Data	05–06 August 2024	Domain, Functional	26	0.4	10.4	2.0	52	Residential
14	Webinar on "India's Space Technology and its Application in the Water Sector"	21 August 2024	Domain	194	0.1	19.4	0.5	97	Distance Learning
15	Training Program on Water Quality	14–18 October 2024	Domain, Functional	33	1.0	33.0	5.0	165	Residential

	Monitoring & Assessment								
16	Training Program on Reservoir Sedimentation Assessment & Management	18–23 November 2024	Domain, Functional	22	1.0	22.0	5.0	1`10	Residential
—	**Total**	—	—	**880**	**10.7**	**476.8**	**53.5**	**2,384**	—

The scale of participation, diversity of thematic coverage, and significant training mandays achieved during the year underscore NWA's continued emphasis on competency-based capacity building.

i. Webinar on Water Pricing in India

Two-day webinar on "Water Pricing in India" was organised during 04-05 April 2024, with an objective of disseminating knowledge and facilitating informed discussions on best practices, challenges, and emerging opportunities in the domain of water pricing. The webinar comprised of four thematic technical sessions, namely: "Rationalization of Water Rates: An Effective Tool for Increasing Water Use Efficiency" delivered by Shri D. S. Chaskar, Chief Engineer & Head, NWA; "Groundwater Regulation and Pricing" by Shri Sunil Kumar, Former Chairman, Central Ground Water Board; "Water Regulatory Authorities: Recent Trends" by Dr. S. K. Sarkar, Distinguished Fellow, TERI and Former Secretary, Ministry of Water Resources; and "Water Pricing in Maharashtra: A Case Study of MWRRA" by Dr. S. A. Kulkarni, Former Secretary, Maharashtra Water Resources Regulatory Authority (MWRRA).A total of 275 participants from various Central and State Government Departments, Central and State Public Sector Undertakings, academic institutions, Water User Associations (WUAs), non-governmental organizations, media, and private organizations participated in the webinar and actively engaged in the deliberations following each session.



ii. Training on Analysis of Water-Quality Daa – Seven Batches

Under the directions of the Chairman, Central Water Commission (CWC) and Ex-officio Secretary to the Government of India, the National Water Academy (NWA) organized a comprehensive two-day training program on "Analysis of Water Quality Data" for seven batches of officers of the Central Water Commission. The program was designed to strengthen the analytical capabilities of officers from both the Engineering and Scientific cadres, with a particular focus on enhancing the quality, consistency, and reliability of monthly water quality bulletins to meet the requirements of diverse stakeholders. The program comprised interactive technical sessions delivered by experts and guest faculty from the Central Pollution Control Board (CPCB), National Institute of Hydrology (NIH), and CWC. The sessions covered key themes including analysis of river water quality data through case studies, inter-relationship of water quality parameters, trend analysis, consistency and continuity checks, and systematic preparation of water quality bulletins and technical reports.

iii. Irrigation Modernization and Design of Pipe Distribution Networks (PDN)

In alignment with the vision articulated by Chairman, Central Water Commission (CWC), for strengthening capacity building of Central and State Water Resources Departments/Organizations in modern irrigation practices, a five-days training program on **"Irrigation Modernization and Design of Pipe Distribution Networks (PDN)"** was organised during **20–24 May 2024**, in association with the Asian Development Bank (ADB)–**Support for Irrigation Modernization Program (SIMP)**.SIMP has been undertaken by the CWC under the Ministry of Jal Shakti, Department of Water Resources, RD & GR, with assistance from the Asian Development Bank, with the objective of improving Water Use Efficiency (WUE) in Major and Medium Irrigation (MMI) projects and enhancing crop water productivity. Adoption of PDN constitutes a key component of the Irrigation Modernization Plans (IMPs) for the first batch of four projects taken up under SIMP.

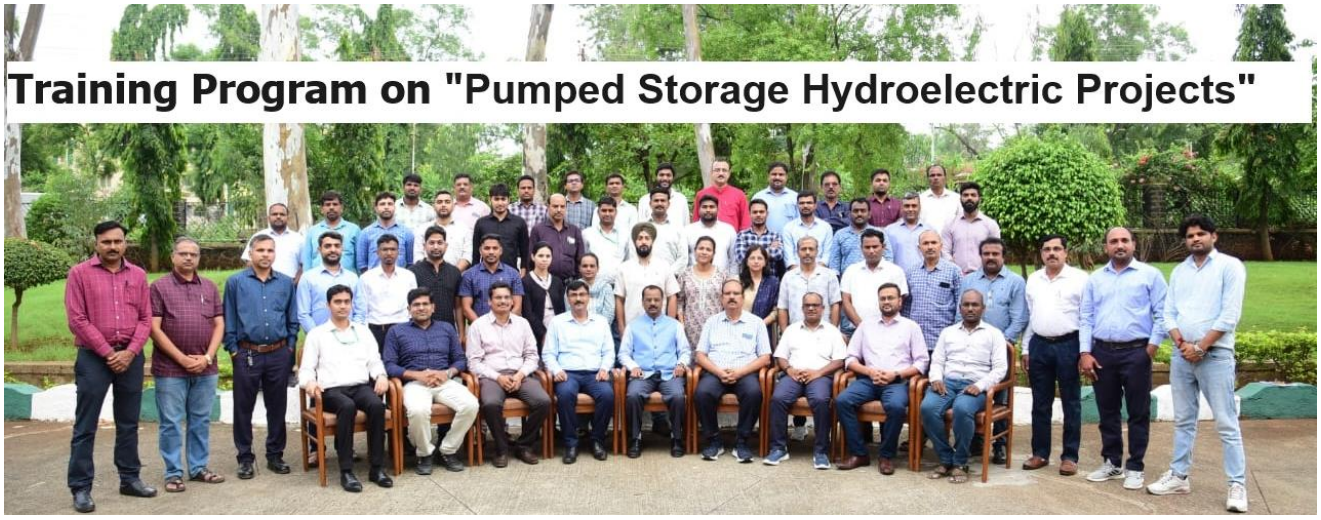
A total of 52 participants—including 49 officers from Central and State Government departments/organizations and 3 participants from industry and academia—participated in the program, enabling meaningful technical discussions and knowledge exchange. The program enhanced participants'

technical competencies in the design and implementation of Pipe Distribution Networks (PDN) through expert lectures and hands-on exercises using EPANET. Participants gained practical insights into PDN planning, hydraulic design, material selection, and operation and maintenance aspects, supporting improved Water Use Efficiency and effective implementation of Irrigation Modernization Plans in line with the capacity-building objectives of the CWC and NWA.

iv. Pumped Storage Hydroelectric Projects (PSHPs)

In accordance with the directions of Chairman, Central Water Commission (CWC), a two-week training program on "Pumped Storage Hydroelectric Projects (PSHPs)" was conducted by NWA.

The program covered a wide range of technical, financial, and institutional aspects of PSHPs, including their role in India's renewable energy transition, financial viability, hydrological and geotechnical investigations, and design considerations for dams, storage systems, and powerhouses. Challenges related to the preparation of Detailed Project Reports (DPRs) and the derivation of operating rules for mixed pumped storage plants were also deliberated. Practical exposure was provided through field visits to the Bhira Hydroelectric Project, Bhatghar Dam, and model studies at the Central Water & Power Research Station (CW&PRS).A total of **44 officers** from various Central and State agencies participated in the program.



v. Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) & Data-Driven Decision-Making for Government

A three-day training program on "Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) and Data-Driven Decision Making for Government" was organised during 11–13 June 2024 in collaboration with the Wadhwani Foundation, under the directions of the Secretary, Ministry of Jal Shakti, Department of Water Resources, RD & GR.

The training curriculum covered applications of emerging technologies in e-governance, conceptual clarity on AI, ML, and DL, and practical use cases relevant to government functioning. Participants were introduced to both open-source and proprietary analytical tools and were provided hands-on training on image detection and classification using Orange software.

vi. Urban Flood Management

In line with the vision articulated by Chairman, Central Water Commission (CWC) a four-day training program on "Urban Flood Management" was organised during 01–04 July 2024 as part of its capacity-building initiatives.

The program witnessed participation of **57 officers.**

vii. Coastal Erosion Protection & Coastal Zone Management

As a part of Capacity Building Initiative for 2024-25, a five-day training program on "Coastal Erosion Protection & Coastal Zone Management" was organised during 01–05 July 2024.

A total of 36 officers from Central and State Government Departments participated in the programme, including 20 officers from Central organizations such as the Central Water Commission, Central Water and Power Research Station, and Central Ground Water Board.

viii. Webinar on "India's Space Technology and its Application in the Water Sector"

In observance of National Space Day 2024, declared by the Hon'ble Prime Minister of India on 23 August 2024 to commemorate the landmark achievement of Chandrayaan-3, NWA organized a special webinar titled "India's Space Technology and its Application in the Water Sector" on 21 August 2024.

The webinar was conceptualized as an outreach and capacity-building initiative for school, college, and university teachers, students, and other interested stakeholders, with the objective of enhancing awareness about the transformative role of space-based technologies in water resources management. The technical sessions focused on the application of satellite observations, remote sensing, geospatial tools, and data-driven decision-making frameworks to address key challenges related to water availability, monitoring, management, and conservation.

The initiative witnessed enthusiastic participation and wide outreach through online registration and webinar platforms, reflecting NWA's continued commitment during 2024–25 to leveraging emerging technologies and innovative knowledge dissemination for capacity building in the water sector.

ix. Water Quality Monitoring & Assessment

NWA had organized a five-day training programme on "Water Quality Monitoring & Assessment" during 14–18 October 2024. The programme was attended by 33 officers drawn from State Pollution Control

Boards, Public Health Engineering Departments, Water Supply and Sanitation Departments, and city water boards, representing a wide cross-section of agencies engaged in water quality management. The training programme covered a comprehensive range of topics, including the importance of water quality management; institutional roles of the Ministry of Jal Shakti and the Ministry of Environment, Forests & Climate Change; water quality standards and parameters; sampling techniques; on-site analysis; ISO/IEC 17025:2017 compliance; NABL accreditation; advanced analytical instrumentation; quality assurance and quality control; data validation; and the application of Remote Sensing (RS) and GIS in water quality monitoring. The programme also included hands-on demonstrations and a technical visit to the CWC water quality laboratory, providing participants with practical exposure to laboratory procedures and analytical protocols.

x. Reservoir Sedimentation Assessment & Management

A one-week training program on "Reservoir Sedimentation Assessment and Management" **was organised during** 18–23 November 2024. The program was attended by 22 officersA key highlight was a field visit to the Khadakwasla Reservoir, where participants were exposed to advanced instrumentation and field data collection techniques, including the use of Remotely Operated Vehicles (ROVs) for sediment characterization and inspection. In addition, a case study on community-led sediment management, showcasing the Green Thumb Foundation's initiative for desilting the Khadakwasla Reservoir, was presented.

6.4.9 Training Programs related to Dam Safety Aspects

Consequent upon the enactment of the Dam Safety Act, 2021, NWA has undertaken focused initiatives to create awareness of the Act's provisions and to strengthen the technical competencies of officials of dam-owning organizations. The primary objective of these programmes is to equip participants with a comprehensive understanding of dam safety principles & the statutory and technical measures required for effective compliance with the Dam Safety Act, 2021. During the financial year 2024–25, NWA organized a series of residential and distance-learning training programmes on dam safety, dam instrumentation, and the application of DHARMA (Dam Health and Rehabilitation Monitoring Application), aimed at enhancing the professional capabilities of personnel engaged in dam safety

management across the country. The programmes addressed critical operational and technical aspects such as inflow forecasting, reservoir operation, structural health monitoring, seepage investigation techniques, geophysical investigations, sedimentation studies, geotechnical issues, and seismic safety evaluation. Practical learning was reinforced through case studies, including the *Temghar Project* and *Karam Dam*, sessions on gate inspection and maintenance and design considerations, and field exposure through a visit to the Temghar Dam, which has recently undergone rehabilitation involving extensive grouting to arrest excessive seepage etc.Details of the Programs (Webinar & Physical Trainings) conducted by NWA during the year are as under. NWA has conducted 26 Programs (Training / Webinars) with a participation 6419 Officials.

#	*Name of Training/Webinar*	*Dates & Duration*	*Number of participants*
1.	Dharma application related to Dam Safety Aspects	04-05 April 2024 2 days	70
2.	Dharma application related to Dam Safety Aspects	23-24 April 2024 2 days	54
3.	Dam Break Analysis	02-04 May 2024 3 days	65
4.	Design Flood Analysis	29 Apr-01 May 2024	65
5.	Dharma application related to Dam Safety Aspects	10-11 May 2024 2 days	24
6.	Webinar on Dam Safety Aspects	12-14 Aug 2024 3 days	874
7.	Assessment of Structural Safety of Dam	19-28 Aug 2024 2 Weeks	25
8.	Instrumentation in Dams	17-19 Sept 2024 3 days	57
	A Series of 18 Webinars		
9.	Dam safety Act	05.11.2024	698
10.	DHARMA	13.11.2024	684
11.	Dam Inspection	19.11.2024	530
12.	Hydrological Safety	27.11.2024	375
13.	Rule Curve & Routing	03.12.2024	364
14.	Dam Break Analysis	10.12.2024	337
15.	Emergency Action Plan	17.12.2024	227
16.	Rapid Risk Assessment	24.12.2024	230
17.	Geophysical Methods	31.12.2024	227
18.	Dam Instrumentation	07.01.2025	238
19.	Reservoir Sedimentation	14.01.2025	105
20.	Structural Safety of Gravity Dams	21.01.2025	169
21.	Structural Safety of Embankment Dams	28.01.2025	208

22.	Seismic Evaluation	04.02.2025	178
23.	Hydro-Mechanical Safety	11.02.2025	194
24.	Hydrological Review of Dams with Case studies	18.02.2025	138
25.	Early Warning Systems in Hydro Projects	25.02.2025	162
26.	Hazard Classification of Dams	04.03.2025	84
		Total	**6419**

i. DHARMA (Dam Health and Rehabilitation Monitoring Application)- 3 Programs

During the year, three batches of training programmes on the Dam Health and Rehabilitation Monitoring Application (DHARMA) were conducted at NWA, as part of focused capacity-building initiatives on dam safety and asset management. The programmes aimed at imparting hands-on skills to officers in the effective use of the DHARMA platform developed under the Dam Rehabilitation and Improvement Project (DRIP), with emphasis on systematic data management, continuous surveillance, and risk-informed decision-making.

The three batches together witnessed participation of 144 officers from multiple State Governments and Central/State PSUs, reflecting a strong collective commitment towards strengthening dam safety governance and institutional capacity for dam health monitoring across the country.

ii. Design Flood Analysis

A three-day training program on "Design Flood Analysis" was conducted at NWA during 29 April -1 May 2024 , with the objective of equipping participants with essential competencies for evaluating design floods for both new and existing dams and for addressing hydrological safety concerns of existing dam infrastructure.

The training enhanced participants' technical understanding of design flood estimation methodologies and hydrological safety evaluation, strengthened their capacity to apply updated analytical approaches for dam safety appraisal, and supported informed decision-making for planning remedial and risk-mitigation measures in compliance with statutory dam safety requirements.

The programme was attended by 64 officers.

iii. Dam Break Analysis

During the year 2024-25, in a significant stride towards enabling dam owners to effectively implement the provisions of the Dam Safety Act, 2021 and to enhance the safety of downstream communities, a three-day comprehensive training programme on "Dam Break Analysis" was conducted by NWA during 02-04 May 2024.

The programme was designed to equip participants with essential skills for undertaking dam break analysis studies, assessing risks associated with potential dam breaches, and safeguarding lives and livelihoods in downstream areas. The training programme strengthened participants' technical capabilities in conducting dam break analysis using mathematical and computer-based simulation techniques. It enhanced their understanding of dam failure scenarios, flood wave propagation, and impact assessment on downstream areas, thereby enabling more informed preparation of Emergency Action Plans (EAPs).
The programme was attended by **65 officers**

iv. Assessment of Structural Safety of Dam

A training programme on "Assessment of Structural Safety of Existing Dams" was conducted at NWA, Pune during 19–28 August 2024.
The programme was attended by 25 participants and significantly enhanced their technical knowledge and practical skills in assessing the structural safety of existing dams in conformity with the Dam Safety Act, 2021. The training strengthened participants' understanding of standardized assessment methodologies and risk-based decision-making, enabling them to effectively contribute to dam safety management, rehabilitation planning, and regulatory compliance within their respective organizations.

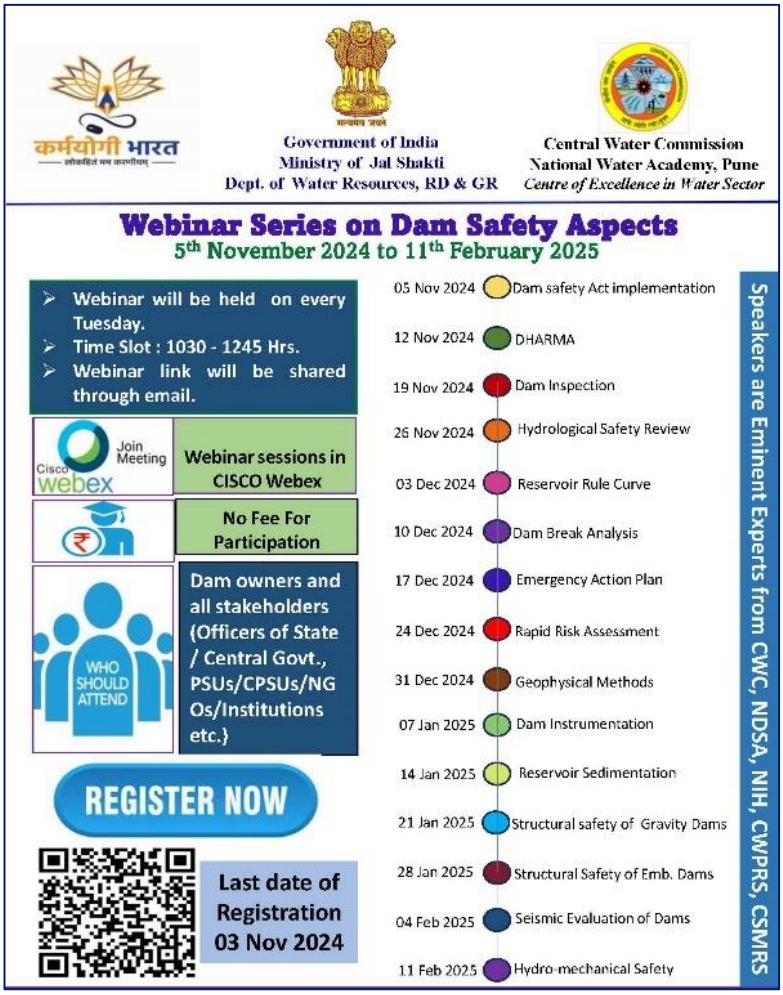
v. Instrumentation in Dams

A specialized training programme on "Instrumentation in Dams" was conducted during 17–21 September 2024.

The training programme comprehensively covered the need and importance of instrumentation in hydraulic structures, conventional and advanced monitoring techniques, and the application of emerging technologies such as fiber-optic sensors and **S**ynthetic Aperture Radar (SAR) for non-contact monitoring of dams. Technical sessions were delivered by eminent scientists, engineers, and industry specialists from reputed institutions, including Central Soil and Materials Research Station (CSMRS), Defence Institute of Advanced Technology (DIAT), Central Water and Power Research Station (CWPRS), Government of Maharashtra, Government of Tamil Nadu, and leading private sector organizations such as AIMIL Limited and Encardio-Rite. A key component of the programme was a field visit to the Koyna Dam, which provided participants with first-hand exposure to dam instrumentation systems in operation and significantly enhanced their practical understanding of the concepts discussed during the classroom sessions. The programme was attended by 57 officers. The programme enhanced participants' technical competencies in the planning, installation, operation, and interpretation of dam instrumentation systems. It strengthened understanding of conventional and advanced monitoring techniques, including fiber-optic sensors and SAR, for early distress detection and performance evaluation. Field exposure reinforced practical, data-driven decision-making, contributing to improved institutional capacity for risk-informed dam safety monitoring and effective compliance with the Dam Safety Act, 2021.

vi. Webinar Series on Dam Safety Aspects

In view of the substantial capacity-building requirements in the dam safety sector, which were difficult to address solely through physical training programmes, NWA conducted a Webinar Series on Dam Safety to support stakeholders in meeting their obligations under the Dam Safety Act and to strengthen competencies in efficient dam asset management. The online format enabled wide participation and effective dissemination of knowledge.



The webinar series was delivered by eminent experts with extensive domain experience and was conducted every Tuesday from 05 November 2024 to 11 February 2025 (10:30–12:45 hrs). The sessions covered key aspects of dam safety, including the Dam Safety Act and DHARMA, dam safety inspection, hydrological safety, reservoir routing and rule curves, dam-break analysis, emergency action planning, geophysical investigations, reservoir sedimentation, dam instrumentation, rapid risk assessment, structural and seismic safety, and hydro-mechanical safety assessment. Each session concluded with an interactive question-and-answer segment.

A Series of 18 Webinars	
Dam safety Act	https://youtu.be/iYTmO1ghqoE?si=u80UQbJAxz3oBIDZ
DHARMA	https://youtu.be/kN3jxghJBE4?si=xdlU8_he2TwW2M0M
Dam Inspection	https://youtu.be/btT4kfhTvMI?si=LH-W6uI_qz2lZaqH
Hydrological Safety	https://youtu.be/pYkNrzmWOdA?si=SZrAUe6esZDsBEDp
Rule Curve & Routing	https://youtu.be/C1Kx3bvRcug?si=9rDMR5TOz-BNNZ6k
Dam Break Analysis	https://youtu.be/6tQq6qojcPU?si=-ZO2r9gpU88W-VQR
Emergency Action Plan	https://youtu.be/QMrFffFNvMw?si=5a-HNVi5Tz06VThA
Rapid Risk Assessment	https://youtu.be/A8EApi_sMZk?si=WOWUKLAFhGZ4lqGo
Geophysical Methods	https://youtu.be/LOHMkytt-Cc?si=43DbOIu_60Al6LrB
Dam Instrumentation	https://youtu.be/a5gcAvkFqj0?si=h_YOJM88WUdprQvu

Reservoir Sedimentation	https://youtu.be/0akXKaADPWc?si=sbyn3J8LuTNg4WYl
Structural Safety of Gravity Dams	https://youtu.be/8Ol4-uEwZ24?si=SaJURjaxL2IOUJdN
Structural Safety of Embankment Dams	https://youtu.be/Ink3CxkTCUQ?si=Q2kI7g9QeToq2-HS
Seismic Evaluation	https://youtu.be/p_bBEv3NGkQ?si=ah7XjCX4iEYEXP6l
Hydro-Mechanical Safety	https://youtu.be/HFxHUL0C0QU?si=KKIQNeK_cjVpU8Ij
Hydrological Review of Dams with Case studies	https://youtu.be/VEa9eYMYyrc?si=nKIIHxeUanq2f3Dh
Early Warning Systems in Hydro Projects	https://youtu.be/XAFjUJ5x628?si=NjZLG4BSOql3YCJ_
Hazard Classification of Dams	https://youtu.be/G-IKqOkv2qc?si=7_326tTRoWcDvC6X

In addition, 18 national-level webinars were conducted, reaching approximately 6,022 participants, with an average batch size of about 300 participants per webinar. These webinars comprehensively addressed provisions of the Dam Safety Act, 2021 and featured expert speakers from National Dam Safety Authority, State Dam Safety Organisations, and other technical institutions, fostering active engagement with field-level stakeholders.

6.4.10 Training Programs under National Hydrology Project (NHP)

As the nodal agency for training and capacity-building activities under flagship schemes of the Ministry of Jal Shakti (MoJS), such as the National Hydrology Project (NHP), the National Water Academy (NWA) continued to play a key role in undertaking training and capacity-development initiatives during 2024–25.

Under the NHP framework, NWA implemented a focused set of capacity-building programmes aimed at strengthening technical competencies in hydrology, geospatial applications, data analytics, and irrigation performance assessment. These initiatives were closely aligned with NHP objectives of promoting data-driven decision-making, encouraging the adoption of modern tools and technologies, and developing a skilled human resource base in the water sector.

The training programmes encompassed advanced and emerging areas, including applications of Google Earth Engine in water resources management, leveraging geospatial technologies for planning and management, and Python programming for hydrological and water-sector applications. Large-scale outreach was achieved through distance-learning modes, particularly via national-level technical webinars and online training programmes, enabling wide participation from Central and State Government agencies and other stakeholders.

In addition, specialized residential programmes were conducted on hydrological modelling using free and open-source tools, Real-Time Data Acquisition Systems (RTDAS), and ET-based irrigation performance assessment tools, with a strong emphasis on practical exposure and hands-on learning. NWA also organized the Young Water Professionals (YWP) Cohort-II Programme under India–Australia

Cooperation, fostering international knowledge exchange and professional development of young officers within the NHP framework.

Overall, **eight training programmes** were conducted under the National Hydrology Project during 2024–25, benefiting **1,222 participants** with a **6,214 mandays** of training. These outcomes underscore the growing demand for digital, analytical, and technology-enabled capacity-building interventions in the hydrology and water resources domain.

#	Name of Training Programme	Dates	Competency Skills (as per CBC)	No. of officers	Dura-tion (Wks	Man-weeks	Training Days	Mandays	Mode of Delivery
1.	Young Water Professional (YWP) Cohort-II Programme under India–Australia Cooperation	08–12 July 2024	Domain	20	1.0	20.0	5	100	Residential
2	Introduction to Google Earth Engine & Applications in Water Resources Management	05–16 Aug. 2024	Domain, Functional	55	2.0	110.0	10	550	Residential
3	Technical Webinar on Leveraging Geospatial Technology for Water Resources Development & Management	19–20 Aug. 2024	Domain, Functional	541	0.2	108.2	1	541	Distance Learning
4	Introduction to Python Programming and its Application in Water Resources Sector	26 Aug. – 06 Sept. 2024	Domain, Functional	435	2.0	870.0	10	4,350	Distance Learning
5	Hydrological Modeling using Free Tools	30 Sept. – 05 Oct. 2024	Domain, Functional	48	1.0	48.0	5	240	Residential
6	Real-Time Data Acquisition System (RTDAS)	11–13 Nov. 2024	Domain, Functional	59	0.6	35.4	3	177	Residential
7	ET-based Irrigation Performance Assessment Tools	25–28 Feb.2025	Domain, Functional	28	0.8	22.4	4	112	Residential
8	ET-based Irrigation Performance Assessment Tools	10–13 March 2025	Domain, Functional	36	0.8	28.8	4	144	Residential
Total				**1222**	**8.4**	**1242.8**	**42**	**6,214**	

i. Young Water Professional (YWP) Cohort-II Programme under India–Australia Cooperation

NWA hosted a week-long inception workshop from 08–12 July 2024 for Cohort-II of Young Water Professionals (YWPs) as part of a comprehensive 14-week capacity-building programme under the National Hydrology Project, implemented in collaboration with the Australian Water Partnership.

A total of 20 Young Water Professionals participated in the programme.

The cohort comprised officers from both Central and State Government organizations, including the Department of Water Resources, RD & GR; Central Water Commission; Central Electricity Authority; Central Water and Power Research Station; Central Ground Water Board; and State Governments of Tamil Nadu and Telangana, reflecting a diverse and multidisciplinary participant profile. The inception workshop covered key thematic areas of contemporary relevance, including geospatial technologies for watershed management, sustainable water management in hilly regions, climate change impacts on water resources and modelling with a focus on Indian river systems, and water trading and institutional frameworks, thereby laying a strong foundation for the subsequent phases of the 14-week programme.

ii. Introduction to Google Earth Engine & Applications in Water Resources Management

NWA conducted a training program on "Introduction to Google Earth Engine & Applications in Water Resources Management" under the NHP during 05–16 August 2024. The programme was attended by 55 participants drawn from 18 Central and State Implementing Agencies (IAs) of NHP, along with officers from other stakeholder departments and organizations.

The training curriculum comprised a comprehensive mix of theoretical sessions and hands-on exercises, aimed at building practical proficiency among participants.

The programme significantly enhanced participants' understanding and hands-on capability in applying cloud-based geospatial tools for data-driven analysis and decision-making in the water sector, thereby supporting the objectives of the National Hydrology Project in strengthening modern, technology-enabled water resources management practices.

iii. Hydrological Modelling Using Free Tools

Training Program on "Hydrological Modelling Using Free Tools" was conducted under the NHP during 30 September to 05 October 2024. The tools covered included QGIS for GIS-based spatial analysis, Google Earth Engine for large-scale satellite data analysis, HEC-HMS for lumped hydrological modelling, SWAT for semi-distributed hydrological modelling, HEC-RAS for hydraulic modelling, and Model Muse for groundwater modelling applications.

iv. Real-Time Data Acquisition System (RTDAS)

NWA organized a three-day training programme on Real-Time Data Acquisition System (RTDAS) during 11–13 November 2024 under the NHP. The programme aimed at strengthening the technical capacity of officers involved in hydro-meteorological data collection and management. It covered key aspects of RTDAS, including network architecture and data flow, telemetry systems, data loggers, field installation, operation and maintenance, and calibration of sensors such as Automatic Rain Gauges (ARG), Automatic Water Level Recorders (AWLR), and Automatic Weather Stations (AWS).

The programme was attended by 59 participants from Central and State Government organizations and other stakeholder agencies involved in hydro-meteorological data management.

v. ET-based Irrigation Performance Assessment Tools – 2 batches

NWA conducted two four-day training programmes on "ET-based Irrigation Performance Assessment Tools" during 25–28 February 2025 and 10–13 March 2025 under the aegis of the Ministry of Jal Shakti, Department of Water Resources, RD & GR.

The programmes comprised intensive hands-on sessions on the Google Earth Engine (GEE) platform, followed by practical training on two irrigation performance assessment tools developed by CWC with World Bank support, namely Evapotranspiration-based Quick Irrigation Performance Assessment (EQIPA) and Detailed Irrigation Performance Assessment (EDIPA). While EQIPA is a generic tool requiring only a command area shapefile and pre-loaded datasets to generate performance indicators and scores, EDIPA provides a more detailed assessment using downscaled evapotranspiration, biomass production datasets, and crop type mapping.

A total of 64 officers participated in these programmes.

6.4.11 Programs as per the Annual Capacity Building Plan of DoWR, RD &GR prepared by CBC

Based on the Capacity Need Analysis (CNA) conducted for the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) and its associated organizations, the Annual Capacity Building Plan (ACBP) was formulated to systematically address identified competency gaps in functional as well as domain-specific areas. The CNA exercise provided a structured and evidence-based assessment of capacity requirements, enabling effective alignment of training interventions with emerging sectoral challenges and priority areas, in accordance with the policy directions of the Ministry. In line with the approved ACBP and the directives of the Ministry, the following key training programmes were conducted by the NWA during the year 2024–25:

Conventional Flood Forecasting	14-18 May 2024	1 Week	45 Nos
Integrated Water Resources Management (IWRM)	15-19 October 2024	1 Week	20 Nos
Overview of the Water Resources Sector of India for Non-Technical Officers	26-30 August 2024	1 Week	26 Nos

i. Training Programme on Conventional Flood Forecasting

A five-day training programme on "Conventional Flood Forecasting" was organized which, aimed at strengthening national preparedness and professional capacity in flood forecasting and flood management practices.

The programme witnessed participation of 46 officers from various Central and State Government organizations engaged in flood forecasting and flood management activities. .

ii. Integrated Water Resources Management (IWRM)

One week training programme on "Integrated Water Resources Management (IWRM)" was conducted during 06–10 October 2025. The technical sessions were conducted by core faculty of NWA, experts from

CWC and guest faculty from State institutions, covering a wide spectrum of IWRM-related themes, including:

* Trans-boundary water management
* Basin-wise reassessment of water resources
* National Water Policy and Framework Law
* Water accounting and water budgeting
* Participatory approaches and capacity building in IWRM

A major component of the programme was a field visit to Hiware Bazar (Maharashtra), a nationally recognized model village that has transformed from a drought-prone settlement into a water-secure and prosperous community through innovative water conservation and management practices. The visit provided valuable practical exposure to community-driven IWRM implementation.

iii. Overview of the Water Resources Sector of India for Non-Technical Officers

A training programme on Overview of the Water Resources Sector of India for Non-Technical Officers of DoWR, RD & GR and CWC was conducted during 07–11 July 2025. A total of 26 officers participated in the programme.

The program included insightful lectures such as its Water Availability, Distribution, Water Quality, Constitutional Provisions for Water, Flagship Schemes of DoWR,RD&GR, Role & Functioning of CWC, Irrigation Development, Ground Water Management, Dam Safety Act' 2021, Flood Management, Watershed Development, etc.

As part of the practical exposure component, participants undertook field visits to Dhom Dam and Telemetry Station at Mahabaleshwar, CWPRS, Pune, Khadakwasla Dam, and the Water Quality

Laboratory of Upper Krishna Division, CWC, Pune, enabling them to gain first hand understanding of operational and infrastructural aspects of water resources management.

6.4.12 Capacity Building needs of Specific State

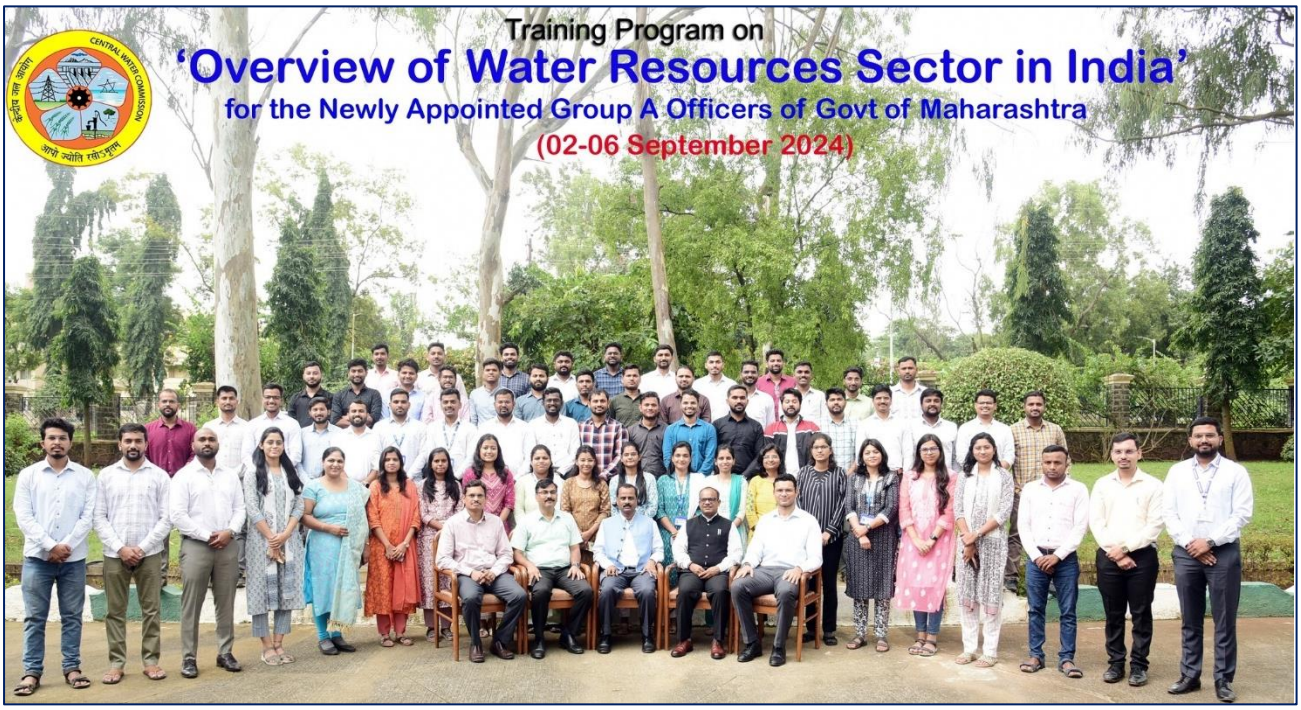
In pursuance of the Memorandum of Understanding (MoU) signed with **Maharashtra Engineering Training Academy (META), Nashik**, on behalf of the Water Resources Department (WRD), Government of Maharashtra, the National Water Academy (NWA), Pune conducted **two customized training programmes** for newly appointed **Group 'A' officers** of the WRD during the year.

Overview of Water Resources Development and Management	10 April 2024	76	0.2
"Overview of Water Resources Sector of India"	02-06 Sept 2024	61	1

Training Programme on "Overview of Water Resources Sector of India" for Group 'A' Officers, WRD Maharashtra :

As part of the above MoU-based collaboration, NWA conducted a training programme on "Overview of Water Resources Sector of India" for newly appointed Group 'A' Officers of the Water Resources Department, Government of Maharashtra, during 02–06 September 2024 at NWA, Pune. A total of 61 officers participated in the programme.

The programme contributed significantly towards building a strong foundational understanding of the water resources sector among newly inducted officers and reinforced NWA's role as a strategic partner to State Governments in structured human resource development and capacity building in the water sector.



The initiative represents a structured state-specific capacity building intervention aimed at supporting the Government of Maharashtra in developing a technically competent and professionally equipped cadre of

officers for effective planning, execution, and management of water resources projects, thereby contributing to improved service delivery and sustainable water governance at the State level.

6.4.13 Customized / Demand Based Trainings - Capacity Building of North-Eastern Region and Hilly States

In response to the region-specific institutional, technical and administrative capacity requirements of the North-Eastern Region and Hilly States, the National Water Academy (NWA), in collaboration with regional institutions, conducted five targeted training programmes during 2024–25. These initiatives were aimed at strengthening project formulation, procurement systems, community-based water management, and project execution capabilities in challenging terrain and hydro-climatic settings. The programmes conducted are summarized below:

e-gem, e-tendering & procurement challenges **at NEHARI**	04-08 November 2024	27	1
DPR preparation for Flood Management, Anti Erosion and River Training works **at NEHARI**	25-29 November 2024	27	1
Customized Training Program on "Community Horticulture & Production and Marketing Associations (CHPMAs)/ WUAs and Participatory Irrigation Management" for technical officers from Horticulture Department, Himachal Pradesh	30 Dec 2024-03 January 2024	15	1
Project Management, Project Supervision and Quality Control" at "Brahmaputra Board-**NEHARI" Guwahati**	18-22 February 2025	25	1
Exposure Visit-cum-Training in Water Resources Management	03-07 March 2025	22	1

i. Training Programme on e-GeM and e-Tendering for Brahmaputra Board Officials

The National Water Academy in collaboration with the North Eastern Hydraulic & Allied Research Institute (NEHARI), Brahmaputra Board, successfully conducted a five-day training programme on "Procurement through e-GeM, e-Tendering and Procurement Challenges" from 04 to 08 November 2024. The training programme comprised comprehensive lectures and hands-on practical sessions covering the complete procurement life cycle. The modules included various modes of procurement and detailed demonstrations of key functionalities of the GeM portal such as direct purchase, L1 comparison, and bidding procedures. The programme also covered bill processing through GeM and PFMS portals, preparation of Bills of Quantities (BoQ) using the CPP portal, and discussion of common issues and challenges encountered during tendering and contract management. A total of 26 officers from various offices of the Brahmaputra Board successfully completed the programme.

ii. Preparation of Detailed Project Report (DPR) for Flood Protection, Anti-Erosion and River Training Works

The North Eastern Hydraulic and Allied Research Institute (NEHARI), in collaboration with the National Water Academy (NWA), Pune, conducted a five-day training workshop on "Preparation of Detailed Project Report (DPR) for Flood Protection, Anti-Erosion and River Training Works" from 25 to 29 November 2024.

A total of 27 participants from various offices of the Brahmaputra Board and the Water Resources Departments of North-Eastern states participated.

iii. Customized Training Programme on Community Horticulture Production & Marketing Associations / WUAs and Participatory Irrigation Management

The National Water Academy conducted a one-week customized training programme on *"Community Horticulture Production & Marketing Associations / Water Users Associations (WUAs) and Participatory Irrigation*

Management" for officers of the Department of Horticulture and the Jal Shakti Vibhag, Government of Himachal Pradesh, from **30 December 2024 to 03 January 2025**.

Technical sessions on themes including agrometeorology, crop weather forecasting, irrigation scheduling, participatory irrigation management, automation and emerging technologies in micro-irrigation systems, recent advances in horticulture, and marketing strategies for horticultural crops. A field visit to the Krishi Vigyan Kendra (KVK), Baramati, was organized to provide participants with practical exposure to advanced agricultural and horticultural practices.

iv. Training Programme on "Project Management, Project Supervision and Quality Control" (18–22 February 2025)

The National Water Academy in collaboration with the North Eastern Hydraulic & Allied Research Institute (NEHARI), Brahmaputra Board, conducted a five-day training programme on "Project Management, Project Supervision and Quality Control" during 18–22 February 2025. The programme was designed for officers from various Departments of the North Eastern Region of India, with the objective of equipping participants with contemporary knowledge and practical skills in modern project management practices for effective execution of infrastructure projects.

During the five-day programme, comprehensive coverage was provided on key domains of project management, including project planning techniques such as Work Breakdown Structure (WBS), Bar Charts, and Critical Path Method (CPM); resource levelling; project monitoring using Earned Value Analysis (EVA); and time–cost trade-off analysis. Participants were given hands-on training on the use of MS Project and Primavera P6 for project scheduling, resource optimization, progress tracking, and report

generation.The technical curriculum also included modules on Total Quality Management (TQM), construction safety practices, construction methodologies, equipment planning, cost estimation for water resources projects, contract administration, and financial management, along with a detailed case study on anti-erosion project management to provide practical insights into field-level implementation.

v. Exposure Visit-cum-Training Programme on Water Resources Management for M. Tech. Students of NERIWALM (03–07 March 2025)

The National Water Academy conducted a week-long Exposure Visit-cum-Training Programme on Water Resources Management for M. Tech. students from the North Eastern Regional Institute of Water and Land Management (NERIWALM) during 03–07 March 2025. The programme was organized as part of the institutional synergy and collaborative capacity-building framework among training institutions under the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti.

The training programme offered a comprehensive academic and practical curriculum covering key thematic areas, including the role and functions of the Central Water Commission, irrigation water management, application of Remote Sensing and GIS in the water sector, introduction to Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning (DL), water quality measurement and analysis, and flood forecasting and management.

To strengthen experiential learning, the participants undertook field and laboratory visits to important technical facilities, including the physical models at Central Water and Power Research Station (CWPRS), Khadakwasla Dam, the Water Quality Laboratory, and the Full Climate Station of the Upper Krishna Division, CWC, Pune, enabling them to gain firsthand exposure to applied hydrological and hydraulic practices.

6.4.14 Non-Technical Programs

In addition to its core mandate of technical training in the water resources sector, the National Water Academy (NWA), Pune, has been consistently conducting non-technical capacity-building programmes for officers of the Central Water Commission (CWC) and the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti. These programmes include flagship courses such as the "Overview of Water Resources Sector of India for Non-Technical Officers" and the "Management Development Programme", aimed at strengthening managerial, administrative, and sectoral understanding among non-technical officials.

i. Management Development Programme (MDP) for Non-Technical Officers

The National Water Academy conducted a one-week Management Development Programme (MDP) for Non-Technical Officers of the Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), and CWC from 27th to 31st January 2025. A total of 16 officers participated in this structured and interactive capacity-building programme.

The MDP adopted a blended training approach comprising three days of classroom-based sessions at NWA and two days of outbound experiential learning. The classroom component included interactive lectures, group discussions, and management games on key themes such as Time Management, Conflict Management, Decision-Making, Creative Problem-Solving, Team Building, and Stress Management. Sessions on Yoga and Meditation, including morning yoga practice, were also conducted to promote physical and mental well-being.

The outbound training module focused on "Ethics in Public Governance" and was conducted at Panchgani by the Initiatives of Change – Friends of Moral Re-Armament (India), a programme and institute approved by the Department of Personnel & Training (DoPT).

Overall, the programme provided participants with practical tools, managerial insights, and ethical perspectives essential for effective public service delivery, contributing to their holistic professional and personal development and enabling improved performance in their official responsibilities.

ii. Post-Retirement Prospects and Avenues for CWES Officers

NWA in association with the Training Directorate, CWC, organized a two-day Training Programme on "Post-Retirement Prospects and Avenues for CWES Officers" from 23-24 January 2025 at Sewa Bhawan, New Delhi. The programme was specially designed to support senior CWES officers in planning a smooth and purposeful transition into post-retirement life, with emphasis on continued professional engagement, financial security, and holistic well-being.

Over the two days, the programme featured expert-led sessions on positive attitude, mental health, financial and investment planning, healthy post-retirement lifestyle, opportunities in the water sector, CGHS facilities, post-retirement employment avenues and societal contribution, pension paper preparation, post-retirement conduct rules, and the Bhavishya Portal. Interactive open-house discussions were integrated into the programme design to facilitate peer learning and practical understanding of critical post-service processes.

6.4.15 Mass Awareness

As part of its mandate to promote water literacy and strengthen stakeholder engagement, the National Water Academy (NWA) organized a series of mass awareness programmes targeting diverse sections of society during the year. These initiatives were designed to enhance understanding of water resources management, conservation practices, disaster preparedness, and institutional roles across different stakeholder groups. The key programmes conducted are summarized below:

- "Overview of the Water Resources Sector of India" for School Teachers and faculty members of District Institutes of Education and Training (DIETs).
- "Overview of the Water Resources Sector" for representatives of Non-Governmental Organizations (NGOs), media professionals, and civil society organizations.
- Training-cum-Workshop on Flood Disaster Management for National Cadet Corps (NCC) cadets.
- One Day Workshop for Civil Engineering Students on Water Resources Management

i. Training-cum-Workshop for School Teachers on "Overview of the Water Resources Sector in India"

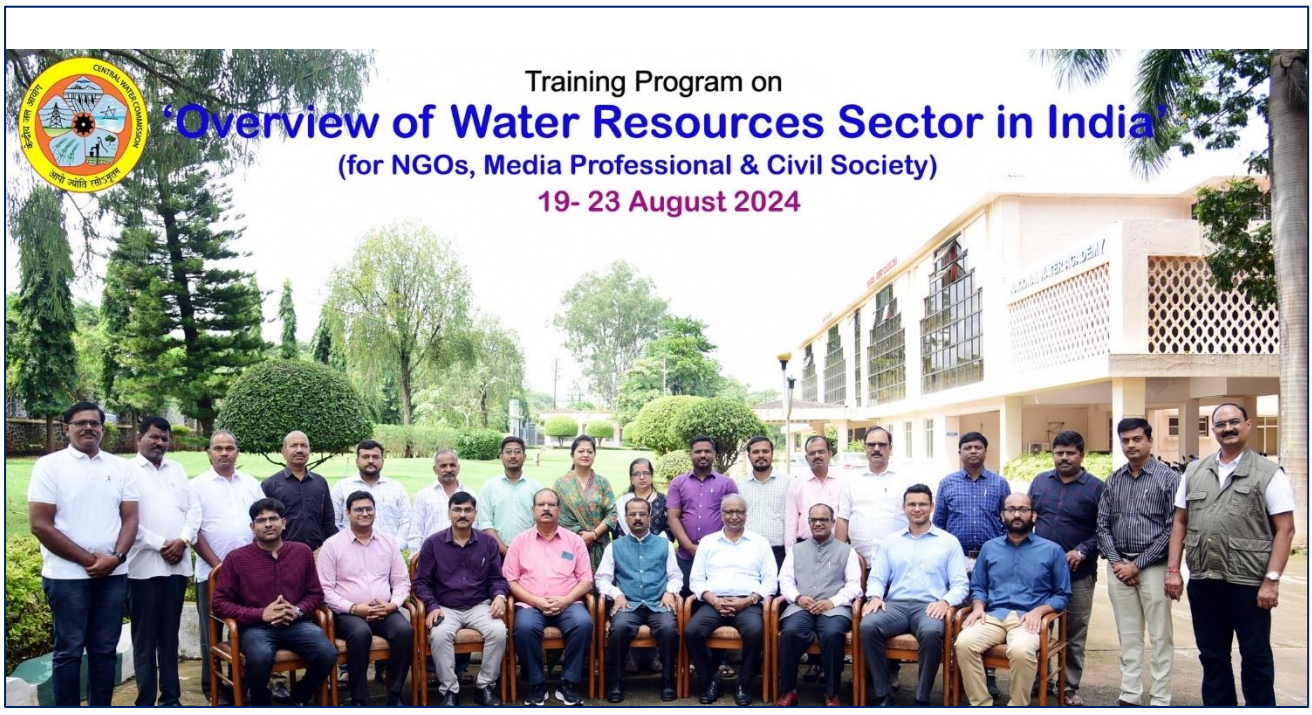
As part of its Mass Awareness initiative, the National Water Academy (NWA), Central Water Commission (CWC), Pune organized a Training-cum-Workshop for School Teachers on "Overview of the Water Resources Sector in India" on 20 August 2025.

ii. Overview of the Water Resources Sector for representatives of Non-Governmental Organizations (NGOs), media professionals, and civil society organizations

Recognizing the important role played by NGOs, media professionals, and civil society in raising public awareness on water-related issues, NWA has been conducting such training programmes over the years, and the present programme is a continuation of this ongoing endeavour. NWA conducted a Training-cum-Workshop on "Overview of the Water Resources Sector in India" for NGOs, Media Professionals, and Civil Society

Representatives during 19–23 August 2024, with 22 participants attending the programme.

The sessions covered critical thematic areas including water availability and distribution, water quality management, irrigation development, groundwater development, the Dam Safety Act, 2021, flood management, and trans-boundary water resources management, among others. A key component of the training-cum-workshop was a field visit to Hiware Bazaar (Maharashtra), a nationally recognized model village that has successfully transformed itself from a drought-prone and water-scarce settlement into a hub of water sustainability and rural prosperity through community-led water conservation and watershed management initiatives.



iii. Training-cum-Workshop on Disaster Management for NCC cadets

The National Water Academy (NWA), Central Water Commission (CWC), Pune successfully organized a **one-day Training-cum-Workshop on Disaster Management** for **NCC cadets of the 2nd Maharashtra Battalion, Pune**, on **18 March 2025**, with the objective of equipping young cadets with essential disaster preparedness and response capabilities. A total of **44 cadets** participated in the programme.

The workshop featured comprehensive technical sessions covering an **overview of the water resources sector of India** and **flood disaster management**, with emphasis on institutional mechanisms, early warning systems, and coordinated response frameworks. A special practical-oriented segment was conducted by faculty from the **National Disaster Response Force (NDRF), Pune**, focusing on **flood response operations, medical emergency preparedness, search and rescue techniques, and post-disaster recovery strategies**. The interactive nature of the sessions enabled participants to gain both conceptual understanding and hands-on exposure to standard disaster management protocols.

iv. One Day Workshop for Civil Engineering Students on Water Resources Management

To sensitize Civil Engineering students to the fundamentals of water resources management in India and to encourage responsible and ethical professional engagement in the water sector. NWA conducted a special one-day workshop for Civil Engineering students on "Water Resources Management" on 25 September 2024, in which a total of 59 students of the second-year Civil Engineering course participated.

The topics covered included the national water resources scenario, the role and functions of the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) and its associated organizations, as well as flood management, hydrological and hydraulic modelling, and the planning and design of water resources structures.

These programmes contributed significantly to building grassroots awareness, fostering community participation, and strengthening the dissemination of key policy and technical aspects of water resources management among critical stakeholder groups.

6.4.15 Distance Learning (Certificate Course)

During the year, the National Water Academy (NWA) conducted the following two major distance learning / certificate courses through its e-learning platform:

i. Distance Learning Course on Basic Hydrological Sciences

As a designated Regional Training Centre of the World Meteorological Organization (WMO), the National Water Academy (NWA) regularly conducts online training programmes in the field of hydrology. During the year, NWA, in collaboration with WMO, conducted a 7-week National Distance Learning Course in Basic Hydrological Sciences (2025) for Indian participants under WMO Regional Association–II (RA-II) during the period 24 March to 9 May 2025. The programme was aimed at strengthening the professional capabilities of hydrologists and hydrological forecasters engaged in hydro-meteorological data analysis, flood forecasting, and water resources management.

The programme received an encouraging response, with 130 participants from various Central and State Government Departments and organizations across the country.

Delivery was undertaken through the WMO e-learning platform, with course modules jointly developed by NWA and COMET MetEd and hosted on the WMO Learning Management System. The programme comprised structured self-paced learning, two live webinars (inaugural and concluding), and additional expert-led technical sessions.

The curriculum covered fundamental and applied aspects of hydrological sciences, including surface and groundwater processes, rainfall–runoff modelling, streamflow routing, river discharge measurement, unit hydrograph development, flood forecasting techniques, and flood risk assessment

The programme contributed significantly to national capacity building in hydrological sciences and reaffirmed NWA's role as a premier training institution supporting the objectives of the Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation.

ii. National Certificate Course on Participatory Irrigation Management (NCCPIM)

In pursuance of the directions of the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti, NWA, in collaboration with the Indian Network on Participatory Irrigation Management (IndiaNPIM), developed and delivered the National Certificate Course on Participatory Irrigation Management (NCCPIM) through its e-learning platform.

One programme was conducted during the year, with the participation of 162 stakeholders, including government field functionaries, office bearers of Water User Associations (WUAs), and farmers from different States/UTs. The course aimed at strengthening institutional capacities, promoting participatory governance in irrigation management, and enhancing field-level implementation of PIM principles.

6.4.16 Collaborative Program -Training-cum-Workshop on Water Conservation and Management for Panchayati Raj Institutions (PRIs), Farmers, and Water User Associations (WUAs) at village Rui, Tal Baramati

As part of its mass awareness and grassroots capacity-building initiatives, and in pursuance of the directions of Shri Kushvinder Vohra, Chairman, Central Water Commission (CWC) and Ex-Officio Secretary to the Government of India, the National Water Academy (NWA), CWC, Pune organised a one-day Training Programme-cum-Workshop on "Water Conservation and Management" on 07 June 2024 at Rui Village, Taluka Indapur, District Pune, Maharashtra, in association with Krishi Vigyan Kendra (KVK), Baramati and Indapur Taluka Agro Farmers Producer Company Ltd.

The programme was conducted in Marathi to ensure effective outreach at the grassroots level and witnessed participation of 281 stakeholders, including Panchayati Raj functionaries, office bearers of Water User Associations (WUAs), farmers, Panchayat Samiti officials and representatives of Farmer Producer Companies. The initiative was undertaken to strengthen local capacity in water governance through vernacular-language training at the Panchayat level.

The deliberations were followed by interactive discussions focusing on local water challenges and village-level solutions.

Participant feedback indicated a high level of satisfaction, with an overall rating of 9.2 out of 10, reflecting strong appreciation for the relevance of the topics, quality of technical inputs and organisational arrangements.

The programme contributed significantly to improving awareness among participants on watershed development, village-level water budgeting, groundwater recharge, micro-irrigation technologies and the institutional roles of Panchayati Raj Institutions and Water User Associations in sustainable water management. It also strengthened collaboration between NWA and KVK Baramati for future outreach activities and reinforced the importance of community participation and women's involvement in irrigation management. The programme forms part of the Ministry's continued efforts to strengthen capacity building and promote responsible water governance at the local level.

The event also received coverage in the regional daily "Sakal," further supporting dissemination of water conservation messages across the region.

रुईमध्ये शेतकऱ्यांना जलसंवर्धनाबद्दल मार्गदर्शन

कळस, ता. ११ : रुई (ता. इंदापूर) येथे जलशक्ती मंत्रालय, राष्ट्रीय जल अकादमी, कृषी विज्ञान केंद्र बारामती व इंदापूर तालुका ॲग्रो फार्मर प्रोड्युसर कंपनीच्या माध्यमातून शेतकऱ्यांसाठी जल संवर्धन व व्यवस्थापन याबाबत मार्गदर्शनपर कार्यशाळेचे आयोजन केले होते. या कार्यशाळेत शेतकऱ्यांना जल संवर्धन, व्यवस्थापन व शेतकऱ्यांच्या यशोगाथांच्या माध्यमातून मार्गदर्शन केले.

येथे आयोजित केलेल्या कार्यशाळेस राष्ट्रीय जल अकादमीचे मुख्य अभियंता डी. एस. चासकर, केंद्रीय जल आयोगाचे मिलिंद पानपाटील, जलसपंदा विभागाचे सहाय्यक अधिक्षक अभियंता राजेश रिठे, कृषी विज्ञान केंद्राचे विषय तज्ञ डॉ. रतन जाधव, संतोष गोडसे, वाल्मी संस्थेचे प्रा. शरद भोगले, फार्मर प्रोड्युसर कंपनीचे वैभव पाटील यांसह शेतकरी उपस्थित होते.

विविध प्रदेशात पाणी उपलब्धता वेगवेगळ्या प्रमाणात असून सध्या पावसाचा पॅटर्न बदलला आहे. जल संपदा विभागाकडून शेतकऱ्यांना विकासाचा केंद्र बिंदू मानून काम केले जाते. पाणी साठवण, सिंचन क्षेत्र निर्मिती, नदीजोड आणि प्रशिक्षण यातून आधुनिकतेची कास धरुन कामे केली जात असल्याचे जलसपंदा विभागाचे सहाय्यक अधिक्षक अभियंता राजेश रिठे यांनी सांगितले.

गावातील पाणी गावातच कसे राहील यावर भर देवून लोकसहभागातून पाणी साठवण्याबाबत अभ्यास करून काम केले पाहिजे. जलसंधारण आणि व्यवस्थापनावर अनेक यशोगाथा असून, त्याचा अभ्यास करून बदलत्या तापमानाशी अनुसरून पीक पद्धतीत बदल करणे गरजेचे असल्याचे कृषी विज्ञान केंद्राचे विषय तज्ञ डॉ. रतन जाधव यांनी सांगितले.

यावेळी उपस्थित शेतकऱ्यांनी जल प्रतिज्ञा घेतली. तर इंदापूर तालुका फार्मर प्रोड्युसर कंपनीच्या सभासद शेतकऱ्यांना यावेळी समभाग प्रमाणपत्राचे वाटप केले. वैभव पाटील यांनी सूत्रसंचालन केले.

रुई (ता. इंदापूर) : जल संवर्धन व व्यवस्थापन याबाबत मार्गदर्शनपर कार्यशाळेत शेतकऱ्यांना तज्ञांनी मार्गदर्शन करताना उपस्थित मान्यवर.

The training programme-cum-workshop organised by the National Water Academy (NWA), CWC, Pune in association with KVK Baramati was highly appreciated by the participants. They expressed that such programmes should be conducted at regular intervals to sensitise Panchayati Raj Institutions and to create sustained awareness among farmers and end users at the grassroots level regarding the need for water conservation and management, adoption of advanced irrigation methods, importance of community participation, institutional roles, and awareness of various Government schemes and incentives. The stakeholders acknowledged that adoption of appropriate water conservation measures would enable sustainable utilisation and contribute significantly to the long-term preservation and management of the region's available water resources.

The programme also facilitated the strengthening of institutional collaboration between NWA, CWC, Pune and KVK Baramati for undertaking similar initiatives on a wider scale in future. Participants

recognised water as a vital national resource whose availability varies across regions due to changing rainfall patterns, thereby underscoring the need for collective planning, conservation, development and management of water storage at the village level. They further acknowledged the critical role played by State Government agencies such as the Water Resources Department (WRD), Water Conservation and Management Department (WCMD) and Zilla Parishads in managing available water resources through creation of storage infrastructure, development of irrigation facilities and promotion of modern technologies, particularly micro-irrigation, for improving water-use efficiency.

6.4.17 International Training Programs

On the specific request of the Ministry of External Affairs (MEA), the National Water Academy (NWA), Central Water Commission (CWC), Pune conducted two customised training programmes for officers of the Government of Nepal under the Indian Technical and Economic Cooperation (ITEC) Programme of the Ministry of External Affairs, Government of India, during 2024, with a total participation of 40 officers.

i. One of these programmes was a two-week International Training Programme on "Water Resources Development and Management – Issues and Challenges," conducted during 15-16 April 2024 attended by 20 officers.

The customised programmes were designed to address the specific technical and institutional capacity requirements of the participating officers and covered contemporary issues related to integrated water resources management, river basin planning, flood forecasting and management, irrigation modernisation, dam safety, climate change adaptation, and the application of modern tools and technologies in water resources planning and monitoring. The programmes also facilitated professional exchange between Indian and Nepali officials, enabling the sharing of best practices and policy perspectives relevant to transboundary water management. The training also included exposure visits

to relevant institutions and project sites to provide practical, hands-on learning experiences to the participants.

ii. The second program two-week International Training Programme on Flood Forecasting and Early Warning System" for officials of the Government of Nepal under the Indian Technical and Economic Cooperation (ITEC) Programme of the Ministry of External Affairs, Government of India. The programme was conducted as part of the continued technical cooperation between India and Nepal in the water sector and was attended by 20 officers from Nepal.

The comprehensive curriculum of the programme covered key thematic areas including hydrology, meteorology, flood forecasting techniques, disaster management, urban flooding, and the application of advanced technologies such as Remote Sensing, Geographic Information Systems (GIS), Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning (DL) in the water sector. The training also included exposure visits to relevant institutions and project sites to provide practical, hands-on learning experiences to the participants.

The course pedagogy adopted a blended and participatory approach, integrating ice-breaking sessions, interactive lectures, group discussions, recap sessions, group activities, field visits, and cultural programmes, thereby fostering a collaborative and enriching learning environment.

These initiatives further reaffirmed NWA's position as a national and regional centre of excellence for training and capacity building in the water sector and contributed to the strengthening of bilateral cooperation between India and Nepal in the field of water resources development and management.

iii. Training for Officials of Government of Rwanda through WAPCOS was conducted at NWA with a participation of 09 Officers.

A three-week International Training Programme on "Planning and Designing of Water-Efficient Irrigation Systems" for a delegation of irrigation engineers from Rwanda during 24 March to 11 April 2025 was successfully conducted. The programme was attended by nine officers and was designed as an intensive knowledge-sharing and capacity-building initiative aimed at enhancing irrigation efficiency and promoting sustainable water resources management practices.

The curriculum covered a wide spectrum of technical themes, including micro and drip irrigation systems, hydrology and hydrometry, automation and digitisation in irrigation, solar-powered irrigation systems, and emerging technologies for improving water-use efficiency. Participants also received hands-on training on specialised software tools such as CROPWAT, CLIMWAT, WaterCAD, and EPANET, complemented by field visits to research institutions, demonstration farms, and major irrigation infrastructure in and around Pune. Sessions were delivered by experienced in-house faculty of NWA along with distinguished guest experts from reputed academic and research institutions, ensuring a balanced integration of theoretical knowledge, practical application, and real-world exposure.

6.4.18 New Areas of Trainings

To address emerging priorities and evolving technical requirements in the water resources sector, the NWA initiated training programmes in new thematic areas during the year, focusing on contemporary challenges and advanced analytical tools.

1. Training Programme on Urban Flood Management

Following the establishment of the Urban Hydrology Directorate in the Central Water Commission (CWC) in June 2023, NWA conducted its first-ever training programme on Urban Flood Management to strengthen institutional capacity in addressing the growing challenges of urban flooding.

The programme was designed to familiarize officers with urban hydrological processes, drainage system planning, flood modelling, real-time monitoring, and integrated urban flood mitigation strategies. It received encouraging response and was well-received by participants from multiple stakeholder agencies, including Central and State Government organizations, urban local bodies, and technical institutions.

This initiative marked an important step in expanding NWA's training portfolio to support the national focus on urban water resilience and climate-adaptive infrastructure.

2. Capacity Building on ET-based Irrigation Performance Assessment Tools

In line with the recommendations of the 2nd All India Ministers' Conference on Water Security held at Udaipur in February 2025, NWA introduced specialized capacity-building programmes on Evapotranspiration (ET)-based Irrigation Performance Assessment Tools to facilitate their wider adoption in irrigation planning and water use efficiency assessment. These programmes are being implemented in collaboration with:

- POMIO (Participatory Irrigation Management Office),
- National Institute of Hydrology (NIH), and
- The World Bank.

During the year, two training programmes were conducted in March 2025, benefiting a total of 58 officers from State Water Resources Departments and Central Government agencies.

The initiative aims to promote evidence-based irrigation management, improve system performance evaluation, and support data-driven decision-making for sustainable agricultural water use.

6.4.19 National Space Day 2024 – Key Events Organized by National Water Academy (NWA)

To commemorate National Space Day 2024 and to promote awareness on the application of space technology in the water resources sector, the National Water Academy (NWA), Central Water Commission, Pune organized a series of technical and outreach activities aimed at professionals, students, and the wider public.

1. Technical Webinar on Geospatial Technology (19–20 August 2024)

As a special initiative in the run-up to National Space Day, NWA organized a two-day technical webinar on "Leveraging Geospatial Technology for Water Resources Development & Management." The webinar was open to professionals from Central and State Government departments, Public Sector Undertakings, academic institutions, and other stakeholders. The key thematic areas covered included:

- Geospatial data products for Water Resources Development and Management (WRD&M)

- Applications of geospatial technology in the water sector
- Flood management and early warning tools
- Irrigation and water use efficiency management

The technical sessions were delivered by eminent experts from National Remote Sensing Centre (NRSC), Hyderabad; Indian Institute of Remote Sensing (IIRS), Dehradun; and the Indian Space Research Organisation (ISRO).

The webinar witnessed an enthusiastic participation of 1,256 stakeholders from across the country, reflecting strong national interest in geospatial applications for sustainable water management.

2. Awareness Webinar for Students and Teachers (21 August 2024)

To further broaden outreach and inspire young learners, NWA organized a special awareness webinar on "India's Space Technology and its Application in Water Resources," specifically targeting students and teachers from schools, colleges, and universities.

The session provided an overview of India's achievements in space technology and demonstrated how satellite-based tools support hydrology, flood forecasting, drought monitoring, irrigation planning, and water resources assessment.

A total of 194 students and teachers participated in the webinar, gaining valuable exposure to the interdisciplinary interface between space science and water resources management.

3. National Online Quiz on Space and Water (12–21 August 2024)

As part of the celebrations of National Space Day 2024, NWA organized National Online Quiz Contest titled "National Space Day Quiz – Celebrating India's Stellar Achievement in Space Technology". The objective was to foster awareness and promote knowledge among students and the general public regarding India's remarkable progress in space technology and its interlinkages with water resources management.

The quiz was conducted from 12th to 21st August 2024 and was widely publicized across educational institutions nationwide. The initiative received an overwhelming response, with over 13,000 participants from across India.

To encourage participation and recognize knowledge, E-certificates were automatically issued to all participants who scored above the qualifying threshold. This initiative reflects NWA's continued commitment to capacity building, scientific awareness, and outreach through innovative and inclusive platforms.

This large-scale outreach activity underscored NWA's commitment to capacity building, public engagement, and dissemination of scientific knowledge through innovative and inclusive digital platforms.

****

Chapter 7: Training & Capacity Building – Other Initiatives 2024-25

In addition to its regular schedule of structured training programmes, NWA undertook a broad range of complementary initiatives during 2024–25 aimed at strengthening the institutional ecosystem for capacity building in the water resources sector. These initiatives were designed to enhance the quality, relevance, and long-term impact of training interventions through systematic faculty development, faculty exchange and collaboration, expanded external academic and professional contributions, and alignment with national civil services capacity-building reforms.

A major focus during the year was placed on upgrading faculty competencies, promoting knowledge exchange with premier national and international institutions, and extending NWA's technical outreach through active participation in external training and advisory assignments. In parallel, the Academy achieved a significant institutional milestone through its accreditation by the Capacity Building Commission (CBC) under the Mission Karmayogi framework, enabling structured delivery of competency-based training programmes in accordance with the national standards for civil services capacity building.

This chapter presents a consolidated account of these "other initiatives," highlighting NWA's efforts to strengthen its human resource base, deepen institutional partnerships, expand professional influence beyond the Academy, and reinforce its role as a national centre of excellence for training and capacity building in water resources development and management.

7.1 Accreditation by Capacity Building Commission (CBC)

The National Water Academy achieved a significant institutional milestone by securing Accreditation under the National Standards for Civil Service Training Institutions (NSCSTI), a national framework developed by the Capacity Building Commission (CBC) to benchmark and enhance the quality of training delivery across Civil Service Training Institutions (CSTIs) in India.

Following the submission of a comprehensive application on the NSCSTI portal, a Desktop Assessment was conducted by ICARE, an empanelled assessment agency of CBC. Upon successful completion of this stage, an On-site Assessment was carried out on 8–9 May 2024 by a senior assessor, a former Deputy Comptroller & Auditor General of India (in the rank of Secretary to the Government of India).

During the on-site assessment, the NWA team, led by Shri D. S. Chaskar, Chief Engineer & Head, NWA, made a detailed institutional presentation covering all eight pillars of the NSCSTI framework. The assessment involved a rigorous review of NWA's training systems, governance mechanisms, digital infrastructure, faculty management practices, and quality assurance processes, supported by extensive documentary evidence across 59 defined metrics under the following pillars:

1. Training Needs Assessment & Course Design
2. Faculty Development
3. Resources & Training Targets
4. Trainee Support Systems
5. Digitisation & Training Delivery

6. Collaboration & Partnerships
7. Training Evaluation & Quality Assurance
8. Governance & Leadership

NWA secured a final score of 76.2 out of 100, placing it in the "Very Good (उत्कृष्ट)" category, marginally below the "Excellent (अति उत्कृष्ट)" benchmark of 77. This achievement positions NWA among the top-tier civil service training institutions in the country, reflecting its sustained commitment to quality-driven, competency-based, and digitally enabled capacity building.

The Certificate of Accreditation was formally handed over by the On-site Assessor to Shri D. S. Chaskar, Chief Engineer & Head, NWA, marking a moment of pride for the Academy.

The accreditation is valid for a period of two years, during which NWA will also undertake a structured Quality Improvement Programme (QIP) under the guidance of CBC and assessment experts to further strengthen its institutional systems and training outcomes.

This accomplishment also reflects the continued commitment of the Ministry of Jal Shakti and the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) towards strengthening institutional capacities and delivering world-class training in the water resources sector.

7.1.1 Participation in CSTI Convention 2024

Faculty members of the National Water Academy participated in the **CSTI Convention 2024**, held at **Vigyan Bhawan, New Delhi on 12 August 2024**. As an accredited Civil Service Training Institution under the NSCSTI framework of CBC, NWA's participation reaffirmed its institutional commitment to excellence in civil service training and national capacity building.

The convention provided a high-level platform for knowledge exchange and dissemination of best practices among premier training institutions, while reinforcing alignment with the national vision of

competency-driven training under Mission Karmayogi. NWA faculty gained valuable exposure to newly launched initiatives such as the **Faculty Development Portal**, **Amrit Gyaan Kosh**, and the structured **Quality Improvement Programme (QIP)** framework, all of which are expected to further strengthen the Academy's training ecosystem.

The participation also strengthened NWA's engagement with national capacity-building reforms and its resolve to contribute effectively to the modernization of governance and human resource development in the water sector.

7.1.2 One-day Workshop on "Updation of NSCSTI Framework" – 10 February 2025

NWA participated in the **One-day Workshop on the "Updation of National Standards for Civil Service Training Institutions (NSCSTI) Framework"** held on **10 February 2025**. The workshop was convened to review and refine the existing accreditation framework in light of evolving training requirements, quality benchmarks, and institutional best practices across CSTIs in India.

The deliberations involved representatives from leading training institutions, officials of the Capacity Building Commission, and other key stakeholders. Discussions focused on critical areas such as:

- Institutional governance and leadership standards
- Training impact and outcome assessment
- Faculty competency development
- Digital learning infrastructure and platforms
- Learner-centric and blended pedagogical approaches

NWA actively contributed to the discussions, drawing upon its experience in large-scale capacity-building programs, digital learning initiatives, and its recent accreditation under NSCSTI standards. The outcomes of the workshop are expected to guide the next phase of framework enhancement and performance benchmarking of CSTIs under the broader objectives of **Mission Karmayogi**.

7.2 Faculty Development

Recognising that effective training depends on well-prepared and skilled faculty, the National Water Academy (NWA), Central Water Commission (CWC), Pune gives high importance to continuous faculty development. During the year, NWA faculty members participated in several national and international training programmes to improve their teaching skills, subject knowledge, course design abilities, and understanding of new and best practices in civil service training.

7.2.1. Faculty Development Programme at YASHADA, Pune

As part of continuous professional development, two faculty members of NWA participated in a Faculty Development Programme conducted at the Yashwantrao Chavan Academy of Development Administration (YASHADA), Pune. The programme focused on strengthening:

- Training delivery methodologies
- Instructional design techniques
- Adult learning (andragogical) principles

- Learner engagement and assessment tools

The exposure enhanced the faculty's ability to design and deliver structured, outcome-oriented and learner-centric training programmes, thereby contributing to the overall improvement in the quality and effectiveness of capacity-building interventions undertaken by NWA for water sector professionals.

7.2.2 Contribution to India Water Week–2024

NWA actively contributed to the organisation and conduct of India Water Week–2024, held during 17–20 September 2024 at Bharat Mandapam, Pragati Maidan, New Delhi. The event provided an important national and international forum for policymakers, water professionals, researchers, and community representatives to deliberate on emerging challenges and strategic directions in water resources management.

Shri D. S. Chaskar, Chief Engineer and Head, NWA, co-chaired a technical session on "Integrated Water Resources Development and Management (IWRD&M)" and, in his opening address, emphasized the need for a comprehensive and integrated approach to address India's growing water-related challenges. He also highlighted the role of NWA in capacity building and skill development of water sector professionals to support effective and sustainable water management practices.

Further, officers of NWA coordinated three sessions under the sub-theme "Water Governance and Financing", covering key aspects such as financing and operation & maintenance of water infrastructure, policy interventions for water security, stakeholder convergence, beneficiaries' participation, women's role in water resources management, social equity and inclusion, and the application of traditional knowledge for water conservation. The deliberations resulted in several practical recommendations for strengthening governance mechanisms in the water sector.

The active involvement of NWA in technical deliberations and session coordination contributed meaningfully to the overall success and outcomes of India Water Week–2024.

7.2.3. Faculty Participation in Advanced Training Programme on Case Writing for Public Policy

As part of its structured faculty development strategy, the National Water Academy participated in the Advanced Training Programme on Case Writing for Public Policy, conducted from 9–13 December 2024 at the Sushma Swaraj Institute of Foreign Service, New Delhi. The programme was jointly organised by the Capacity Building Commission (CBC), Government of India, the Asian Development Bank Institute, and the Stanford Leadership Academy for Development.

Two Deputy Directors from NWA—Shri Chaitanya K. S. and Shri Saurabh—were among 30 selected participants representing leading Central and Administrative Training Institutes from across the country.

The programme was inaugurated by Dr. Jitendra Singh, Hon'ble Minister of State for Personnel, Public Grievances and Pensions, who also launched the "Amrit Gyan Kosh" portal on the iGOT Karmayogi

platform, a national repository of high-quality policy case studies developed by CBC. The training programme focused on:

- Advanced techniques in case writing
- Structuring real-life public policy narratives
- Case-based pedagogy for civil service training
- Tools for fostering analytical thinking and evidence-based decision making

The competencies gained through this programme are expected to facilitate the integration of **case-based learning methodologies** into NWA's training curricula, thereby strengthening practical problem-solving orientation and policy implementation skills among water sector professionals.

7.2.4 Participation in WMO Seminar on Management of Regional Training Centres (RTCs), Abu Dhabi

The Chief Engineer & Head, NWA participated in the Seminar on Management of WMO Regional Training Centres (RTCs) organised by the World Meteorological Organization (WMO) at Abu Dhabi in October 2024.

During the seminar, a detailed presentation was made on the activities of NWA in its capacity as a designated Regional Training Centre (RTC) of WMO, highlighting:

- Training programmes conducted for national and international participants
- Alignment of course content with the WMO Competency Framework
- Integration of emerging technologies in hydrology and meteorology training
- Contribution of NWA's programmes towards achieving WMO's long-term strategic objectives

The seminar provided valuable international exposure and facilitated exchange of best practices among global RTCs, further strengthening NWA's institutional capabilities in the design and delivery of internationally benchmarked training programmes.

7.2.5. Participation in National Workshop on Integrated Flood Risk Management

Faculty members of NWA participated in the **National Workshop on Integrated Flood Risk Management** held on **26 November 2024 in New Delhi**. The workshop brought together subject matter experts, policymakers, and practitioners to deliberate on comprehensive and multi-disciplinary approaches to flood risk reduction and resilience building.

Participation in the workshop enabled NWA faculty to gain insights into:

- Contemporary flood risk management frameworks
- Application of emerging technologies and modelling tools
- Institutional coordination mechanisms
- Best practices in disaster preparedness and mitigation

The knowledge gained contributes directly to strengthening NWA's training programmes in the areas of flood management, disaster risk reduction, and climate resilience, reinforcing its role as a premier national institution for capacity building in integrated water resources and disaster management.

7.3 Faculty External Contributions

NWA played an active and constructive role in strengthening capacity building and technical knowledge exchange across institutions through faculty exchange programmes and external expert engagements. During the year, faculty members of NWA contributed to a wide range of training programmes, workshops, seminars, conferences, and collaborative initiatives organised by national and international institutions. These engagements reinforced inter-institutional cooperation and facilitated the systematic dissemination of best practices, contemporary methodologies, and emerging approaches in the water resources sector, thereby supporting evidence-based planning and improved sectoral performance.

1. Chief Engineer, NWA has a member, participated in the **Second Meeting of the Sub-Committee on "Capacity Development" under the National Committee on Dam Safety (NCDS)**, held on 10th May 2024 at Delhi. The participation reflected NWA's continued engagement in national-level policy discussions and its commitment to strengthening institutional capacity development in the dam safety sector. Key deliberations included strategies for training, skill enhancement of dam safety personnel, and the role of institutions like NWA in driving structured capacity-building efforts under the Dam Safety Act, 2021.

National Seminar on Advances in Irrigation Technologies and Management : Faculty members of the National Water Academy (NWA), CWC, Pune actively contributed to the National Seminar on *"Advances in Irrigation Technologies and Management"* held on 29th–30th November 2024 at the Assam Water Centre, Guwahati.

The event was jointly organized by the North Eastern Regional Institute of Water and Land Management (NERIWALM), RGI CGWB (RGNGWTRI), and the Assam Water Centre, in collaboration with the Central Water Commission (CWC), Central Ground Water Board (CGWB), Brahmaputra Board, National Institute of Hydrology (NIH), ICAR–Indian Institute of Water Management, and the Department of Irrigation, Government of Assam.

NWA faculty served in key roles as **Scientific Committee Members, Co-Chairs, and Lead Speakers**, sharing their expertise on emerging trends and best practices in irrigation technologies and management. A special plenary session on *"Issues and Challenges of Irrigation Management in India with Special Reference to North-East India"* featured panellists from diverse institutions working in the

water sector, including NWA, contributing to rich technical discussions and knowledge exchange. This engagement reflects NWA's continued commitment to advancing capacity building, thought leadership, and regional collaboration in water resources management.

2. **Workshop on Training Needs Assessment**: National Water Academy (NWA), CWC, Pune participated in the *"Training and Research Needs Assessment"* Workshop organized by the North Eastern Regional Institute of Water and Land Management (NERIWALM) at Guwahati in February 2025.

The workshop aimed to identify emerging capacity-building priorities and research focus areas in the water and land management sectors, with special emphasis on the North Eastern Region. NWA's participation contributed to shaping future training strategies and promoting collaborative approaches to address regional challenges in water resources management.

3. **Strengthening of WALMIs/IMTI**s: In pursuance of the report submitted, a review meeting with all WALMIs/IMTIs was conducted in virtual mode. Based on the discussions, a draft report was prepared for submission to CWC Headquarters and the Ministry.
4. **e-Learning Content Development:** A dedicated Python Programming module using Jupyter Notebooks was developed on NWA's MOODLE LMS for a training program on Statistical Tools for Groundwater Data Management & RTDAS, conducted by RGNWTRI in November 2024.
5. **Technical Resource Support:** NWA nominated faculty for sessions on 'Conjunctive Use of Surface and Ground Water' and 'Surface Water Quality' in Water Auditing Certification Courses organized by RGNWTRI in March and August 2023.
6. **Participation in International Training Program on Ground and Surface Water Management:** NWA actively contributed to the two-week International Training Programme on *"Ground and Surface Water Management"* organized by the Rajiv Gandhi National Ground Water Training and Research Institute (RGNGWTRI), Raipur, in collaboration with the African–Asian Rural Development Organization (AARDO), from 23rd September to 4th October 2024. Shri D. S. Chaskar, Chief Engineer & Head, NWA, addressed the inaugural session and emphasized the critical importance of integrated water management in enhancing rural development. He highlighted how improved access to clean water, sanitation, and adequate water for livelihoods can

significantly contribute to employment generation, economic upliftment, and social equity in rural areas.

As part of the training program attended by mid- and senior-level officials from AARDO member countries, NWA faculty members delivered expert sessions under the module on *Surface Water Management*, alongside serving and retired officers of the Central Water Commission. The Academy's participation reinforced its commitment to international capacity building in the water resources sector.

7. **Faculty Contribution to Faculty Development Programme on Agricultural Water Management**: As part of knowledge-sharing and outreach initiatives, faculty members from National Water Academy (NWA), CWC, Pune were invited to deliver expert lectures during the Faculty Development Programme (FDP) on *"Advances in Agricultural Water Management"* held in February 2025. The FDP was jointly organized by the North Eastern Regional Institute of Water and Land Management (NERIWALM) and B. N. College of Agriculture, Assam Agricultural

University. NWA's participation in the program reinforced inter-institutional collaboration and contributed to strengthening academic and professional capacity in the field of agricultural water management, particularly in the context of the North Eastern Region.

8. **Special Lecture at Maharashtra National Law University:** Chief Engineer & Head, National Water Academy (NWA), CWC, Pune, was invited to deliver a special lecture on *"Legal Framework for Management and Development of Water Resources"* at Maharashtra National Law University, Aurangabad. The session provided valuable insights into the legal and institutional dimensions of water governance in India, fostering interdisciplinary dialogue between legal scholars and water sector professionals. This engagement reflects NWA's expanding outreach and thought leadership in integrating legal, policy, and technical perspectives in water resources management.

9. **Contribution to iGOT Platform – Development of Online Learning Modules:**

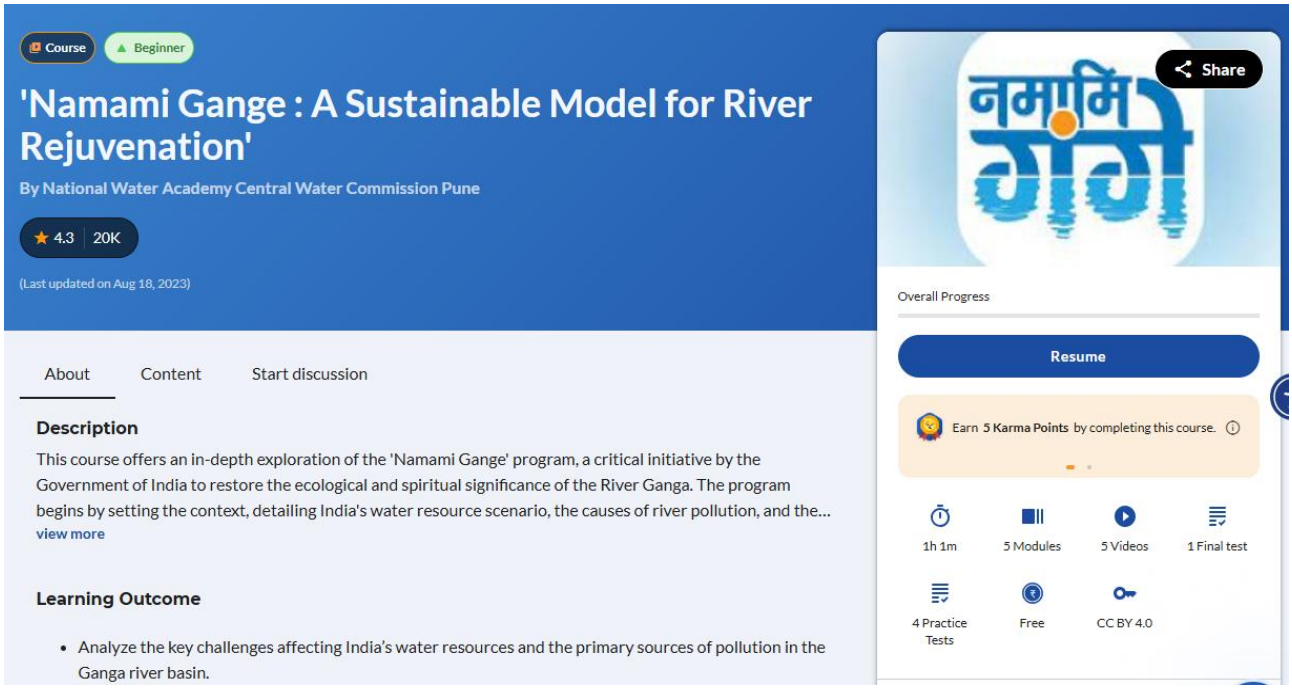
In alignment with the objectives of Mission Karmayogi and the Government of India's digital capacity-building framework, the National Water Academy (NWA), CWC, Pune continued to support national competency development through active contribution to the iGOT (Integrated Government Online Training) Karmayogi platform during 2024–25. NWA faculty provided domain expertise, instructional design support, and technical inputs for the development and onboarding of structured, high-quality e-learning courses and applied case studies in priority areas of the water sector.

During the year, NWA developed and onboarded courses on *Namami Gange: A Sustainable Model for River Rejuvenation*, *Water Law and River Valley Disputes in India*, and *Managing Floods and Droughts*. The course on *Efficient Use of Water Resources* is under final review, while modules on *Leveraging Geospatial Technologies for Water Resources Development and Management (WRDM)* and *National Water Policy* are under development. In addition, NWA is contributing two applied case studies including *India's Dam Safety Act: From Risk to Regulation*, with *Springs of Change: Tackling Water Scarcity in Ziro* which are under development.

These digital learning resources are designed to benefit a wide spectrum of stakeholders, including government officials, engineers, planners, and field-level practitioners, and support standardized, competency-based training across services and departments. Through these initiatives, NWA has further strengthened its role as a national knowledge partner in digital learning, contributing to scalable, consistent, and outcome-oriented capacity building in water resources planning, management, regulation, and sustainability.

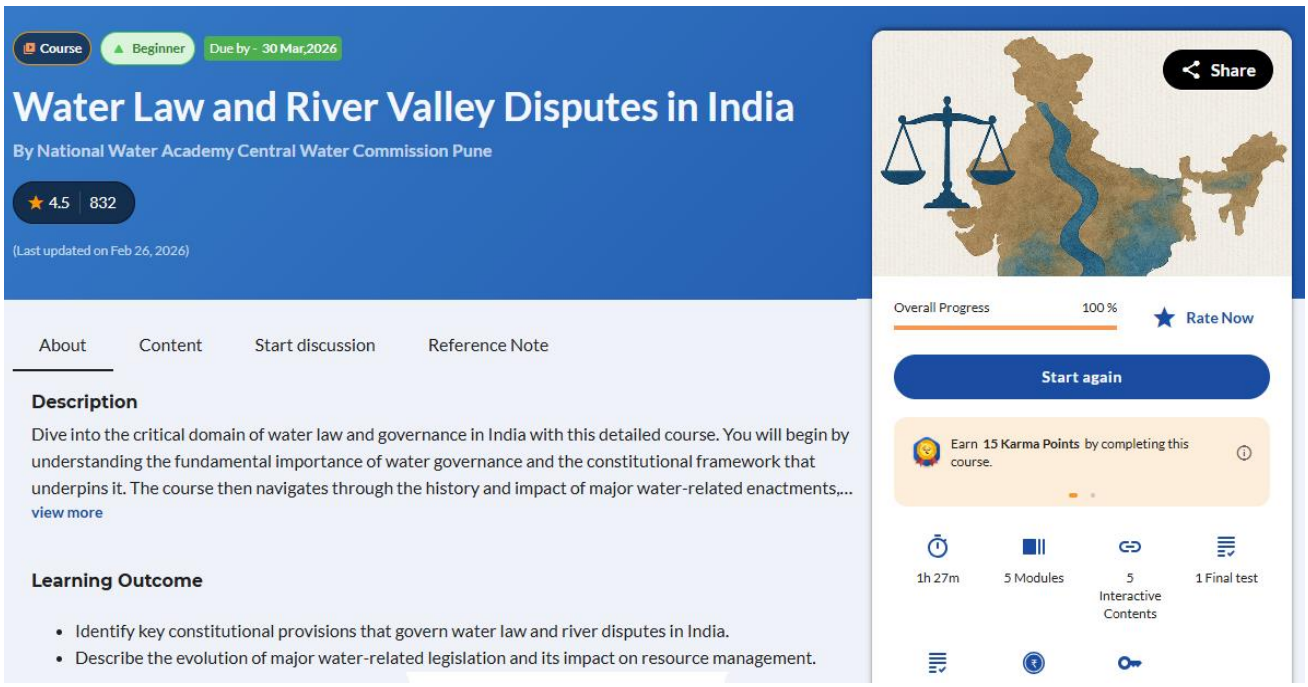
'Namami Gange : A Sustainable Model for River Rejuvenation'

This course offers an in-depth exploration of the 'Namami Gange' program, a critical initiative by the Government of India to restore the ecological and spiritual significance of the River Ganga. The program begins by setting the context, detailing India's water resource scenario, the causes of river pollution, and the historical efforts in Ganga conservation. Learners will delve into the five foundational pillars of the mission: Nirmal Ganga (unpolluted flow), Aviral Ganga (unrestricted flow), Jan Ganga (public participation), Gyan Ganga (knowledge and research), and Arth Ganga (sustainable economic models).



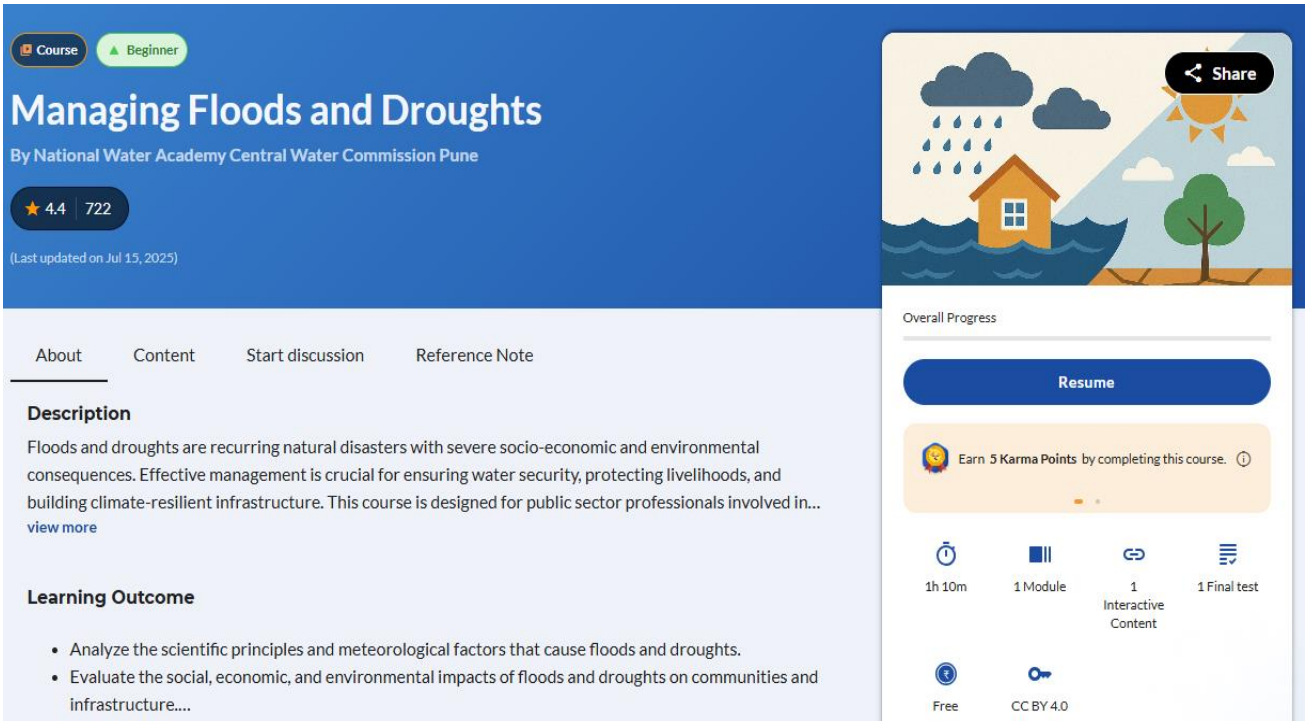
Water Law and River Valley Disputes in India :

This course covers critical domain of water law and governance in India . It starts with understanding the fundamental importance of water governance and the constitutional framework that underpins it. The course then navigates through the history and impact of major water-related enactments, providing context to the current legal landscape. A significant focus is placed on the mechanisms for resolving inter-state river water disputes, including the pivotal role of tribunals and judicial processes



Managing Floods and Droughts

Effective management of floods & droughts is crucial for ensuring water security, protecting livelihoods, and building climate-resilient infrastructure. This course is designed for public sector professionals involved in water resources, disaster management, and planning, providing them with the essential knowledge to address these challenges systematically. The curriculum is structured across six modules, beginning with the fundamental science behind floods and droughts. It delves into the primary causes, both natural and anthropogenic, and analyzes their wide-ranging impacts on communities, agriculture, and the economy. Learners will be introduced to various monitoring tools and early warning systems.



10. **Participation in the Two-day Workshop on "Surface Water Studies" – 11–12 February 2025**:

Two-day Workshop on "Surface Water Studies" organized by the Department of Water Resources, RD & GR under the National Hydrology Project (NHP) at Kaushal Bhawan, Modi Bagh, New Delhi on 11–12 February 2025 was attended by Chief Engineer, NWA.

The workshop aimed to promote technical exchange and collaboration among various NHP implementing agencies, with focused deliberations on recent advancements in surface water modelling, hydrometeorological data acquisition systems, hydrological assessments, and decision support tools.

NWA contributed substantively to the discussions by sharing its institutional experience in capacity building and training programmes related to surface water hydrology, application of hydrometeorological data, and the use of modelling and analytical tools. The workshop provided an effective platform for knowledge sharing and for further advancing the objectives of integrated water resources management under the National Hydrology Project.

7.3 Standardization and Institutionalization of On-boarding Process for Newly Joined Core Faculty at NWA, CWC, Pune

The on-boarding process for newly joined officers inducted as Core Faculty at the National Water Academy (NWA) has been systematically standardized and institutionalized as an integral component of faculty integration and professional development.

In alignment with the accreditation requirements prescribed under the National Standards for Civil Service Training Institutions (NSCSTI) by the Capacity Building Commission (CBC), NWA has established a structured and outcome-oriented induction framework to ensure uniformity, quality, and readiness of newly inducted faculty members. The framework includes:

- Mandatory familiarization with NWA's Standard Operating Procedures (SOPs) and Training Manual
- Participation in in-house Training of Trainers (ToT) programmes, including modules on the Moodle Learning Management System
- Nomination for relevant Faculty Development Programmes (FDPs)
- Encouragement to attend specialized ToT programmes developed by the Department of Personnel & Training (DoPT) at recognized State Administrative Training Institutes (ATIs), such as YASHADA, among others
- Completion of certified online FDPs available on national platforms such as iGOT Karmayogi and NPTEL

In addition to formal training inputs, the process emphasizes mentoring and institutional familiarization through informal peer interactions and regular engagement with the Head of the Academy, facilitating smooth professional integration and alignment with NWA's academic culture and training objectives.

To ensure accountability and proper documentation, newly inducted faculty members are required to submit an "On-boarding Report", along with relevant course completion certificates, within three months of joining.

This structured and transparent on-boarding mechanism ensures that new faculty members are effectively oriented, professionally equipped, and fully empowered to contribute meaningfully to NWA's mandate of delivering high-quality training and capacity building in the water resources sector.

7.4 Other important activities undertaken

7.4.1 Visit of Secretary, DoWR, RD & GR

During the visit to Pune on May 14 2024, by Ms. Debashree Mukherjee, Secretary, DoWR, RD & GR and Sh. Subodh Yadav, JS (Admin, IC & GW), the five-day national training on "Conventional Flood Forecasting" was inaugurated by the dignitaries which was attended by 50 officers from central and state agencies in flood forecasting and management. The Secretary, DOWR, RD & GR emphasized climate-induced flood risks and the Government's revised Flood Management Programme linking funding to flood plain zoning. She appreciated CWC's role in flood mapping and NWA's efforts in capacity building.

Sh. Subodh Yadav, JS (Admin, IC & GW), reaffirmed the Ministry's focus on preparedness.

7.4.2 Engagement under India-EU Water Initiative (IEWI) – Phase III

The third phase of the India-EU Water Initiative (IEWI) commenced in March 2024 and will continue until February 2027. A high-level meeting between senior officers of the Ministry of Jal Shakti and the EU delegation was held to review past achievements and strategize ongoing actions under the India-EU Water Partnership (IEWP) and Support to Ganga Rejuvenation (SGR). The Secretary, DoWR, RD & GR emphasized the need to strengthen the institutional capabilities of the three training institutes under the Ministry.—NWA, RGNGWTRI, and NERIWALM. In line with this, the IEWI/GIZ team led by Ms. Laura Sustersic visited the National Water Academy (NWA), Pune, on 10 June 2024 to consult with NWA faculty and discuss priority areas for collaborative capacity . A detailed consultations were held at NWA, chaired by the Chief Engineer, NWA, with

IEWI officials to identify priority areas for training and capacity building. Focus areas included River Basin Management, Urban Flooding, Hydrological and River Basin Modelling, Remote Sensing & GIS, and Irrigation Management. It was agreed to intensify training initiatives for sustainable and outcome-oriented capacity development.

7.4.3 Interaction with the Committee on Petitions of Rajya Sabha – 27th January 2025

As part of the Study Visit of the Committee on Petitions of Rajya Sabha to Port Blair, Hyderabad, and Pune during 23rd–27th January 2025, NWA, Pune facilitated the meeting of the Committee held in Pune on 27th January 2025. Pursuant to instructions from CWC-HQ and nominations by DoWR, RD & GR, a background note titled "Role of National Water Academy in Training & Capacity Building of Water Sector Professionals" was prepared and submitted to the Committee

in advance. During the meeting, Chief Engineer, NWA made a detailed presentation on NWA's contributions to river conservation and rejuvenation through capacity-building initiatives. The presentation covered key areas such as river health monitoring, environmental flows, floodplain zoning, and training on river restoration techniques.

Senior officials from the Ministry, NRCD, CWC, and NWA participated in the discussion. Several queries were raised by Committee Members regarding NWA's outreach, training programs for states like Kerala, involvement of students, promotion of rainwater harvesting, climate change responsiveness, and public engagement. All queries were duly addressed, and category-wise beneficiary details were later submitted to the Parliament Secretariat as per commitment.

7.4.4 Visit of High-Level Delegation from Nepal's Ministry of Water Supply under India-Nepal WASH Cooperation MoU :

In line with the India-Nepal MoU on cooperation in the Water, Sanitation, and Hygiene (WASH) sector, a high-level delegation from the Ministry of Water Supply, Government of Nepal, visited the National Water Academy (NWA), CWC, Pune on March 4, 2025.

The delegation, led by Ms. Pramila Devi Shakya Bajracharya, Secretary, Ministry of Water Supply, included the Joint Secretary and Director General, Department of Water Supply & Sewerage Management, and was accompanied by the Director (EA & IC), DoWR, RD & GR, Ministry of Jal Shakti. They were welcomed by Shri D.S. Chaskar, Chief Engineer & Head, NWA, and faculty members.

Discussions focused on strengthening collaboration in capacity building, with the Nepalese side expressing strong interest in leveraging NWA's expertise. Reference was made to the two successful training programs conducted by NWA in 2024 under the ITEC scheme of MEA.

The delegation also visited key water infrastructure in Pune, including the 500 MLD Parvati Water Treatment Plant and the Khadakwasla Dam. The visit concluded with both sides reaffirming their commitment to advancing cooperation in the water sector under the MoU framework.

7.4.5 Social Media Outreach and Digital Visibility

In order to enhance institutional visibility, improve dissemination of training-related information, and strengthen engagement with stakeholders across Central and State Governments, academic institutions, and international partners, the National Water Academy (NWA) continued to actively utilize social media platforms during the year.

NWA maintains an official presence on major digital platforms, including X (Twitter), Facebook, and YouTube, which are used for dissemination of programme announcements, coverage of training activities, accreditation milestones, distance learning initiatives, and other institutional developments.

During 2024–25, social media platforms were leveraged to:

- Publicize upcoming training programmes and nomination schedules,
- Provide real-time updates on ongoing national and international programmes,
- Showcase key institutional achievements and accreditation milestones,
- Disseminate knowledge resources through distance learning and recorded sessions, and
- Enhance transparency and outreach to a wider professional and public audience.

The Academy's YouTube channel has been utilized as a digital repository for distance learning programmes and technical sessions, thereby supporting scalable capacity building beyond physical classrooms. Social media engagement has contributed to:

- improved visibility of NWA's mandate and activities,
- increased participation from State Government officials and sector professionals, and
- strengthened institutional branding as a national centre of excellence in water resources training.

NWA proposes to further strengthen its digital outreach through structured content planning, enhanced professional networking platforms, and integration of social media analytics for monitoring outreach effectiveness.

Platform	Handle / Page
YouTube	NWA, India: Distance Learning
X (Twitter)	@nwa_pune
Instagram	@nationalwateracademy
Facebook	National Water Academy Pune

****

Chapter 8: Training Feedback Process, Benchmark & Analysis of Feeback for 2024-25

8. Feedback, Benchmarking and Quality Assurance Framework

8.1 Feedback Process

NWA has institutionalized a structured and comprehensive feedback mechanism to systematically assess training needs, enhance the effectiveness of its training programmes, and improve associated support services. The feedback framework is designed to evaluate multiple dimensions of programme delivery, including course content, teaching methodologies, faculty effectiveness, learning resources, logistical arrangements, and institutional infrastructure, thereby ensuring a holistic assessment of the overall training experience. Participant feedback is collected at multiple levels, as detailed below:

1. **Training Programme Feedback** – covering course coverage, relevance of content, faculty effectiveness, quality of learning materials, and identification of emerging training areas.
2. **Logistics and Infrastructure Feedback** – addressing accommodation, housekeeping, catering, and other facilities with a view to enhancing participant comfort and experience.
3. **Interactive Feedback Sessions** – conducted with faculty members, guest faculty, and senior leadership to obtain qualitative insights into programme effectiveness and scope for improvement.

At the conclusion of each training programme, participants submit structured feedback using a standardized format. In addition, selected participants share key learnings and suggestions during open discussion sessions, facilitating deeper understanding of programme outcomes and practical impact. For long-duration programmes, a concurrent evaluation mechanism is also in place, enabling real-time monitoring and progressive refinements during the course itself.

8.2 Feedback Analysis and Implementation

Feedback is systematically analysed and used for evidence-based improvements in both academic delivery and institutional services.

- **Structured Evaluation:** Feedback is classified under training effectiveness, logistics, and service quality to enable focused analysis.
- **Data-Driven Decision-Making:**
    - Training-related feedback is reviewed by the core faculty to ensure that relevant academic and pedagogical improvements are incorporated into subsequent programmes.
    - Feedback pertaining to logistics, housekeeping, and catering services is analysed and communicated to the Administration & Coordination (A&C) Unit for corrective and preventive action.
- **Archival and Reference:** Original feedback forms and analytical reports are preserved in the NWA Library to support institutional memory, longitudinal performance tracking, and strategic planning.

8.3 Benchmarking Framework

To ensure consistency in quality and to maintain high standards in training delivery and support services, NWA has established benchmark scores for key performance parameters across different categories of training programmes. These benchmarks serve as reference standards for evaluating training effectiveness and associated institutional services.

A. Benchmarks for Short-Term Training Programmes (Up to 2 Weeks)

Criteria	Benchmark Score (Out of 10)
Training Effectiveness	7.5
Housekeeping Services	7.5
Catering Services	7.5

B. Benchmarks for Long-Term Training Programmes (Two Weeks or More)

Criteria	Benchmark Score (Out of 10)
Training Effectiveness	7.0
Housekeeping Services	7.0
Catering Services	7.0

8.4 Overall Feedback Coverage During the Year

During the year, NWA has conducted a total of 96 training programmes comprising online programmes, residential programmes at NWA, Pune, and residential programmes conducted outside NWA.

Out of these, 55 programs were residential programs conducted at NWA, Pune, for which comprehensive participant feedback was obtained on training effectiveness, catering services, and housekeeping services in accordance with the approved benchmarking framework. These programmes were attended by 1,843 officers and accounted for a cumulative training load of 101.40 training weeks, with programme duration ranging from one day to 34 weeks.

In addition, 12 short-duration programmes (ranging from one day to four weeks) were conducted at NWA and at external locations. These programmes were attended by 692 officers and accounted for 10.40 training weeks. As these programmes did not involve residential logistics in most cases, feedback was obtained primarily on training effectiveness.

The remaining 29 programmes were conducted in online mode, for which feedback was restricted to academic and instructional parameters.

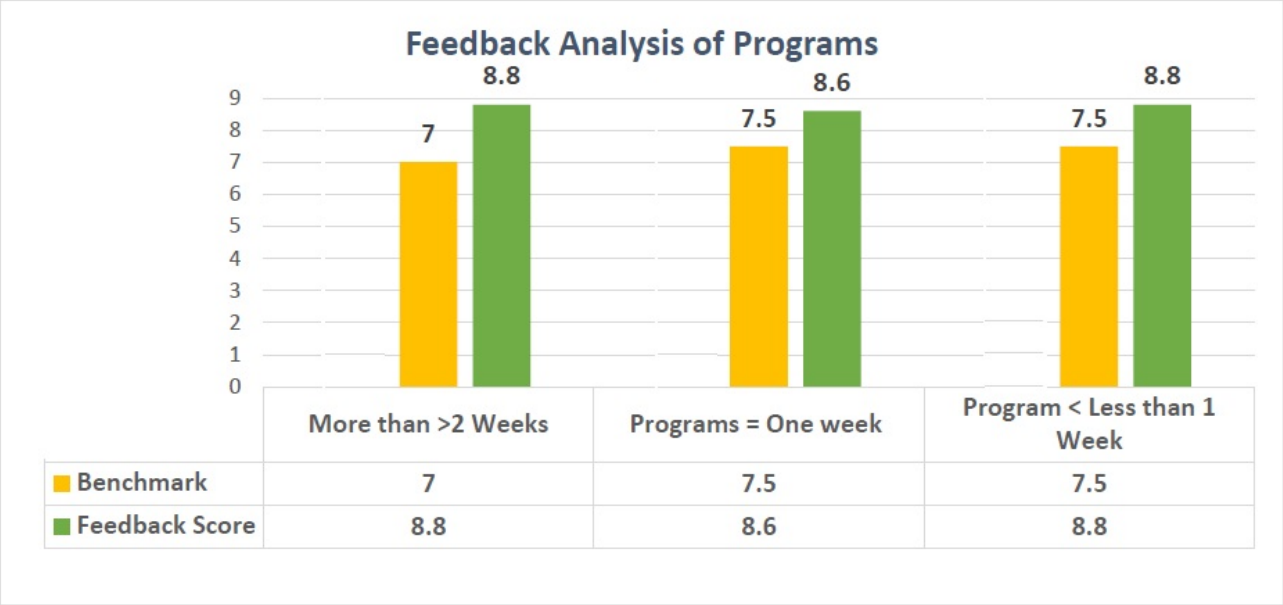
Based on the feedback data collected across these categories, a detailed benchmark-based analysis of short-term and long-term programmes is presented in the subsequent sections.

8.5 Feedback Analysis of Short-Term Programmes (Up to 2 Weeks)

During the year, NWA conducted **12 short-term training programmes** (with durations ranging from **one day to four weeks**) at NWA, Pune and at external locations, covering technical, administrative, and capacity-building themes for diverse stakeholder groups. As per the approved benchmarking framework, short-term programmes are required to achieve a **minimum benchmark score of 7.5 out of 10**.

For the programmes listed below, feedback assessment was confined to the parameter of **Training Effectiveness**, in accordance with the benchmarking provisions applicable to short-duration courses. Most of the one-week programmes were conducted at State locations, where **logistical arrangements such as accommodation and catering were not organized by NWA**. Accordingly, feedback on housekeeping and catering services was not applicable for these programmes. The programme-wise details along with the feedback analysis are presented below.

No	Name of the Programme	Weeks	No Of Trainees	Overall Grading out of 10
1	Overview of Water Resources Development and Management (for WRD-GoM ITP officers)	0.2	76	8.2
2	Training -cum- Workshop on Water Conservation and Management for PRIS	0.2	281	9.2
3	Training-cum-Workshop on Water Conservation and Management for School Teachers & DIET Faculty	0.2	57	8.8
4	Training-cum-Workshop on Water Resources Management	0.2	59	9.1
5	Training-cum-Workshop on Flood Disaster Management(for NCC Cadets of 2 Maharashtra Battalion)	0.2	44	9.2
6	Post Retirement Prospects and Avenues of CWES Officers	0.4	17	8.5
7	Orientation Program of Lower Division Clerks	1	38	9
8	Coastal Erosion and Protection and Coastal Zone Management	1	36	8.2
9	e-GEM, e-Tendering and Procurement Challenges (at NEHARI)	1	27	8.8
10	Preparation of Detailed Project Reports for Flood Protection, Anti Erosion and River Training Works (At Nehari)	1	27	8.6
11	Project Management Project Supervision and Quality Control (At NEHARI)	1	25	8.6
12	Mandatory Cadre Training Program for Junior Engineers of CWC (Special Arrangement)	4	5	8.8



The feedback analysis indicates that all short-term programmes performed well above the prescribed benchmark.

8.6 Feedback Analysis of Residential Training Programmes Conducted at NWA, Pune (55 Programmes)

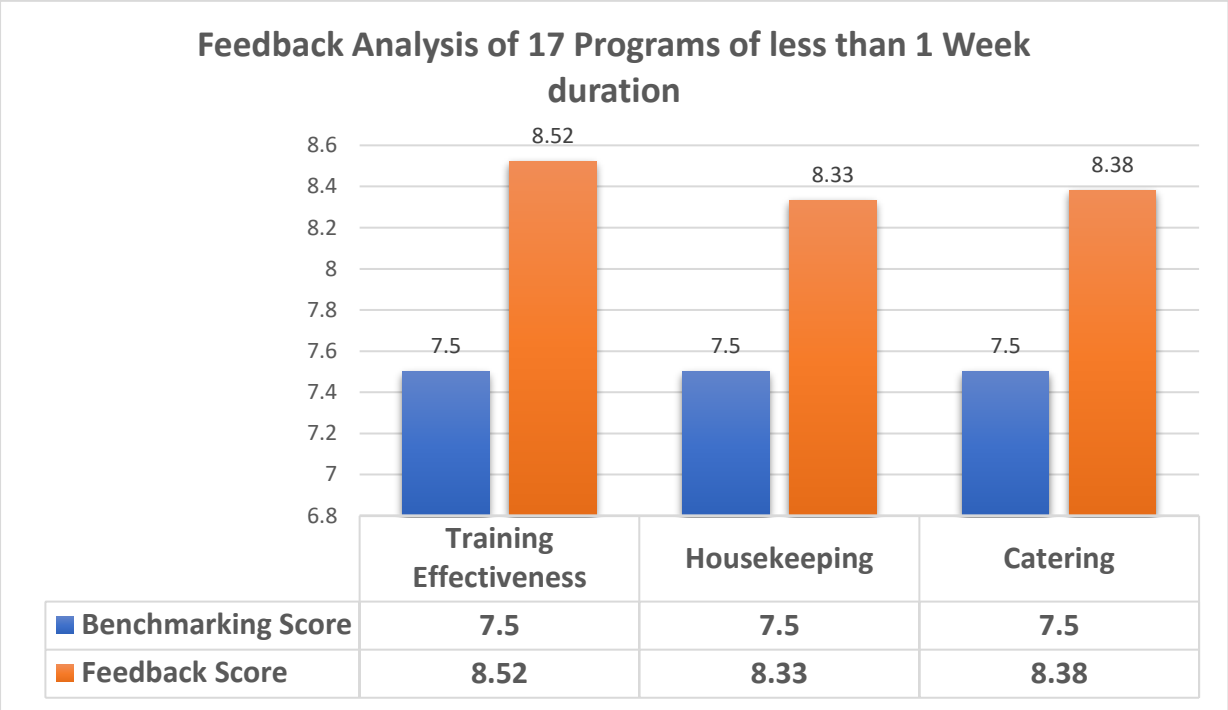
During the year, NWA conducted **55 residential training programmes** at NWA, Pune, covering durations ranging from **0.4 weeks** to **34 weeks**. These programmes collectively accounted for **101.40 training weeks** and were attended by **1,843 participants**. For these programmes, participant feedback was obtained against three key performance parameters, namely training effectiveness, housekeeping services, and catering services. As per the approved benchmarking framework, the applicable benchmark score was **7.5 out of 10** for programmes of up to two weeks' duration and **7.0 out of 10** for programmes exceeding two weeks in duration. The programme-wise detailed score along with the feedback analysis are presented below.

No	Name of the Programme	Wks	No Of Trainees	Course	House-keeping	Catering
2	Dam Health & Rehabilitation Monitoring Application	0.4	54	8.5	8.4	8
3	Analysis of Quality of Water (WQ) Data	0.4	15	8.6	8.4	8.8
4	Analysis of Quality of Water Quality (WQ) Data	0.4	18	8.9	9	9.3
5	Analysis of Quality of Water Quality (WQ) Data	0.4	18	8.5	7.6	8.8
6	Dam Health Rehabilitation Monitoring Applications (DHARMA)	0.4	24	9.4	8.3	7.6
7	Analysis of Quality of Water Quality (WQ) Data	0.4	23	8.5	8	8
8	Analysis of Quality of Water Quality (WQ) Data	0.4	21	8.2	7.9	8.1

9	Analysis of Quality of Water Quality (WQ) Data	0.4	25	8.3	8.1	8.3
10	Analysis of Quality of Water Quality (WQ) Data	0.4	26	8	8.1	8.1
11	Procurement of Goods Works, Non-Consultancy Services and Consultancy Services	0.6	37	8.5	8.3	8.6
12	Design Flood Analysis	0.6	65	8	8	8.4
13	Dam Break Analysis	0.6	65	8.6	8.4	8.4
14	Aritifical Intelligence Machine Learning, Deep Learning and Data Driven Decision Making for Government	0.6	21	8.6	9.2	8.3
15	Real Time Data Acquisition System	0.6	59	8.6	7.8	7.7
16	Urban Flood Management	0.8	56	8.4	8.4	8.5
17	ET Based Irrigation Performance Assessment Tools	0.8	28	8.2	8.7	8.6
18	ET based Irrigation Performance Tools	0.8	36	9	9	9
19	Conventional Flood Forecasting	1	45	8.8	8.7	8.8
20	Irrigation Modernization and Design of Pipe Distribution Networks	1	52	8.7	8	8.4
21	Induction Training Program on Overview of Resources Sector in India (For Officers of NERIWALM)	1	8	9.5	9.7	9.7
22	Young Water Professional (YWP) Cohort-II Program under India - Australia Cooperation (YWP)	1	20	9.1	9.4	9.4
23	Faculty Development Program (for Training Managers from State and Central Organisations)	1	27	9.2	9.4	9
24	Emergency Action Plans for Dams	1	56	8.2	8	8.4
25	Overview of Water Resources Sector of India (For NGO, media, civil society etc.)	1	22	8.6	9.5	9.3
26	Overview of Water Resources Sector India (For Non-Technical officers)	1	26	9.9	9.2	9.3
27	Instrumentation in Dams	1	57	8.5	9.2	9.2
28	Hyrological Modelling Using Free Tools	1	48	8.5	8.6	8.7
29	Induction Training Program for Junior Engineers of Farakka Barrage	1	18	7.7	8.3	7.9
30	Water Quality Monitoring and Management	1	33	8.5	8.7	8.5
31	Integrated Water Resources Management	1	10	8.2	8	7.6
32	Community Horticulture & Production and Marketing Associations (CHPMAs)/ WUAs and Participatory Irrigation Management" for technical officers from Government of Himachal Pradesh	1	15	8.7	9.5	9.3
33	Overview of Water Resources Sector of India (For CGWB-ITP officers Batch-I)	1	27	8.8	9.5	8.7
34	Overview of Water Resources Sector of India (For CGWB-ITP officers Batch-II)	1	29	8.8	8.8	8.6

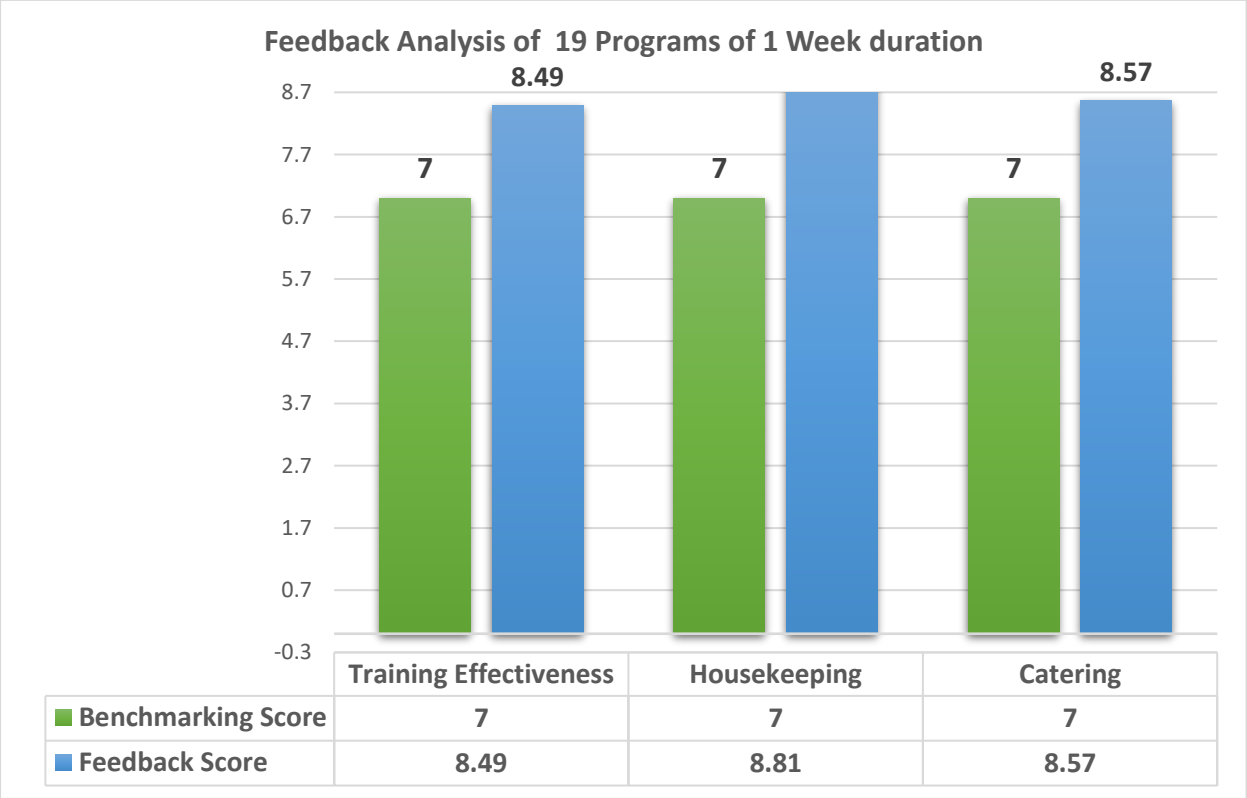
35	Management Development Progam (for Non Technical Officers of MoJS, DoWR,RD&GR, CWC)	1	16	9	9.4	8.8
36	Training Module on Overview of WRS	1	61	9.1	9.2	9.3
37	Exposure Visit Cum Training on Water Resources Management	1	22	8.6	9.2	8.7
38	Reservoir Sedimentation Assessment and Management	1.2	22	9	8.8	8.7
39	Mandatory Cadre Training Program Level IV for Hydromet Cadre	1.4	5	8.6	9.3	9
40	Mandatory Cadre Training Program Level III for Hydromet Cadre	1.4	10	8.5	8	8.5
41	Water Resources Development and Management - Issues and Challenges (For Govt. of Nepal Officers)	2	20	8.1	8.2	8.7
42	Flood Forecasting, Modelling and Early Warning System (For Govt. of Nepal officers)	2	20	8.8	8.9	9.4
43	Pumped Storage Hydroelectric Projects	2	44	8.7	7.9	8.1
44	Introduction to Google Earth Engine & Application in Water Resources Management	2	55	8.8	8.6	8.9
45	Assessment of Structural Safety of Existing Dams	2	25	8.9	8.4	8.7
46	Mandatory Cadre Training Program Level 2 for Junior Administrative Grade CWES Group A Officers	2	30	8.5	8.4	9.2
47	Induction Training Program for Multi Tasking Staff of the Department	2	42	9	9.2	8.7
48	Induction Training Program for Multi Tasking Staff of Department	2	39	8.8	9.2	9.2
49	Induction Training Program for Brahmaputra Board	3	32	9.1	8.7	9.1
50	Induction Training Program for Newly Recruited Junior Engineers of CWC	3	54	8.4	8.9	8.2
51	Induction Training Program for Newly Recruited Junior Engineers of CWC	3	53	8	8.5	8.3
52	Induction Training Program for Newly Recruited Junior Engineers of CWC	3	56	7.4	8.4	8
53	Mandatory Cadre Training Program (MCTP) for Senior Time Scale Officers of CWES Group A	3	28	9.1	8.8	9
54	Mandatory Cadre Training Program for AD-II	4	23	8.7	7.5	8.1
55	34 Induction Training Program for Central Water Engineering Services Group A Probationary Officer	34	32	8.7	9.5	9.3
	Total	**101.4**	**1843**			

Seventeen programs were conducted ranging from 2 days to less than 1 week. The feedback analysis is given below :



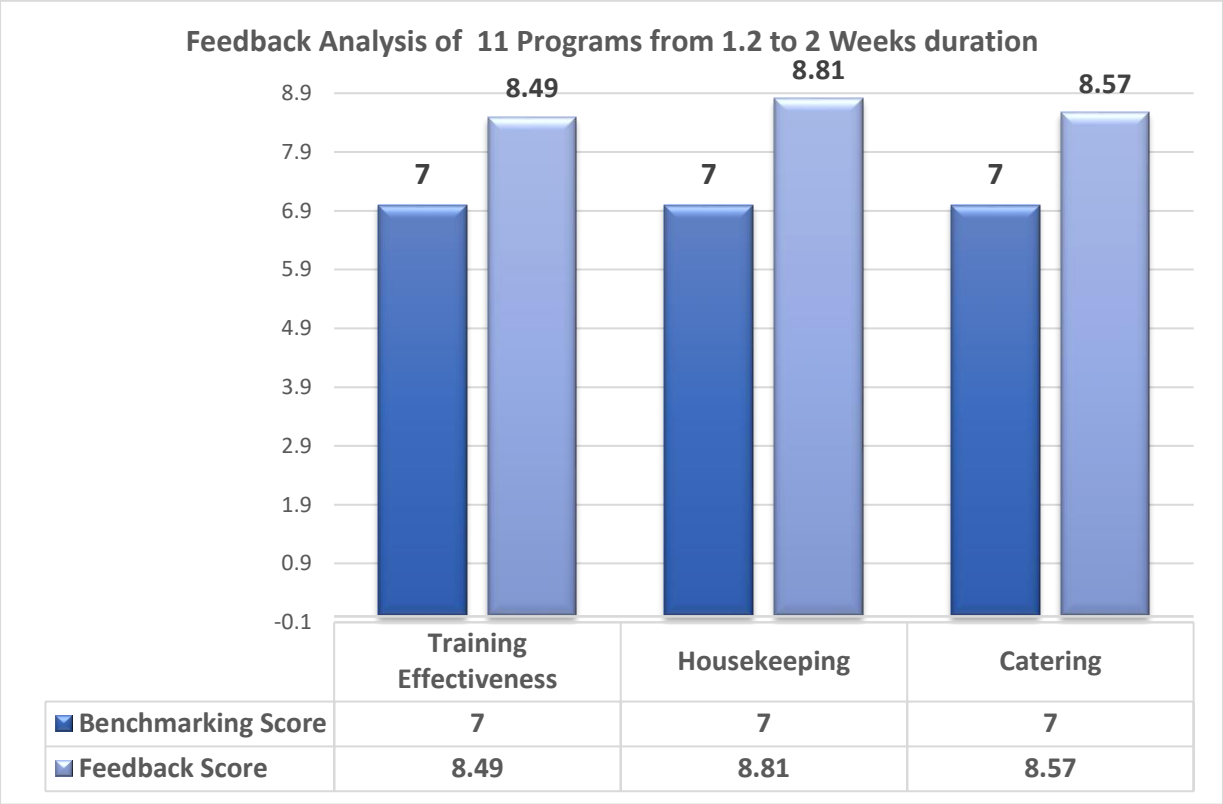
	Training Effectiveness	Housekeeping	Catering
Benchmarking Score	7.5	7.5	7.5
Feedback Score	8.52	8.33	8.38

Nineteen programs were conducted for duration of one week. The feedback analysis are given below :

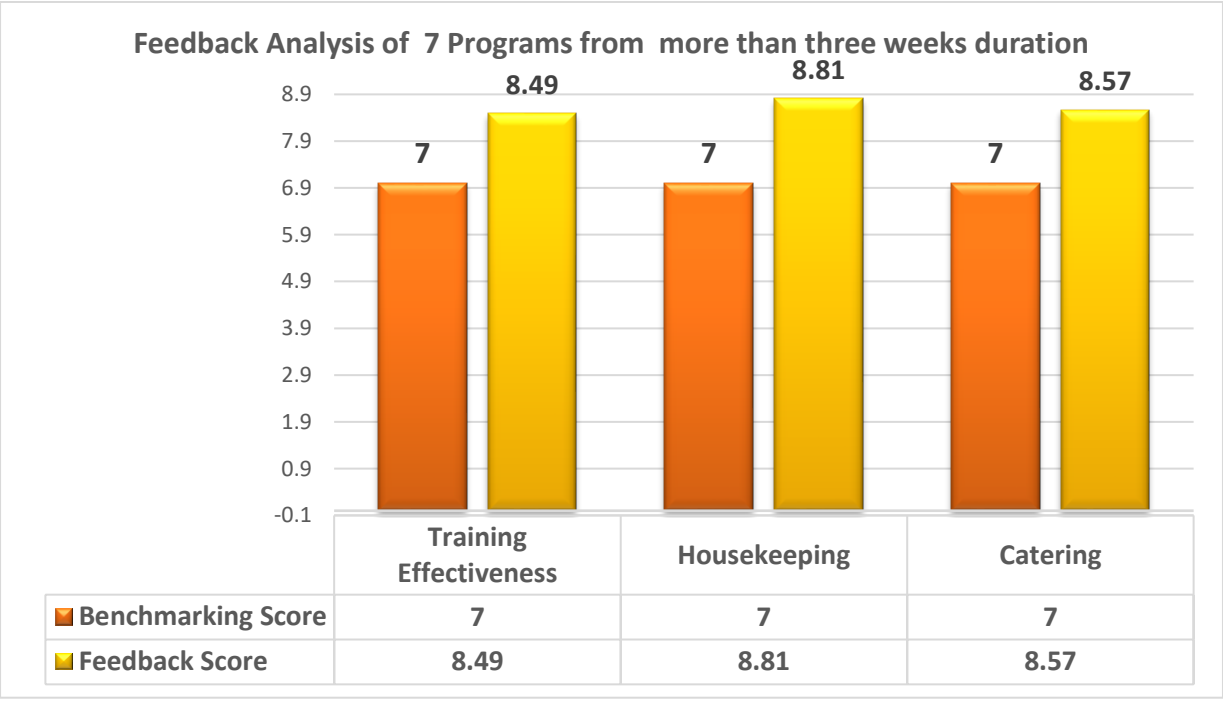


	Training Effectiveness	Housekeeping	Catering
Benchmarking Score	7	7	7
Feedback Score	8.49	8.81	8.57

Eleven programs were conducted ranging 1.2 to 2 weeks duration. The feedback analysis is as given below:



Seeven programs were conducted ranging 3 weeks to 34 weeks duration. The feedback analysis are as given below:



8.7 Benchmark Compliance and Institutional Performance

All evaluated programmes were found to be fully compliant with the prescribed benchmark scores across the three assessed parameters, namely training effectiveness, housekeeping services, and catering services. The consistently high service-related scores further indicate effective coordination among academic planning units, campus administration, and service providers under the supervision of the Administration & Coordination (A&C) Unit, including during periods of high residential occupancy and overlapping training schedules. The feedback and benchmarking outcomes for the year clearly demonstrate that the National Water Academy (NWA) has consistently met and, in most cases, exceeded the prescribed benchmarks for training quality and associated institutional support services across short-term, long-term, residential, and online programmes. This sustained level of performance is underpinned by a robust academic and pedagogical framework, strong faculty engagement supported by systematic course design, effective logistical and service management by the Administration & Coordination (A&C) Unit, and a mature, data-driven quality assurance and performance monitoring system..

Collectively, these outcomes reaffirm NWA's position as a **premier national institution for training and capacity building in the water resources sector**, with demonstrated capability to deliver high-quality programmes at scale while maintaining strong service standards and institutional reliability.

8.8 Concluding Assessment and Capacity Augmentation for Future Mandates

In measurable and operational terms, the feedback analysis confirms that NWA has moved beyond baseline compliance to a level of **institutional performance characterized by reliability, consistency, and excellence**—a foundation for its future role in supporting national water security objectives and long-term sectoral capacity development. The consistently high feedback scores not only validate the robustness of NWA's operational and academic framework but also reinforce its positioning as a national centre of excellence for capacity building in the water resources sector.

At the same time, the scale, diversity, and quality of programmes achieved during the year have been delivered largely through optimal utilization of existing human resources and sustained workload management across academic and administrative units. These outcomes demonstrate NWA's institutional readiness to support expanded national training mandates, host larger and more complex multi-stakeholder programmes, and scale international and inter-state capacity-building initiatives, subject to commensurate strengthening of its manpower base. In the absence of proportional augmentation of faculty and administrative staff, further expansion of training volumes and new thematic areas would place operational strain on existing teams and may constrain NWA's ability to sustain the high standards of training quality and service delivery currently being achieved.

****

Chapter 9: Competency Skills Addressed through NWA Training Programmes (2024–25)

9.1. Introduction

In alignment with the Capacity Building Commission (CBC) framework under Mission Karmayogi, NWA structures its training architecture around the systematic development of three core categories of competencies, namely:

- **Domain Competencies** – technical and sector-specific knowledge and expertise;
- **Functional Competencies** – professional, managerial, digital, and operational capabilities required for effective public service delivery; and
- **Behavioural Competencies** – leadership attributes, ethical conduct, teamwork, communication, and stakeholder engagement skills.

During the year 2024–25, NWA conducted **96 training programmes** through residential, online, off-campus, national, and international modes. These programmes collectively covered officers and stakeholders across Central and State Governments, international participants, engineers, administrators, technical staff, trainers, and community stakeholders. The competency mapping of all programmes demonstrates a thoughtful and balanced integration of domain, functional, and behavioural learning outcomes to ensure holistic capacity building in the water resources sector.

9.2. Overall Competency Coverage Profile

Based on the competency mapping of the 96 programmes conducted during the year:

- **50 programmes** primarily addressed **Domain competencies**;
- **32 programmes** addressed **combined Domain and Functional competencies**;
- **5 programmes** addressed **Domain, Functional, and Behavioural competencies** in an integrated manner;
- **8 programmes** addressed **Functional competencies** exclusively; and
- **1 programme** addressed **Functional and Behavioural competencies**.

This distribution reflects NWA's strategic focus on strengthening technical depth while progressively embedding managerial, digital, leadership, and professional effectiveness skills across training interventions.

Table 9.1 – Programme Distribution by Competency Category

Competency Category	Number of Programmes	Share of Total (%)
Domain only	50	52.1%
Domain + Functional	32	33.3%
Domain + Functional + Behavioural	5	5.2%
Functional only	8	8.3%
Functional + Behavioural	1	1.1%
Total	**96**	**100%**

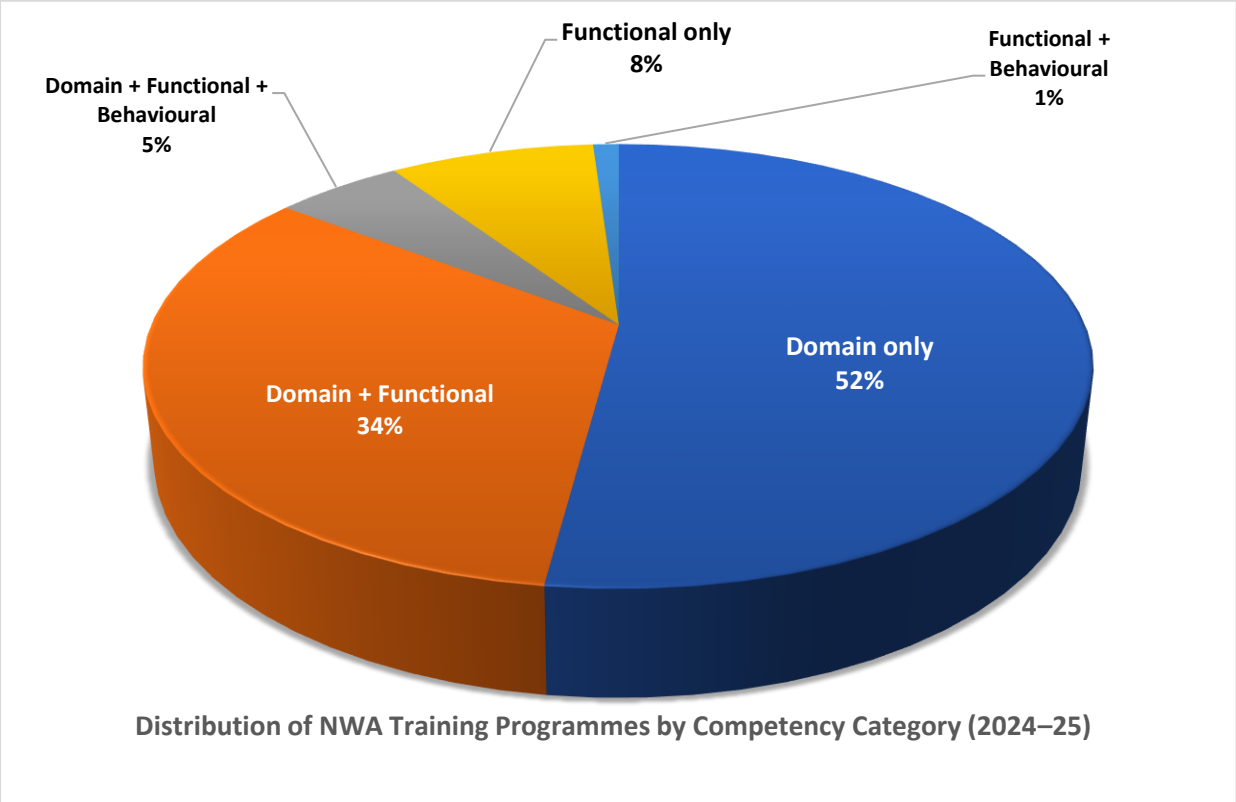
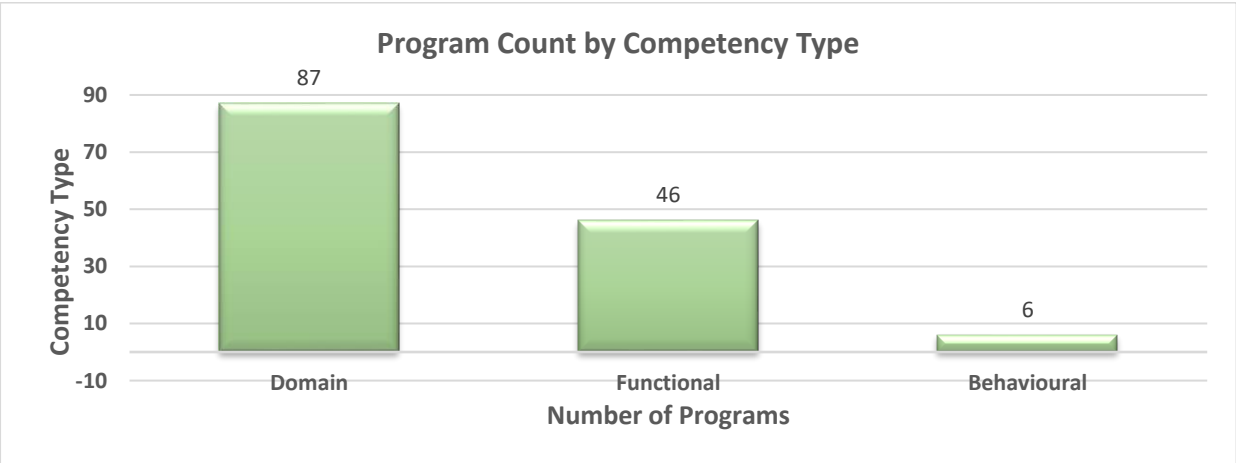


Table 9.2 – Competency Coverage Matrix (Programme Count)

Competency Type	Programmes Covering the Competency
Domain	87
Functional	46
Behavioural	6

Note: Programme counts exceed 96 where multiple competencies are covered within the same programme.



9.3. Domain Competencies – Strengthening Technical and Sectoral Expertise

Domain competencies constitute the foundation of NWA's training mandate. During the year, a substantial number of programmes were dedicated to enhancing advanced technical knowledge, analytical capabilities, and sectoral understanding across diverse sub-domains of water resources engineering and management.

9.3.1 Core Thematic Areas Covered : The domain-focused programmes addressed the following major technical areas:

- Water resources planning and development
- Dam safety, inspection, instrumentation, rehabilitation, and risk assessment (including DHARMA and DRIP-related modules)
- Flood forecasting, flood modelling, dam break analysis, emergency action planning, and urban flood management
- Hydrological modelling and hydrometeorology
- Reservoir sedimentation assessment and management
- Irrigation modernization and efficient water use systems
- Participatory irrigation management
- Water quality monitoring and data analysis
- Coastal zone management and erosion control
- Geospatial technologies, remote sensing, and Google Earth Engine applications
- Real-time data acquisition systems
- Artificial Intelligence, Machine Learning, and data-driven decision support
- Hydrological safety and early warning systems

9.3.2 Illustrative Programmes : Representative domain-oriented programmes conducted during the year include:

- Overview of Water Resources Development and Management
- Design Flood Analysis and Dam Break Analysis
- Flood Forecasting, Modelling and Early Warning Systems (including international programmes for Government of Nepal officials)
- Emergency Action Plans for Dams
- Instrumentation in Dams
- National Certificate Course on Participatory Irrigation Management
- Hydrological Modelling using Free Tools
- Water Quality Monitoring and Management
- Integrated Water Resources Management
- Distance Learning Course on Basic Hydrological Sciences (WMO-RTC programme)
- A comprehensive series of 18 technical webinars on dam safety, risk assessment, instrumentation, sedimentation, hydrological review, seismic evaluation, and hazard classification etc.

9.3.3 Competency Outcomes: Through these interventions, participants strengthened their abilities to:

- apply engineering principles in dam safety and flood risk management;
- interpret hydrological and water quality datasets;

- design and evaluate irrigation and flood mitigation infrastructure;
- utilise modern modelling and geospatial tools;
- integrate scientific evidence into planning and regulatory processes; and
- respond effectively to climate variability and extreme hydrological events.

These programmes directly contribute to enhancing institutional technical capacity within CWC, State WRDs, allied agencies, and international partner institutions.

9.4. Functional Competencies – Enhancing Professional and Operational Capability

Functional competencies are important for translating technical expertise into efficient public service delivery. NWA's training portfolio increasingly incorporates modules that build operational effectiveness, digital proficiency, regulatory compliance, and administrative competence.

9.4.1 Key Functional Skill Areas: The programmes addressing functional competencies focused on:

- Digital skills and e-learning systems (MOODLE, training management platforms);
- Programming and data analytics (Python for water resources applications);
- Procurement and contract management under GFR and e-procurement frameworks;
- Project management, supervision, and quality control;
- Financial and administrative procedures in government organisations;
- Induction training for engineers, technical staff, and multi-tasking staff;
- Cadre-specific mandatory training aligned with service rules;
- International professional collaboration programmes;
- Performance assessment tools such as ET-based irrigation efficiency frameworks; and
- Training of trainers and faculty development.

9.4.2 Programmes with Domain + Functional Integration :A significant set of programmes combined technical depth with hands-on operational application, including:

- DHARMA application related to dam safety
- Water pricing and economic aspects of water resources
- Conventional flood forecasting operations
- Python programming for water sector applications
- ET-based irrigation performance assessment tools
- Induction training programmes for CWC engineers, Brahmaputra Board officers, CGWB officers, Farakka Barrage engineers, and MTS staff
- Young Water Professionals (India–Australia cooperation)
- International programme on Water Resources Development and Management for Government of Nepal officers

These programmes ensured that participants not only understood technical concepts but were also capable of deploying tools, software platforms, data workflows, and regulatory procedures in real operational environments.

9.4.3 Exclusive Functional Programmes :NWA also conducted dedicated functional competency programmes such as:

- Procurement of Goods, Works, and Consultancy Services

- e-GeM and e-Tendering challenges
- Training Information Management System workshops
- Project Management, Supervision and Quality Control
- Faculty Development Programmes
- Orientation programme for Lower Division Clerks
- Post-retirement professional transition planning for CWES officers

These interventions directly enhanced administrative efficiency, transparency, compliance, and institutional governance standards across the water sector.

9.5. Behavioural Competencies – Developing Leadership and Professional Effectiveness

Recognising that technical excellence must be complemented by effective leadership and ethical public service values, NWA systematically embedded behavioural competencies into long-duration and cadre-level programmes.

9.5.1 Programmes Addressing Behavioural Skills : Behavioural competencies were explicitly incorporated in the following programmes:

- Mandatory Cadre Training Programme for Junior Engineers of CWC
- Mandatory Cadre Training Programme Level-II for Junior Administrative Grade CWES officers
- 34-week Induction Training Programme for CWES Group-A Probationary Officers
- Mandatory Cadre Training Programme (MCTP) for Senior Time Scale CWES officers
- Management Development Programme for Non-Technical Officers of MoJS, DoWR, RD & GR and CWC

9.5.2 Behavioural Skill Domains Covered : These programmes included structured modules and experiential learning components on:

- leadership and decision-making in public institutions;
- communication and presentation skills;
- teamwork and inter-departmental coordination;
- ethics, integrity, and public accountability;
- stakeholder consultation and conflict resolution;
- change management and organisational adaptability;
- stress management and professional resilience.

Pedagogical approaches included case studies, group discussions, simulations, role-plays, mentoring sessions, field exposure, and interaction with senior administrators and domain experts.

9.5.3 Impact on Organisational Effectiveness : The integration of behavioural competencies ensures that officers graduating from NWA programmes are not only technically proficient but are also capable of:

- leading multidisciplinary teams;
- managing complex projects and institutional interfaces;
- engaging constructively with communities, State agencies, and international partners; and
- upholding high standards of professionalism in public service delivery.

9.6. International and Cross-Sectoral Competency Development

NWA's competency framework during the year also extended to international cooperation and cross-sectoral learning through programmes for:

- Government of Nepal (flood forecasting and water resources management);
- Government of Rwanda (planning and design of water-efficient irrigation systems);
- Young Water Professionals under India–Australia cooperation; and
- NGO, media, civil society, and educational institutions.

These programmes strengthened cross-cultural communication, global best practices adoption, and comparative policy understanding, thereby broadening the professional horizons of participants.

9.7. Alignment with National Capacity Building Frameworks

The design and delivery of competency-oriented training programmes during 2024–25 remained aligned with:

- Mission Karmayogi principles of continuous learning and role-based competency development;
- CBC's competency dictionary and accreditation requirements;
- service-specific training mandates under CWC and MoJS;
- emerging national priorities such as dam safety, digital governance, climate resilience, and data-driven water management.

NWA's systematic competency mapping provides strong institutional readiness for continued accreditation, programme scaling, and expansion of national and international training mandates. Through the structured delivery of 96 training programmes covering domain, functional, and behavioural competencies, the National Water Academy has demonstrated a comprehensive and future-oriented approach to human resource development in the water resources sector. The balanced integration of technical expertise, operational capability, and leadership skills ensures that trained officers and stakeholders are equipped to address complex water challenges with professionalism, efficiency, and strategic vision.

This competency-driven training architecture reinforces NWA's position as the country's premier institution for capacity building in water resources engineering and management and a key contributor to national institutional strengthening under Mission Karmayogi.

****

अध्याय 10 - आधिकारिक कार्यों में हिंदी का प्रगतिशील प्रयोग
Progressive Use of Hindi in Official Work

1. कार्यशालाओं का आयोजन

वित्तीय वर्ष 2024–25 के दौरान राष्ट्रीय जल अकादमी, पुणे में कुल **चार (04) कार्यशालाओं** का आयोजन किया गया, जिनका विवरण निम्नानुसार है:

क्रम सं.	दिनांक	विषय
1	06.06.2025	राजभाषा हिन्दी का व्याकरण तथा इसका सहज प्रयोग
2	26.09.2024	ई-बिल्स प्रणाली पर व्याख्यान
3	06.12.2024	ई-ऑफिस प्रणाली पर व्याख्यान
4	19.03.2025	ई-बिल्स प्रणाली पर व्याख्यान

इन कार्यशालाओं का उद्देश्य अधिकारियों एवं कर्मचारियों को राजभाषा हिन्दी के प्रभावी प्रयोग तथा ई-गवर्नेंस प्रणालियों के व्यावहारिक उपयोग के प्रति सक्षम बनाना रहा।

2. राजभाषा कार्यान्वयन समिति की बैठकें

वित्तीय वर्ष 2024–25 के दौरान राष्ट्रीय जल अकादमी, पुणे में **राजभाषा कार्यान्वयन समिति की चार (04) बैठकें** आयोजित की गईं, जिनमें कार्यालयीन कार्यों में हिन्दी के अधिकाधिक प्रयोग पर विशेष बल दिया गया।

क्रम सं.	दिनांक	विवरण
1	27.05.2024	प्रथम बैठक
2	13.09.2024	द्वितीय बैठक
3	30.12.2024	तृतीय बैठक
4	28.03.2025	चतुर्थ बैठक

3. राजभाषा सम्मेलनों में सहभागिता

अकादमी द्वारा राजभाषा के प्रचार-प्रसार हेतु राष्ट्रीय एवं क्षेत्रीय स्तर के सम्मेलनों में सक्रिय भागीदारी की गई।

(क) चतुर्थ अखिल भारतीय राजभाषा सम्मेलन, नई दिल्ली

- **दिनांक:** 14–15 सितम्बर 2024
- **स्थान:** भारत मंडपम, नई दिल्ली
- **प्रतिभागी : 01**

(ख) राजभाषा सम्मेलन, जयपुर

- **दिनांक:** 17 फरवरी 2025
- **प्रतिभागी : 05**

6. हिन्दी पखवाड़ा-2024 का आयोजन

राजभाषा हिन्दी के प्रचार-प्रसार एवं कार्यालयीन कार्यों में इसके उपयोग को बढ़ावा देने के उद्देश्य से राष्ट्रीय जल अकादमी, पुणे द्वारा **13 से 28 सितम्बर 2024** के दौरान **हिन्दी पखवाड़ा-2024** का आयोजन किया गया।

इस अवधि में अकादमी परिसर में स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों की सक्रिय सहभागिता से कुल **छः (06) प्रतियोगिताओं** का आयोजन किया गया, जिनका विवरण निम्नानुसार है:

1. हिन्दी टंकण प्रतियोगिता
2. हिन्दी टिप्पणी लेखन (हिन्दी एवं हिन्दीत्तर भाषियों हेतु – 02 प्रतियोगिताएँ)
3. हिन्दी अनुवाद (हिन्दी एवं हिन्दीत्तर भाषियों हेतु – 02 प्रतियोगिताएँ)
4. हिन्दी निबंध प्रतियोगिता
5. भाषण प्रतियोगिता
6. कविता प्रतियोगिता

इन प्रतियोगिताओं में राष्ट्रीय जल अकादमी परिसर स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों ने उत्साहपूर्वक भाग लिया।

पुरस्कार वितरण समारोह

दिनांक **27 सितम्बर 2024** को श्री **डी. एस. चासकर**, मुख्य अभियंता एवं प्रमुख, राष्ट्रीय जल अकादमी द्वारा सभी प्रतियोगिता विजेताओं को प्रमाण-पत्र प्रदान कर सम्मानित किया गया।

इस अवसर पर उन्होंने उपस्थित अधिकारियों एवं कर्मचारियों को अधिकाधिक आधिकारिक कार्य हिन्दी में करने हेतु प्रेरित किया तथा हिन्दी पखवाड़ा-2024 के सफल आयोजन हेतु गठित आयोजन समिति को समस्त गतिविधियों के सफल निष्पादन के लिए बधाई दी |


राष्ट्रीय जल अकादमी
NATIONAL WATER ACADEMY

****

Chapter 11 : Celebrations and Observance of Important Days

Participation in World Environment Day 2024 Celebrations

The National Water Academy (NWA), Pune joined the Institution of Engineers (India), Pune Centre in the celebration of World Environment Day 2024. The concluding programme was held on 21 June 2024 at Firodia Auditorium, Abhiyanta Bhawan, Pune.

The event witnessed the participation of several prominent organizations, including Central Water & Power Research Station (CWPRS), Indian Plumbing Association, Pune, Marathi Vidnyan Parishad, Pune, D. Y. Patil College of Engineering, Akurdi, Eco-Logic Foundation, and the Rotary Club of Pune.

World Environment Day is observed annually on 5 June to promote awareness and collective action on environmental protection. The theme for 2024, "Our Land, Our Future", emphasized the importance of land restoration, combating desertification, and strengthening resilience to drought.

On the occasion, Shri Anand Chordia, Director – Technology & Innovation, The Eco Factory Foundation, highlighted the significance of environmental conservation and shared insights into the initiatives undertaken by his organization in this field.

The NWA delegation was led by Shri S. N. Pande, Director, National Water Academy, CWC, who also felicitated students of AIMSS Military School for their commendable contributions towards environmental stewardship.

Prof. Dr. T. P. Singh, Director, Symbiosis Institute of Geoinformatics, delivered a presentation on the role of Remote Sensing and GIS technologies in environmental protection and monitoring.

The programme also featured a skit on "Save Environment" performed by students, which was well received and appreciated by the audience.

15 August 2024 – Independence Day

The National Water Academy (NWA), Pune observed **India's 78th Independence Day** with a flag-hoisting ceremony at the Academy premises, led by **Shri D. S. Chaskar, Chief Engineer & Head, NWA**. In his address, he underscored the Academy's role in strengthening national capacity building in the water sector in line with the country's developmental priorities. He also highlighted the key achievements of NWA during the year and appreciated the dedicated efforts of all officers and staff, including outsourced personnel, in supporting the Academy's mission. The occasion served to reaffirm NWA's collective commitment to public service and national development.

#Plant4Mother campaign

As part of the **#Plant4Mother** campaign launched by the Hon'ble Prime Minister of India, the National Water Academy (NWA), Central Water Commission (CWC), Pune organized a tree plantation drive on **6 September 2024** at the Academy campus. The initiative was undertaken in close coordination with the **Pune Municipal Corporation** and with the active participation of various offices of the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR) stationed at NWA, including the **Upper Krishna Division**, **M&A Directorate (MCO, Nagpur)**, the **National Dam Safety Authority**, and NWA.

The campaign was conducted under the guidance of **Shri D. S. Chaskar, Chief Engineer & Head, NWA**, who, during the launch ceremony, highlighted the significance of the initiative in promoting environmental sustainability and public participation in afforestation. He informed that the Government of India has set ambitious targets of planting **approximately 80 crore trees by September 2024** and **140 crore trees by March 2025**, following a **"Whole of Government"** and **"Whole of Society"** approach. He also encouraged officers and staff to pledge their commitment towards the protection of trees and conservation of the environment.

स्वच्छता ही सेवा अभियान 2024 का शुभारंभ

राष्ट्रीय जल अकादमी (NWA), पुणे द्वारा दिनांक 13 सितंबर 2024 को "स्वच्छता ही सेवा" अभियान का शुभारंभ किया गया। इस अवसर पर श्री डी. एस. चासकर, मुख्य अभियंता एवं प्रमुख, राष्ट्रीय जल अकादमी ने अकादमी परिसर में स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों को स्वच्छता की शपथ दिलाई। अपने संबोधन में उन्होंने इस वर्ष के अभियान की थीम "स्वभाव स्वच्छता – संस्कार स्वच्छता" के महत्व को रेखांकित करते हुए स्वच्छता को दैनिक जीवन का अभिन्न अंग बनाने पर बल दिया। यह अभियान 14 सितंबर 2024 से 01 अक्टूबर 2024 तक संचालित किया गया, जिसके दौरान राष्ट्रीय जल अकादमी परिसर एवं आसपास के क्षेत्रों में विभिन्न स्वच्छता एवं जन-जागरूकता गतिविधियाँ आयोजित की गईं।

राष्ट्रीय जल अकादमी (रा.ज.अ.), पुणे द्वारा दिनांक 23 सितंबर 2024 को *"स्वच्छता ही सेवा"* अभियान के अंतर्गत अकादमी परिसर एवं इसके आसपास स्वच्छता अभियान एवं सफाई गतिविधियों का आयोजन किया गया। इस अवसर पर अकादमी परिसर में स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों ने सक्रिय रूप से भाग लेते हुए श्रमदान किया।

इसी क्रम में, दिनांक 25 सितंबर 2024 को मुख्य अभियंता एवं प्रमुख, राष्ट्रीय जल अकादमी द्वारा अकादमी परिसर में स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों को एकल-उपयोग प्लास्टिक (Single Use Plastic) के निषेध के संबंध में शपथ दिलाई गई, जिससे पर्यावरण संरक्षण एवं स्वच्छता के प्रति जागरूकता को और अधिक सुदृढ़ किया जा सके।

उल्लेखनीय है कि *"स्वच्छता ही सेवा"* अभियान 14 सितंबर 2024 से 01 अक्टूबर 2024 तक देशभर में संचालित किया गया, जिसके अंतर्गत राष्ट्रीय जल अकादमी, पुणे द्वारा भी अकादमी परिसर एवं उसके आसपास के क्षेत्रों में विभिन्न स्वच्छता एवं जन-जागरूकता गतिविधियाँ आयोजित की गईं।

राष्ट्रीय जल अकादमी (रा.ज.अ.), केंद्रीय जल आयोग, पुणे में दिनांक 14 सितंबर से 01 अक्टूबर 2024 तक *"स्वच्छता ही सेवा"* अभियान का सफलतापूर्वक आयोजन किया गया। इस वर्ष यह अभियान *"स्वभाव स्वच्छता – संस्कार स्वच्छता"* की थीम के अंतर्गत संचालित किया गया।

अभियान के दौरान अकादमी द्वारा विभिन्न स्वच्छता एवं जन-जागरूकता गतिविधियाँ आयोजित की गईं, जिनमें रा.ज.अ. परिसर एवं इसके आसपास स्वच्छता हेतु श्रमदान, दो-बिन प्रणाली (गीला/सूखा कचरा पृथक्करण) के संबंध में जागरूकता, खडकवासला बाँध परिसर की सफाई, एकल-उपयोग प्लास्टिक के निषेध की शपथ, रा.ज.अ. परिसर के समीप खडकवासला सिंचाई प्रणाली की सफाई, तथा स्वच्छता जागरूकता रैली का आयोजन शामिल था। इन सभी गतिविधियों में अकादमी परिसर में स्थित विभिन्न कार्यालयों के अधिकारियों एवं कर्मचारियों ने उत्साहपूर्वक सहभागिता की।

21 June 2025 : International Day of Yoga

The International Day of Yoga was observed at the National Water Academy (NWA), Pune on 21 June 2025 with active participation of officers, staff members, trainees, and outsourced personnel. The programme was organized in the Academy campus in alignment with the national theme announced by the Ministry of AYUSH, Government of India, emphasizing holistic health, mental well-being, and harmony between human beings and nature.

A guided yoga session was conducted by a certified instructor, covering common yoga protocol, including asanas, pranayama, and meditation practices. The

session highlighted the relevance of yoga in promoting physical fitness, stress management, emotional balance, and enhanced work productivity, particularly in demanding professional environments.

सतर्कता जागरूकता सप्ताह / VIGILANCE AWARENESS WEEK :28 OCTOBER TO 03 NOVEMBER 2024

जल शक्ति मंत्रालय, जल संसाधन, नदी विकास और गंगा संरक्षण विभाग और केंद्रीय सतर्कता आयोग के निर्देशों पर 2024 का सतर्कता जागरूकता सप्ताह 28 अक्टूबर से 3 नवम्बर 2024 तक राष्ट्रीय जल अकादमी, पुणे में मनाया गया।

इस सप्ताह भर के कार्यक्रम का उद्देश्य भागीदारों के बीच सतर्कता, नैतिक शासन और साइबर सुरक्षा के महत्व के बारे में जागरूकता बढ़ाना था। इस सप्ताह के दौरान आयोजित कार्यक्रमों का संक्षिप्त विवरण निम्नलिखित है:

इस सप्ताह के दौरान राष्ट्रीय जल अकादमी, पुणे ने कई गतिविधियाँ आयोजित कीं, जैसे कि, कार्यशालाएँ, जागरूकता ग्राम सभा, चित्रकला प्रतियोगिता आदि। सतर्कता जागरूकता क्विज़ (ऑनलाइन) और जागरूकता अभियानों का आयोजन भी किया गया, ताकि लोगों को भ्रष्टाचार के हानिकारक प्रभावों और उसे रोकने के उपायों के बारे में शिक्षा दी जा सके।

28 अक्टूबर 2024 को श्री डी एस चासकर, मुख्य अभियंता और प्रमुख द्वारा सतर्कता जागरूकता सप्ताह 2024 की शपथ लेने के साथ शुरू हुईं। उन्होंने राष्ट्रीय जल अकादमी, पुणे में उपस्थित सभी कर्मचारियों और अधिकारियों को शपथ दिलाई। राष्ट्रीय जल अकादमी, राष्ट्रीय बांध सुरक्षा प्राधिकरण, प्रबोधन एवं मूल्यांकन निदेशालय, ऊपरी कृष्णा मण्डल, भीमा उपमण्डल, केंद्रीय लोक निर्माण विभाग, और राष्ट्रीय जल अकादमी के सभी आउटसोर्स कर्मचारी इस शपथ ग्रहण समारोह में शामिल हुए।

राष्ट्रीय जल अकादमी, पुणे ने 28 अक्टूबर से 03 नवंबर तक सतर्कता जागरूकता सप्ताह के दौरान विभिन्न प्रमुख स्थानों पर पोस्टर प्रदर्शित किए, जैसे खडकवसला, किरकेटवाडी, नांदेड़ फाटा, कोल्हेवाड़ी और अन्य स्थानों पर। इन पोस्टरों ने सार्वजनिक ध्यान आकर्षित किया और जनसाधारण के बीच जागरूकता पैदा की।

शपथ ग्रहण कार्यक्रम की कुछ तस्वीरें इस प्रकार हैं:

राष्ट्रीय जल अकादमी, पुणे के मुख्य अभियंता और प्रमुख श्री डी एस सी चासकर द्वारा 28 सितंबर 2024 को सुबह 11 बजे शपथ दिलाई गई |

ताष्ट्रीय जल अकादमी, केंद्रीय जल आयोग, पुणे ने स भागिता आतृतत सतर्कता उपायों की वास्तविक भातना को आत्मसात कतने के लिए विभिन्न क्षमता निर्माण कार्यतम आयोजित किए। इसके अनुसात, ताष्ट्रीय जल अकादमी, केन्द्रीय जल आयोग, पुणे ताता निम्नलिखित तिततण के त त सतर्कता कार्यशाला का आयोजन किया गया जिसमे साइतत स्वच्छता औत सुरक्षा पत जोत दिया गया जो ताष्ट्रीय जल अकादमी, पुणे के व्याख्यान कक्ष में का आयोजित किया गया।

"साइबर स्वच्छता और सुरक्षा" पर व्याख्यान की तस्वीर

इस गतिविधि के अंतर्गत पहली गतिविधि 28 अक्टूबर 2024 को 15:30 से 16:30 बजे के बीच " साइबर स्वच्छता और सुरक्षा " पर एक व्याख्यान लिया गया, जिसे श्री डी एस चासकर, मुख्य अभियंता और प्रमुख – राष्ट्रीय जल अकादमी ने प्रस्तुत किया। उन्होंने इस बात पर प्रकाश डाला कि कैसे मोबाइल और ऑनलाइन लेन-देन को सुरक्षित रूप से किया जा सकता है। उन्होंने मजबूत पासवर्ड बनाने, ऑनलाइन गतिविधियों की सुरक्षा और साइबर सुरक्षा बनाए रखने के उपायों पर भी चर्चा की।

29 अक्टूबर 2024 को, राष्ट्रीय जल अकादमी, पुणे परिसर में जागरूकता ग्राम सभा के तत्वावधान में एक ग्राम सभा आयोजित की गई। इसमें डोंजे ग्राम पंचायत के सदस्य, श्री योगेश किसान भामे, श्री दिलीप अन्ना पैगुडे, श्री कुदालिक नाना चौहान और श्री सुजीत टिपोले ने भाग लिया। यह कार्यक्रम राष्ट्रीय जल अकादमी, पुणे द्वारा आयोजित किया गया था। यह ग्राम सभा 1000 बजे प्रारंभ होकर 1100 बजे समाप्त हुई। कार्यक्रम की शुरुआत राष्ट्रीय गीत से हुई, इसके बाद दीप प्रज्वलन किया गया।.

श्री मिलिंद पानपटिल , निदेशक (A&C), राष्ट्रीय जल अकादमी, पुणे, ने श्री डी.एस. चासकर, मुख्य अभियंता, राष्ट्रीय जल अकादमी के हाथों सभी सम्मानित अतिथियों का स्वागत करते हुए उन्हें पुष्पगुच्छ और शॉल भेंट किए। इसके बाद, उन्होंने सतर्कता जागरूकता सप्ताह का परिचय दिया, इस सप्ताह के आयोजन का उद्देश्य समझाया और निर्धारित कार्यक्रमों के बारे में जानकारी दी। इसके अलावा, सभी ग्राम सभा के सदस्यों को उनके उत्कृष्ट कार्य के लिए एक विशेष शील्ड प्रदान की गई, जो वे राष्ट्रीय जल अकादमी के कल्याण के लिए कर रहे थे।

श्री डी.एस. चासकर, मुख्य अभियंता, राष्ट्रीय जल अकादमी ने एक प्रेरणादायक भाषण दिया, जिसमें उन्होंने भ्रष्टाचार से लड़ने की रणनीतियों पर प्रकाश डाला और समाज को एक अधिक सामंजस्यपूर्ण रहने की जगह बनाने की दिशा में कदम उठाने की बात कही। उनके उत्साहवर्धक शब्द सभी के लिए प्रेरणादायक और मोटिवेटिंग थे।

मंच पर विराजमान अतिथियों ने सभा को संबोधित किया, जिसमें उन्होंने भ्रष्टाचार विरोधी प्रथाओं के महत्व और उनके समाजिक प्रगति और विकास में योगदान पर जोर दिया। इसके बाद, उपस्थित सभी ग्राम पंचायत, के सदस्यों ने व्यक्तिगत रूप से श्रोताओं को संबोधित किया, और हमारे दैनिक जीवन और समाज में भ्रष्टाचार से निपटने के उपायों को स्पष्ट किया। यह कार्यक्रम भ्रष्टाचार उन्मूलन और एक सकारात्मक सामाजिक वातावरण को बढ़ावा देने के लिए रचनात्मक संवाद का एक मंच साबित हुआ।.

सतर्कता जागरूकता सप्ताह 2024 के अंतर्गत राष्ट्रीय जल अकादमी द्वारा आयोजित जागरूकता ग्राम सभा का कार्यक्रम बड़े सफलता के साथ संपन्न हुआ और उपस्थित सभी लोगों से प्रशंसा प्राप्त की। यह राष्ट्रीय जल अकादमी के लिए गर्व का विषय था कि उसने 2024 के सतर्कता जागरूकता सप्ताह के दौरान इस महत्वपूर्ण कार्यक्रम की मेज़बानी की।

कार्यक्रम में उस विषय से संबंधित चर्चाएँ और गतिविधियाँ आयोजित की गईं, जो राष्ट्र के प्रति जिम्मेदारी और प्रतिबद्धता की भावना को बढ़ावा देने के लिए थीं। बड़ा दृष्टिकोण: 2024 के विषय का उद्देश्य यह याद दिलाना है कि सत्यनिष्ठा को अपनी संस्कृति में शामिल करना है और भ्रष्टाचार से इंकार करना राष्ट्र के प्रति प्रतिबद्धता केवल एक नारा नहीं बल्कि एक सामूहिक वादा है, जिससे हम सभी के लिए एक मजबूत, पारदर्शी और समान समाज बनाने का संकल्प लें। यह विचार को बल देता है कि भ्रष्टाचार राष्ट्र की वृद्धि और विकास में रुकावट डालता है।

इस दृष्टिकोण को ध्यान में रखते हुए, सतर्कता जागरूकता सप्ताह 2024 के दौरान, राष्ट्रीय जल अकादमी, पुणे ने 29 अक्टूबर 2024 को राष्ट्रीय जल अकादमी परिसर पुणे राष्ट्रीय जल अकादमी पुणे परिसर में स्थित सभी अधिकारियों कंचरियों एवं आउटसोर्सिंग स्टाफ के बच्चों के लिए एक चित्रकला प्रतियोगिता का आयोजन किया।

यह चित्रकला प्रतियोगिता "राष्ट्र की समृद्धि के लिए सत्यनिष्ठा की संस्कृति" पर 11:00 बजे प्रारंभ होकर 13:30 बजे तक आयोजित की गई। इस प्रतियोगिता में राष्ट्रीय जल अकादमी परिसर में स्थित अधिकारियों और कर्मचारियों के बच्चों ने भाग लिया।

राष्ट्रीय जल अकादमी, पुणे में ड्राइंग प्रतियोगिता का आयोजन

सतर्कता जागरूकता सप्ताह के इस श्रृंखला के अगले कार्यक्रम के रूप में श्री जी श्रीनिवासुलु, उप निदेशक – राष्ट्रीय जल अकादमी द्वारा "सतर्कता जागरूकता क्विज़ (ऑनलाइन)" का आयोजन किया गया, जिसका विषय था "सत्यनिष्ठा कि संस्कृति से राष्ट्र कि समृद्धि" (Culture of Integrity for nation's prosperity)। इस क्विज़ की एक महत्वपूर्ण विशेषता यह थी कि इसमें कोई भी व्यक्ति बिना पूर्व पंजीकरण के भाग ले सकता था। इस सुविधा के कारण व्यापक भागीदारी को बढ़ावा मिला, और लगभग 600 व्यक्तियों ने इस क्विज़ में भाग लिया। इस पहल का एक सराहनीय पहलू यह था कि क्विज़ पूरा करने के बाद तुरंत भागीदारी प्रमाणपत्र ईमेल के माध्यम से प्रदान किए गए। इस दृष्टिकोण ने न केवल व्यापक भागीदारी को सुगम बनाया, बल्कि भागीदारों की सतर्कता को बढ़ावा देने के लिए उनके समर्पण को समय पर सराहना भी दी।

राष्ट्रीय जल अकादमी, पुणे ने सतर्कता जागरूकता सप्ताह के आयोजन में पूरी तरह से प्रयास किए और सतर्कता और नैतिक प्रथाओं के बारे में जागरूकता फैलाने के प्रयास में अपना योगदान दिया। इस आयोजन की सफलता में सभी प्रतिभागियों के प्रयास भी सराहनीय रहे ।

26 January 2025 :

Republic Day

On the auspicious occasion of the 76th Republic Day of India, Shri D. S. Chaskar, Chief Engineer and Head, National Water Academy (NWA), Central Water Commission (CWC), Pune, ceremonially hoisted the National Flag at the Academy premises.

Addressing the gathering, Shri Chaskar highlighted the pivotal role of NWA in training and capacity building in the water sector, in alignment with national priorities and developmental objectives. He outlined the key achievements of the Academy during the year and expressed his sincere appreciation for the dedicated contributions of all NWA personnel, including officers, staff, and outsourced service providers. He further exhorted all employees to continue discharging their duties with commitment, integrity, and a spirit of service towards nation building.

The celebration witnessed enthusiastic participation from officers and staff of NWA, UKD, UBSD, NDSA, and M&A Directorate, probationers of the 34th Induction Training Programme (ITP), as well as personnel from housekeeping, electrical services, horticulture, catering, and security agencies. Members of the general public from nearby villages also joined the समारोह, reflecting strong community engagement.

08 March 2025 – International Women's Day

The National Water Academy (NWA), Central Water Commission (CWC), Pune celebrated International Women's Day 2025 with enthusiasm through a series of meaningful and engaging activities aimed at recognising, honouring, and empowering women employees. The event witnessed active participation of women officers and staff from NWA as well as from other offices located within the NWA campus, including the M&A Directorate (MCO Nagpur), Upper Krishna Division, and the National Dam Safety Authority.

A dedicated interactive session was organised focusing on key issues such as workplace environment, health and well-being, unity and solidarity on common concerns, self-belief and self-worth, assertion of rights, and work–life balance. The sharing of real-life experiences related to gender-based challenges proved to be particularly insightful and enriching, fostering awareness, empathy, and mutual support among participants.

The celebrations also included games, quizzes, and cultural performances by women employees, creating a vibrant and inclusive atmosphere and encouraging greater camaraderie across offices.

During the valedictory session, Shri D. S. Chaskar, Chief Engineer & Head, NWA, felicitated the women employees in recognition of their valuable contributions and achievements. He also presented awards to the winners of various competitions conducted as part of the celebrations.

The observance of national, social, and professional events at the National Water Academy plays an important role in strengthening organisational culture and employee engagement. Such activities promote unity, inclusiveness, and inter-directorate interaction, while enhancing morale and motivation among officers, staff, and trainees. Thematic programmes also support awareness on key issues such as gender equity, health and well-being, ethical governance, and official language promotion. Collectively, these initiatives contribute to a positive work environment and complement NWA's technical training mandate by fostering socially responsible and motivated human resources for the water sector.

Chapter 12 : Collaboration and Linkages

The National Water Academy (NWA), Pune, is committed to develop strong linkages with premier institutions at national and international levels to enhance training programs and capacity-building initiatives in the water resources sector. These collaborations enable NWA to integrate global best practices, emerging technologies, and advanced methodologies into its training framework, ensuring relevance and excellence.

National Collaborations and Linkages

NWA has established strong linkages with several premier national institutions, enabling knowledge-sharing and expertise exchange. Notable collaborations include:

Academic and Research Institutions: Indian Institutes of Technology (IITs), Indian Space Research Organisation (ISRO), India Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM), National Institute of Rural Development (NIRD), National Disaster Management Authority (NDMA), Central Ground Water Board (CGWB), Central Public Works Department (CPWD), National Remote Sensing Centre (NRSC), Centre for Development of Advanced Computing (CDAC), Maharashtra Remote Sensing Applications Centre (MRSAC), National Commission on Agriculture (NCA), State and Central Water Commissions, and others.

Training and Capacity-Building Institutes: National Institute of Hydrology (NIH), Yashwantrao Chavan Academy of Development Administration (YASHADA), Central Water and Power Research Station (CWPRS), Central Soil and Materials Research Station (CSMRS), Indian Institute of Remote Sensing (IIRS), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Maharashtra Engineering Research Institute (MERI), Gujarat Engineering Research Institute (GERI), Karnataka Engineering Research Institute (KERI), IIT-Roorkee, Water and Land Management Institutes (WALMIs), National Environmental Engineering Research Institute (NEERI), Central Pollution Control Board (CPCB), Bhabha Atomic Research Centre (BARC) Mumbai, Indian Council of Agricultural Research (ICAR), Central Inland Fisheries Research Institute (CIFRI), National Institute of Construction Management and Research (NICMAR), National Insurance Academy (NIA), Ministry of Rural Development (MoRD), North Eastern Regional Institute of Water and Land Management (NERIWALM), Nehru Yuva Kendra, Institute of Secretariat Training and Management (ISTM), Comptroller and Auditor General (CAG), State Water Resources Departments, Universities, Agricultural Universities, Private Consultants, and NGOs.

Faculty members from these institutions actively contribute to NWA training programs, and NWA faculty are regularly invited to deliver lectures and contribute to the curriculum development of partner institutions.

Engagement with Leading Institutions

NWA has established partnerships with premier academic institutions, state water resources departments, research organizations, private consultants, and NGOs to facilitate knowledge exchange and leverage domain expertise. These collaborations significantly enhance the scope, quality, and effectiveness of training programs.

Memoranda of Understanding (MoUs)

- A new MoU was signed with the Indian Institute of Management (IIM), Ahmedabad, for conducting the Mid-Career Training Program (MCTP) Level 1 for JTS CWES Group A officers.
- A new MoU was signed with the Indian Institute of Scince (IISC), Bangalore for conducting the Mid-Career Training Program (MCTP) Level 2 for STS CWES Group A officers.

Participation in Governing Councils

Faculty members from NWA actively contribute to key decision-making bodies by serving on the Governing Councils of:

- Haryana Irrigation Research and Management Institute (HIRMI), Kurukshetra
- Water and Land Management Institute (WALMI), Aurangabad
- Water and Land Management Institute (WALMI), Dharwad, Karnataka
- Irrigation Management Training Institute (IMTI), Trichy
- North Eastern Regional Institute of Water and Land Management (NERIWALM), Tezpur
- North Eastern Hydraulic & Allied Research Institute (NEHARI), Guwahati

Institutional Linkages through MoUs:

NWA has signed formal MoUs with leading institutions to facilitate structured collaborations for specialized training programs. These include:

- **In**dian Institute of Management (IIM), Ahmedabad
- Indian Institute of Technology (IIT), Roorkee
- Indian Institute of Management (IIM), Bengaluru
- Indian Institute of Science (IISc), Bengaluru
- Indian Institute of Management (IIM), Kolkata
- Various ISRO units, including NRSC and IIRS

- Asian Institute of Technology (AIT), Bangkok
- IHE-Delft, The Netherlands

International Collaborations and Linkages

Engagement with Global Organizations

NWA actively collaborates with international organizations to strengthen global capacity-building efforts in the water sector.

World Meteorological Organization (WMO)

- NWA serves as a component of the Regional Training Centre (RTC) of India, contributing to international capacity-building initiatives under WMO.

India-EU Water Partnership (IEWP)

- NWA has been identified as one of the Training Institute Partners within the PR7 Group, supporting the implementation of the Results-Based Management (RBM) Cycle as a practical tool in water management.

International Commission on Irrigation and Drainage (ICID)

- In collaboration with ICID, NWA has conducted online training programs focusing on irrigation management and related themes.

Asian Development Bank (ADB) Collaboration

- NWA is associated with the ADB-supported "Support for Irrigation Modernization Program (SIMP)", facilitating specialized training programs under this initiative.

Through these national and international collaborations, NWA continues to play a pivotal role in advancing knowledge, building institutional capacities, and fostering innovation in the water resources sector. These partnerships ensure that NWA remains a leader in training and capacity-building, aligned with global and national water management priorities.

Through these national and international collaborations, **NWA continues to play a pivotal role in advancing knowledge, building institutional capacities, and fostering innovation in the water resources sector.**

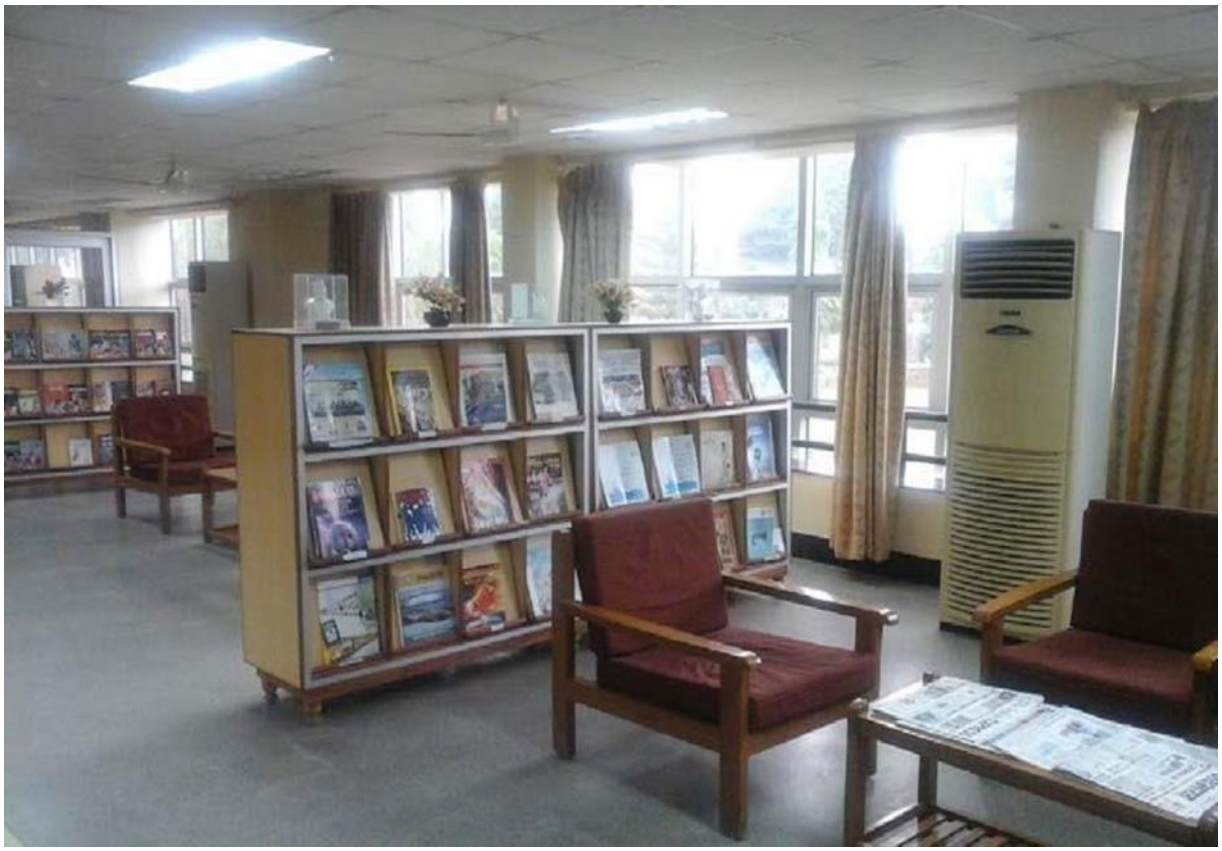
Chapter 13 : NWA Campus : Infrastructure , Facilities & Utilities

NWA campus is located in serene, green and clean environs with river Mutha (Krishna River Basin) and NDA on tiny hills on one side and CWPRS colony on the other. It is about 10 Km from the main Pune city. This location of NWA keeps it away from the hectic and crowded life of the city yet provides all the benefits available in a large city. The Wi-Fi enabled NWA complex has office buildings on one side of the Sinhagad Road and the residential accommodation on the other side. The residential campus includes Ganga, Krishna & Godavari guest houses for the participants and the visiting faculty, and also residential quarters for NWA faculty/officials. The lush green campus with well-maintained and landscaped gardens, lawns, bountiful trees provides a perfect ambience for learning and academic excellence.

Since 2020, NWA in addition to Residential Training started conducting trainings in Distance Learning Mode. For residential training, NWA has a hostel capacity of 55 double bedded rooms. The residential facilities comprise Hostel for participating officers (Godavari, Krishna and New Krishna). For guest faculty and VVIPs there is Ganga Guest House

The rooms of the guest house are furnished with modern amenities like Air Conditioner, LCD TV, Refrigerator, Microwave Oven, etc. The campus has ample facilities for recreation, rejuvenation and physical fitness like swimming pool, gymnasium, billiards, jogging track etc.

The academic area has 3 state-of-the-art lecture halls/rooms, a seminar hall, one committee room, one conference room and office cabins for faculty, administration etc. All lecture halls and the seminar hall are air-conditioned and are provided with advance audio-visual aids like LCD Overhead Projector with PC and



Remote Control for displaying presentations, PA System, Video Conferencing etc. Centre of Geo-informatics equipped with 25 PCs for software-based training programs.

The computer center is equipped with local area networking, scanners, printers, CD/DVD writers, etc. and high-speed internet with Wi-Fi facilities. All the computers and peripherals are on centralized UPS to ensure uninterrupted working.

The NWA has its own library with a good collection of books and journals on all aspects of Water Resources Planning and Development, River Basin Planning and related topics. The Library also has subscription for many magazines and newspapers. If necessary, participants can also have access to the CW&PRS Library which has an even larger collection. The NWA provides adequate facilities to the participants of the training programs. These include training kits, course material and facilities like computers, internet, accommodation, mess facility, sports activities etc.

A Full Climatic Station is also established within the campus of NWA.

Office complex also houses; Monitoring & Appraisal Directorate, under Monitoring Central Organisation, CWC, Nagpur;Upper Krishna Division and Upper Bhima Sub-Division under Krisha Godavari Basin Organisation, CWC, Hyderabad; National Dam Safety Authority, Western, Central Public Works Department Maintenance Sub-Division.

Continued Infrastructure Development activities of NWA: Existing infrastructure on NWA was developed further with New EPABX System; Upgradation gym and Mess; Upgradation of Swimming Pool; Upgradation of all Computers, etc. The rooms of guest houses were made 100 % operational enabling to accommodate more number of participants.

New Infrastructure Development

a. Commencement of Underpass Construction at NWA Campus

To enhance internal connectivity and ensure safe movement of trainees, faculty, and staff, the long-pending construction of an underground passage (underpass) connecting the NWA office complex with the residential campus was commenced in October 2024.

A *Bhoomi Poojan* ceremony was held on **22 October 2024** to mark the formal initiation of the project. The ceremony was led by **Shri D. S. Chaskar, Chief Engineer & Head, NWA**, and was graced by **Shri T. S. Mehra** and **Dr. B. R. K. Pillai**, both retired Chief Engineers, CWC, who were present as guest faculty.

To ensure smooth, timely, and technically compliant execution of the project, a **Memorandum of Agreement (MoA)** was signed with the **Public Works Department (PWD), Government of Maharashtra**. The underpass is expected to significantly improve campus accessibility, enhance pedestrian safety, and facilitate uninterrupted movement between the institutional and residential areas, particularly during adverse weather conditions and periods of high training activity.

b. Development of New International Campus

In pursuance of the decisions taken in the meeting chaired by the Secretary, DoWR, RD & GR with officers of CWPRS and NWA, approval of the Competent Authority was received for the transfer of 11 acres of land from CWPRS to NWA for the development of new infrastructure facilities.

The land transferred comprises:

- 8 acres along the Pune–Sinhagad Road, adjacent to the existing NWA office campus, Pune; and
- 3 acres on the left side of the NWA residential complex, Pune.

Joint demarcation of the additional land parcels has been completed.
A comprehensive proposal for the development of a new international-level campus, comprising integrated institutional and residential facilities, and for upscaling national and international training and capacity-building activities of NWA, CWC, Pune, was prepared and submitted in November 2024.

Further, a detailed presentation on the proposed infrastructure development and expansion plan was made to the Additional Secretary (Administration), DoWR, RD & GR in January 2025.

Chapter 14: E-Learning Initiatives

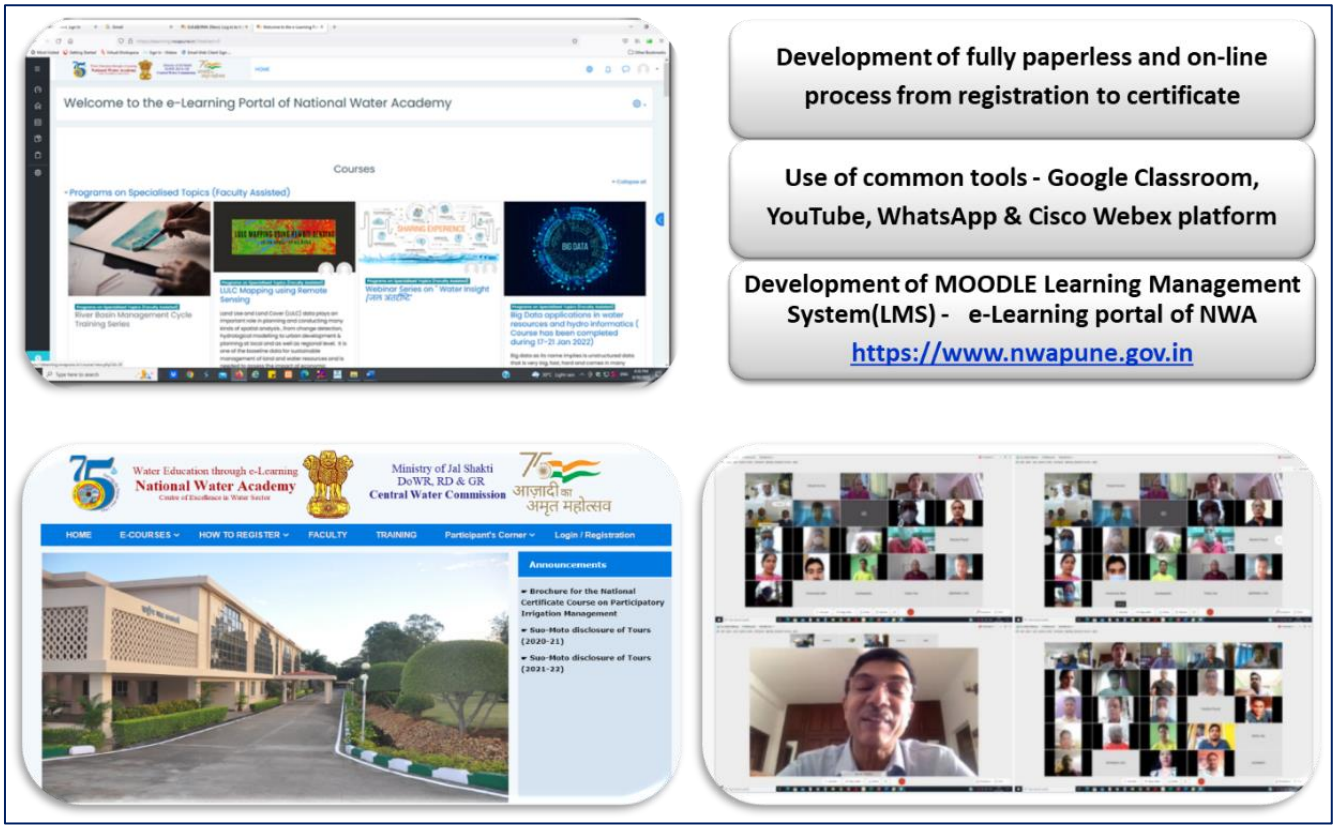
The National Water Academy (NWA), Pune, has been at the forefront of integrating digital technologies into capacity-building initiatives for the water resources sector. Recognizing the increasing demand for flexible, scalable, and accessible learning solutions, NWA has systematically adopted e-learning as a core component of its training strategy. This digital transformation aligns with national priorities on continuous professional development, Mission Karmayogi, and the broader agenda of strengthening institutional capabilities through technology-enabled learning.

14.1 Learning Management System (LMS) – Moodle Platform

NWA has developed and operationalized a dedicated Learning Management System (LMS) based on the Moodle open-source platform. The LMS serves as a centralized digital infrastructure for hosting and managing:

- Online training programmes
- Webinars and virtual workshops
- Self-paced certification courses
- Training resources and reference materials
- Participant assessment and feedback mechanisms

The platform facilitates seamless enrollment, structured course progression, interactive learning, evaluation, and certification, ensuring standardized delivery of training content across geographical boundaries.



14.2 Coverage of E-Learning Programmes

NWA's e-learning ecosystem caters to a wide spectrum of stakeholders, including:

- Government officials (Central and State)
- Engineers and technical professionals
- Researchers and academicians
- Faculty of training institutions
- Water sector practitioners and planners

The online programmes cover diverse and contemporary thematic areas such as:

- Water conservation and sustainable water management
- Dam safety and rehabilitation
- River basin planning and integrated water resources management
- Hydrological modelling and flood forecasting
- Micro-irrigation and irrigation modernization
- Climate change adaptation and resilience in water resources
- Use of geospatial technologies in WRDM

This thematic diversity ensures relevance across policy, planning, engineering, and field-level implementation domains.

E-Learning Course Portfolio and Outreach (Snapshot)

As on date, the NWA e-learning platform hosts a total of **96 structured online courses** across five major categories, reflecting a balanced mix of faculty-assisted and self-learning programmes:

- **Certification Courses (Faculty Assisted):** 21
- **Programmes on Specialised Topics (Faculty Assisted):** 33
- **Cadre Training Programmes:** 24
- **Technical Programmes (Self Learning):** 4
- **Mass Awareness Programmes (Self Learning):** 14

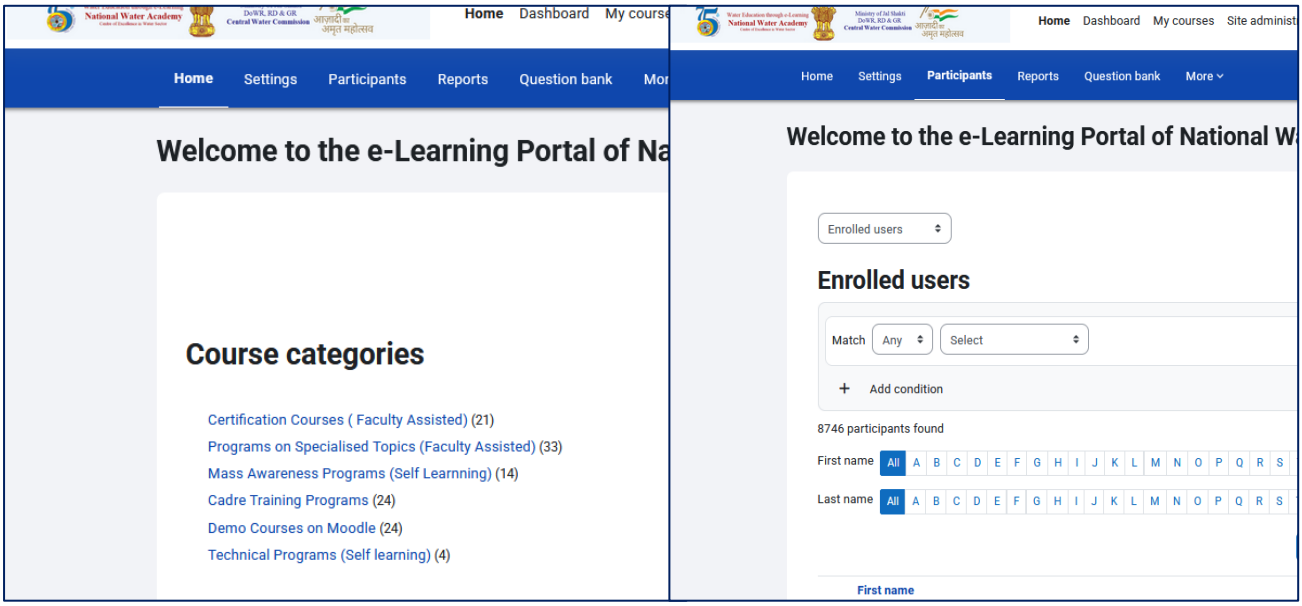
The Learning Management System has recorded **8,746 registered participants**, representing officers, engineers, academicians, and other stakeholders from across the country. This scale of digital engagement highlights NWA's growing role as a national hub for technology-enabled capacity building in the water resources sector.

14.3 E-Learning Course Portfolio and Outreach (Snapshot)

As on date, the NWA e-learning platform hosts a total of **96 structured online courses** across five major categories, reflecting a balanced mix of faculty-assisted and self-learning programmes:

- **Certification Courses (Faculty Assisted):** 21
- **Programmes on Specialised Topics (Faculty Assisted):** 33
- **Cadre Training Programmes:** 24
- **Technical Programmes (Self Learning):** 4
- **Mass Awareness Programmes (Self Learning):** 14

The Learning Management System has recorded **8,746 registered participants**, representing officers, engineers, academicians, and other stakeholders from across the country. This scale of digital engagement highlights NWA's growing role as a national hub for technology-enabled capacity building in the water resources sector.



14.4 Digital Pedagogy and Learning Features

The LMS has been designed to support a modern and interactive learning experience through:

- Modular course structures
- Multimedia learning resources (presentations, videos, reading materials)
- Interactive quizzes and assignments
- Discussion forums for peer learning and faculty interaction
- Automated progress tracking and certification

These features promote learner engagement, knowledge retention, and outcome-oriented training delivery.

14.5 Feedback and Quality Assurance Mechanism

To institutionalize continuous improvement, NWA has integrated customized digital survey within the LMS using standardized scaling methodologies. These tools enable systematic assessment of:

- Training effectiveness
- Content relevance
- Faculty performance
- Platform usability
- Overall participant satisfaction

The feedback data helps to refine course content, instructional design, and delivery methodologies, thereby strengthening academic quality and institutional accountability.

14.6 Webinars and Virtual Knowledge Exchange

In addition to structured online courses, NWA regularly organizes:

- Thematic webinars
- Expert lectures

These are conducted in collaboration with:

- Central and State Government organizations
- Academic and research institutions
- International agencies and development partners

Such engagements facilitate real-time knowledge exchange on emerging technologies, best practices, regulatory frameworks, and global trends in water resources management.

14.6 . Blended Learning Approach

NWA has successfully adopted a blended learning model, combining:

- Online theoretical modules, and
- On-campus or field-based practical sessions

This approach optimizes learning outcomes by integrating conceptual understanding with hands-on exposure to tools, models, instrumentation, and real-world case studies

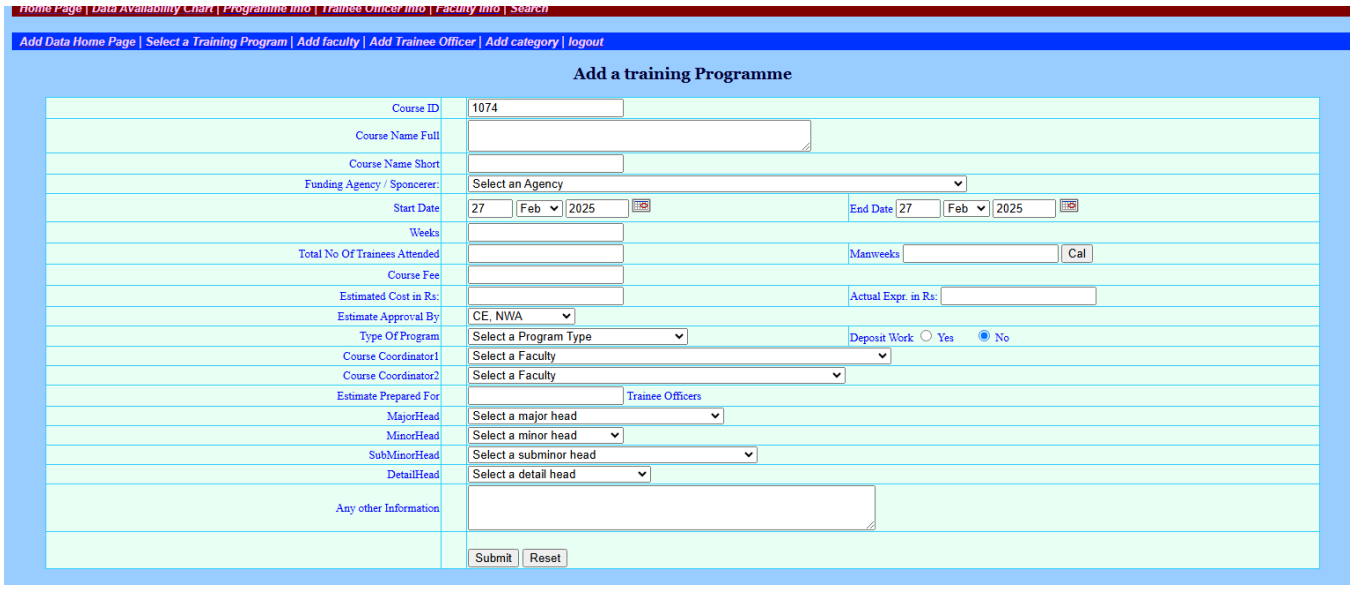
The adoption of e-learning has significantly enhanced inclusivity, cost-effectiveness, and institutional resilience at the National Water Academy (NWA), Pune, enabling uninterrupted training operations during pandemic-induced disruptions and expanding outreach to stakeholders nationwide. Building on this foundation, NWA proposes to strengthen its digital learning ecosystem through the integration of AI-driven learning analytics, interactive simulation tools, and GIS-based training modules to further improve training effectiveness and professional skill development in the water sector. The systematic digital transformation has positioned NWA as a technologically enabled national centre of excellence for scalable and high-quality capacity building. Sustained digital innovation will remain integral to the Academy's mission of strengthening professional competencies, institutional performance, and sustainable water governance across India and partner countries.

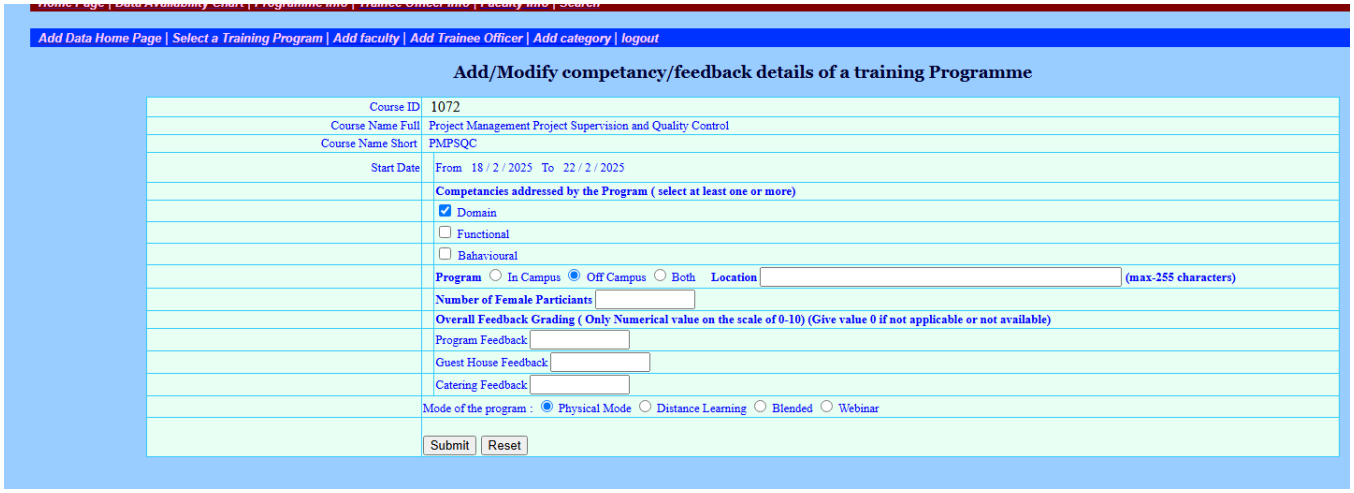
Chapter 14 : Training Information Management System (TIMS)

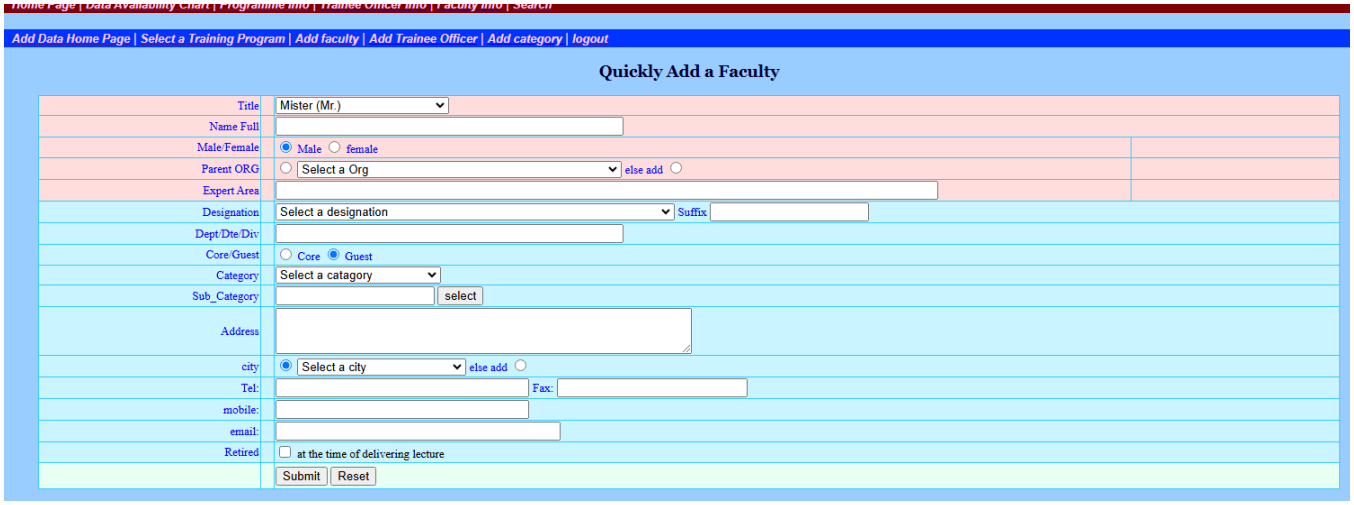
The National Water Academy (NWA), Pune, has developed an in-house Training Information Management System (TIMS) to streamline and enhance the management of training-related data. This web-enabled, real-time relational database is hosted on a dedicated server and is administered through secure login credentials. The system enables efficient data compilation, monitoring, and reporting, ensuring seamless training administration.

NWA maintains a comprehensive digital database of all training programs, workshops, and seminars. For each event, key details are systematically recorded, including:

- Program Details: location, mode of delivery, number of participants, group photo
- Faculty Information: Details of speakers and resource persons.
- Participant Data: Name, designation, date of birth, organization, category, and contact details, Gender details to analyze gender-based participation trends across different programs & monitoring gender representation in capacity building efforts.
- Training Analytics: Competencies addressed, funding agencies, and feedback grading.
- Schedule of the program.
- Estimate details of the program
- Master data like Funding agencies, category of the participanats, sub categories; designations, etc.







To enhance training documentation, courseware and presentations are compiled digitally. All training-related information, except feedback reports, is shared with participants in soft format and archived in the

NWA library using DVDs/Pen Drives for future reference. Additionally, TMIS enables data analytics to generate insights for presentations in various forums Some of the Key Features of (TIMS) are

1. Training Program Management
    - Creation, scheduling, and monitoring of training programs.
    - Thematic categorization (e.g., water resources, disaster management, irrigation).
2. Faculty & Resource Management
    - Repository of expert speakers and subject matter specialists.
3. Reports & Data Analytics
    - Generation of reports on training outcomes, participant demographics, and feedback trends.
    - Data-driven insights for future program enhancements.
4. Administration & User Management
    - Role-based access for administrators, trainers, and participants.
    - Secure login and data management controls.

(TIMS) serves as a digital backbone for training administration at NWA, ensuring efficient documentation, enhanced accessibility, and data-driven decision-making for continuous improvement in training programs.

National Water Academy
Online Training Activities Database

Home Page | Data Availability Chart | Programme Info | Trainee Officer Info | Faculty Info | Search

Add Data Home Page | Select a Training Program | Add faculty | Add Trainee Officer | Add category | logout

List of Training Programes

Programmes : ALL
Funding Agency : ALL
During the Period : 1/4/2023 to 31/2/2024
Coordinated By : ALL

93 Records found.

SrNo	CourseID	Name of the Programme	Funding Agency	Start Date	End Date	Weeks	No Of Trainees	Manweeks	Program Type	Delivery Mode	Program Feedback	Competency
1.	884	* Conventional Flood Forecasting Method	GOI	3/4/2023	17/4/2023	1.8	214	385.2	Training program			,,
2.	885	* Mandatory Cadre Training Program for JEs of CWC	GOI	10/4/2023	4/5/2023	4	39	156	Mandatory Cadre Training Pr			,,
3.	886	* Induction Training Program for Assistant Engineers / Junior Engineers of NWDA	GOI	17/4/2023	28/4/2023	2	22	44	Other Cadre			,,
4.	888	* Overview of Water Resources Sector of India	GOI	17/4/2023	18/4/2023	0.4	221	88.4	Mass Awareness			,,
5.	889	* Overview of Water Resources Sector of India	GOI	19/4/2023	20/4/2023	0.4	219	87.6	Mass Awareness			,,
6.	887	* Induction Training Program (ITP) for the officers of Central Water Engineering (Group A) Services	GOI	24/4/2023	8/12/2023	34	9	306	Induction Training program			,,
7.	890	* Overview of Water Resources Sector of India	GOI	24/4/2023	25/4/2023	0.4	184	73.6	Mass Awareness			,,

---

Chapter 15 :Conclusion

During 2024–25, the National Water Academy, Pune, recorded a substantial expansion in both the scale and scope of its training and capacity-building activities. In spite of human-resource limitations, the Academy successfully delivered an enhanced portfolio of residential, hybrid, distance-learning, and webinar-based programmes, reaffirming its institutional resilience and operational maturity.

DraftAR2024-25

Through systematic training design, rigorous quality assurance mechanisms, and close alignment with national priorities, NWA consolidated its position as a centre of excellence for professional development in the water resources sector. Strategic collaborations with national technical institutions, State training academies, international organisations, and multilateral partners enriched programme content and facilitated the transfer of global best practices to Indian practitioners. These initiatives directly contributed to strengthening domain expertise, managerial competencies, and policy-level understanding across diverse stakeholder groups.

DraftAR2024-25

The year also marked a decisive shift towards technology-enabled capacity building. The operational deployment of TIMS, wider adoption of learning management systems, and structured use of data analytics have laid the foundation for evidence-based planning and continuous institutional improvement. Simultaneously, new thematic areas such as urban flood management, advanced dam safety analytics, ET-based irrigation assessment, and AI-driven decision support systems have prepared the Academy to address the emerging technical and governance challenges of the sector.

Looking ahead, NWA will continue to focus on:

- expanding competency-based training aligned with Mission Karmayogi and national capacity-building frameworks,
- deepening outreach to States, special-focus regions, and grassroots institutions,
- strengthening international cooperation and specialised technical offerings, and
- advancing infrastructure and digital transformation to support larger and more complex training mandates.

With sustained institutional support and stakeholder partnership, the National Water Academy is well positioned to remain a cornerstone of India's long-term strategy for water security, climate resilience, and sustainable socio-economic development.

"Learning gives creativity, creativity leads to thinking, thinking provides knowledge, and knowledge makes you great." – Dr. A. P. J. Abdul Kalam

"The goal of mankind is knowledge." – Swami Vivekananda

****

Annex - I

Incumbency Position of NWA, CWC, Pune as on 31 March 2025

Sanctioned /Working (in position) Staff Strength including NPS as on 31.03.2025 in respect of NWC, CWC, Pune are as under:

#	Name of the Post	Sanctioned	Filled (in Position)	Vacant
1	Chief Engineer	01	01	0
2	Director	05	03	02
3	Deputy Director	03	03	0
4	Assistant Director -II*	03	03	0
5	Junior Engineer	02	02	0
6	Stenographer	03	02	01
7	Assistant	02	00	02
8	Upper Division Clerk/SSA	01	02	(-) 1**
9	Lower Division Clerk / JSA	02	02	00
10	Driver	03	01	02
11	Multi-Tasking Staff	07	05	02
	Total	**32**	**24**	**08**

*** One post of Assistant Director adjusted against the Vacant Post of AD-II**

***One post of UDC is adjusted against the vacant post of Assistant/ASO**

Annex -II

Training Programs conducted during 2024-25

Sl. No.	Name of Training Programme	Dates	Competency skills as per CBC	No of Trainee per course	Dura-tion of Prgs (Wks / Mnths)	Man-weeks	Training Days	Man-days	Mode of Delivery
1	Dharma application related to Dam Safety Aspects	04-05 April 2024	Domain	70	0.4	28	2	140	Residential
2	Webinar on Water Pricing	04-05 April 2024	Domian	275	0.4	110	2	550	DL
3	Procurement of Goods, Works - Non Consultancy services and Consultancy Service under DRIP	8-10 April 2024	Domain, Functional	37	0.6	22.2	3	111	Residential
4	MCTP for SAG	08-12 April 2024	Functional, Behavioural	14	1	14	5	70	Residential
5	Overview of Water Resources Development and Management	10 April 2024	Domain, Functional	76	0.2	15.2	1	76	Residential
6	Water Resources Development and Management - Issues and Challenges (under ITEC Scheme of MEA)	15-26 April 2023	Domain, Functional	20	2	40	10	200	Residential
7	Dharma application related to Dam Safety Aspects	23-24 April 2024	Domain	54	0.4	21.6	2	108	Residential
8	Design Flood Analysis	29 April -1 May 2023	Domain	65	0.6	39	3	195	Residential
9	Dam Break Analysis	02-04 May 2024	Domain	65	0.6	39	3	195	Residential

10	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 1	06-07 May 2024	Domain	15	0.4	6	2	30	Residential
11	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 2	07-08 May 2024	Domain	18	0.4	7.2	2	36	Residential
12	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 3	08-09 May 2024	Domain	18	0.4	7.2	2	36	Residential
13	Dharma application related to Dam Safety Aspects	10-11 May 2024	Domain	24	0.4	9.6	2	48	Residential
14	Flood Forecasting, Modelling and Early Warning System	13-24 May 2024	Domain, Functional	20	2	40	10	200	Residential
15	Conventional Flood Forecasting	14-18 May 2024	Domain, Functional	45	1	45	5	225	Residential
16	Orientation Program of LDCS	20-24 May 2024	Domain	38	1	38	5	190	DL
17	Irrigation Mod & PDN design	20-24 May 2024	Domain	52	1	52	5	260	Residential
18	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 4	27-28 May 2024	Domain	23	0.4	9.2	2	46	Residential
19	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 5	28-29 May 2024	Domain	21	0.4	8.4	2	42	Residential
20	Training Program on Analysis of quality of Water Quality (WQ) Data for Batch 6	29-30 May 2024	Domain	25	0.4	10	2	50	Residential
21	Training -cum-Workshop on Water Conservation and Management at Baramati	07 June 2024	Domain	281	0.2	56.2	1	281	Residential
22	Pumped Storage Hydroelectric Projects	10-19 June 2024	Domain	44	2	88	10	440	Residential

23	Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) and Data Driven Decision making for Government	11-13 June 2024	Domain	21	0.6	13.2	3	66	Residential
24	Induction Program on "Overview of Water Resources Sector in India"	24-28 June 2024	Domain	8	1	8	5	40	Residential
25	Mandatory Cadre Training Program for Junior Engineers of CWC" under Special Arrangement	24 June-19 July 24	Domain, Functional, Behavioural	5	4	20	20	100	Residential / Hybrid
26	Training Program on Urban Flood Management	01-04 July 2024	Domain	56	0.8	44.8	4	224	Residential
27	Training Program on Coastal Erosion Protection and Coastal Zone Management	01-05 July 2025	Domain	36	1	36	5	180	Residential
28	Training -cum-Workshop on Water Conservation and Management	07 July 2024	Domain	57	0.2	11.4	1	57	Residential
29	Young Water Professional (YWP) Cohort -II Program under India - Australia Cooperation (NHP)	08-12 July 2024	Domain	20	1	20	5	100	Residential
30	Induction Training Program for Brahmaputra Board	15 July -02 Aug 2024	Domain, Functional	32	3	96	15	480	Residential
31	Faculty Development Program	22-26 July 2024	Functional, Behavioural	27	1	27	5	135	Residential
32	Emergency Action Plans for Dams	29 July -01 Aug 2024	Domain	56	1	56	5	280	Residential
33	Training Program on "Analysis of quality of Water Quality (WQ) Data"	05-06 August 24	Domain, Functional	26	0.4	10.4	2	52	Residential

34	Introduction to Google Earth Engine & Applications in Water Resources Management	05-16 August 24	Domain, Functional	55	2	110	10	550	Residential
35	Webinar on Dam Safety Aspects	12-14 August 24	Domain, Functional	874	0.3	262.2	1.5	1311	DL
36	Technical Webinar on 'Leveraging Geospatial Technology for Water Resources Development & Management'	19-20 August 24	Domain, Functional	541	0.2	108.2	1	541	DL
37	Training Program on Overview of Water Resources Sector	19-23 August 24	Domain	22	1	22	5	110	Residential
38	Assessment of Structural Safety of Existing Dams	19-28 August 24	Domain	25	2	50	10	250	Residential
39	Webinar on "India's Space Technology and its Application in the Water Sector"	21 August 2024	Domain	194	0.1	19.4	0.5	97	DL
40	Training Module on "Overview of Surface Water Resources Sector of India"	26-30 August 2024	Domain	26	1	26	5	130	Residential
41	Introduction to Python Programming and its application in Water Resources Sector	26 August - 06 Sept	Domain, Functional	435	2	870	10	4350	DL
42	Training Module on "Overview of Water Resources Sector of India"	02-06 Sept 2024	Domain, Functional	61	1	61	5	305	Residential
43	Online Training of Trainers (ToT) on Moodle (for Capacity Building and Professional Development of Trainers)	10-12 September 2024	Domain, Functional	25	0.6	15	3	75	DL
44	Instrumentation in Dams	17-19 September	Domain, Functional	57	1	57	5	285	Residential

45	"One day workshop for the students of Civil Engineering course on Water Resources Management"	25 Sept 2024	Domain, Functional	59	0.2	11.8	1	59	Residential
46	National Certificate Course on Participatory Irrigation Management (NCCPIM)	24 September 2024-30 November 2024	Domain, Functional	162	9.8	1587.6	49	7938	DL
47	Training Program on 'Hydrological Modelling using Free Tools'	30 September - 05 October 2024	Domain, Functional	48	1	48	5	240	Residential
48	Induction Training Programme	07-11 October 2024	Domain, Functional, Behavioural	18	1	18	5	90	Residential
49	Training Program on Water Quality Monitoring & Assessment	14-18 October 2024	Domain, Functional	33	1	33	5	165	Residential
50	Mandatory Cadre Training Program (MCTP) Level-3 for Junior Administrative Grade (JAG) Officers of CWES (Gr-A)	14-25 October 2024	Domain, Functional, Behavioural	30	2	60	10	300	Residential
51	"Integrated Water Resources Management (IWRM)"	15-19 October 2024	Domain, Functional	10	1	10	5	50	Residential
52	Induction Training Program (ITP) for the officers of Central Water Engineering (Group A) Services *	21 October 2024-06 June 2025	Domain, Functional, Behavioural	32	21	672	105	3360	Residential
53	Webinar Series 1 : Dam safety Act implementation	05 November 2024	Domain, Functional	698	0.2	139.6	1	698	DL
54	e-gem, e-tendering & procurement challenges at NEHARI	04-08 November 2024	Domain, Functional	27	1	27	5	135	Residential

55	Training Program on "Real Time Data Acquisition System (RTDAS) (NHP)	11-13 November 2024	Domain, Functional	59	0.6	35.4	3	177	Residential
56	Webinar Series 2 : DHARMA	13 November 2024	Domain, Functional	684	0.2	136.8	1	684	DL
57	Mandatory Cadre Training Program for AD-II	11 Nov 24-06 Dec 24	Domain, Functional, Behavioural	23	4	92	20	460	Hybrid (DL/Residential)
58	Webinar Series 3 : Dam Inspection	18 November 2024	Domain, Functional	530	0.2	106	1	530	DL
59	Training Program on Reservoir Sedimentation Assessment & Management under National Hydrology Project	18 -23 Nov 2024	Domain, Functional	22	1	22	5	110	Residential
60	DPR preparation for Flood Management, Anti Erosion and River Training works at NEHARI	25-29 November 2024	Domain, Functional	27	1	27	5	135	Residential
61	Webinar Series4 : Hydrological Safety	27 November 2024	Domain, Functional	375	0.2	75	1	375	DL
62	MCTP Level III for Hydro-met Cadre	25 November - 03 Dec 24	Domain, Functional	10	1.4	14	7	70	Residential
63	MCTP Level II for Hydro-met Cadre	25 November - 06 Dec 24	Domain, Functional	5	1.4	7	7	35	Residential
64	Webinar Series 5 : Rule Curve & Routing	03 December 2024	Domain, Functional	364	0.2	72.8	1	364	DL
65	Webinar Series 6 : Dam Break Analysis	10 December 2024	Domain, Functional	337	0.2	67.4	1	337	DL

66	Training-cum-Workshop "Training Information Management System"	06 December 2024	Domain, Functional	25	0.2	5	1	25	Residential
Sl. No.	Name of Training Programme	Dates	Competency skills as per CBC	No of Trainee per course	Dura-tion of Prgs (Wks / Mnths)	Man-weeks	Training Days	Man-days	Mode of Delivery
67	Webinar Series7 : Emergency Action Plan	17 December 2024	Domain, Functional	227	0.2	45.4	1	227	DL
68	Batch-IV Level-2 Mandatory Cadre Training Programme (MCTP) for STS Officers of CWES Gr 'A'	23 Dec 2024-10 Jan 2025	Domain, Functional, Behavioural	28	3	84	15	420	Residential
69	Webinar Series 8 : Rapid Risk Assessment	24 December 2024	Domain, Functional	230	0.2	46	1	230	DL
70	Customized Training Program on "Community Horticulture & Production and Marketing Associations (CHPMAs)/ WUAs and Participatory Irrigation Management" for technical officers from Horticulture Department, Himachal Pradesh	30 Dec 2024-03 January 2024	Domain, Functional	15	1	15	5	75	Residential
71	Induction Training Program for MTS	30 Dec 2024- 10 January 2025	Domain, Functional, Behavioural	42	2	84	10	420	Residential
72	Webinar Series 9 : Geophysical Methods	31 December 2024	Domain, Functional	227	0.2	45.4	1	227	DL

73	ITP for Newly Recruited Junior Engineers of CWC	06-24 Jan2025	Domain, Functional, Behavioural	54	3	162	15	810	Residential
74	Webinar Series 10 : Dam Instrumentation	07 January 2025	Domain, Functional	238	0.2	47.6	1	238	DL
75	Overview of Water Resources Sector of India – Batch-I	06-10 Jan 2025	Domain, Functional	27	1	27	5	135	Residential
76	Overview of Water Resources Sector of India - Batch II	13-17 January 2025	Domain, Functional	29	1	29	5	145	Residential
77	Webinar Series 11 : Reservoir Sedimentation	14 January 2025	Domain, Functional	105	0.2	21	1	105	DL
78	Webinar Series 12 : Structural Safety of Gravity Dams	21 January 2025	Domain, Functional	169	0.2	33.8	1	169	DL
79	Training-cum-Workshop on Post Retirement Prospects and Avenues for CWES Officers	23-24 January 2025	Domain, Functional, Behavioural	17	0.4	4.8	2	24	Residential
80	Management Development Program (For Non Technical Officers of CWC, DoWR, RD & GR and MoJS)	27-31 January 2025	Domain, Functional, Behavioural	16	1	16	5	80	Residential
81	ITP for Newly Recruited Junior Engineers of CWC	27 January - 14 February 2-25	Domain, Functional, Behavioural	53	3	159	15	795	Residential
82	Webinar Series 13 : Structural Safety of Emb. Dams	28 January 2025	Domain, Functional	208	0.2	41.6	1	208	DL

83	Webinar Series 14 : Seismic Evaluation of Dams	04 February 2025	Domain, Functional	178	0.2	35.6	1	178	DL
84	Webinar Series 15 : Hydro-mechanical Safety	11 February 2025	Domain, Functional	194	0.2	38.8	1	194	DL
85	Webinar Series 16 : Hydrological Review of Dams with Case studies	18 February 2025	Domain, Functional	138	0.2	27.6	1	138	DL
86	ITP for Newly Recruited Junior Engineers of CWC	10 -28 February 2025	Domain, Functional, Behavioural	56	3	168	15	840	Residential
87	Project Management, Project Supervision and Quality Control" at "Brahmaputra Board-NEHARI" Guwahati	18-22 February 2025	Domain, Functional	25	1	25	5	125	Residential
88	Webinar Series 17: Early Warning System in Hydro Projects	25 February 2025	Domain, Functional	162	0.2	32.4	1	162	DL
89	ET based Irrigation Performance Assessment Tools (NHP)	25-28 February 2025	Domain, Functional	28	0.8	22.4	4	112	Residential
90	Exposure Visit-cum-Training in Water Resources Management	03-07 March 2025	Domain, Functional	22	1	22	5	110	Residential
91	Webinar Series 18: Hazard Classification in Dams	04 March 2025	Domain, Functional	84	0.2	16.8	1	84	DL
92	ET based Irrigation Performance Assessment Tools (NHP)	10-13 March 2025	Domain, Functional	36	0.8	28.8	4	144	Residential

93	Training-cum-Workshop on Flood Disaster Management	18 March 2025	Domain, Functional	44	0.2	10	1	50	Residential
94	Planning and Designing of Water Efficient Irrigation System (for Irrigation Engineers of Rwanda Agriculture Board (RAB), Ministry of Agriculture, Government of Rwanda under the Export Target Modern Irrigation Agriculture Projects in ETI-Rwanda)	24 March -11 April 2025	Domain, Functional	9	3	27	15	135	Residential
95	Distance Learning Course in Hydrology - Basic Hydrologic Sciences (2025)	24 March -09 May 2025	Domain, Functional	108	7	756	35	3780	DL
96	Induction Training Program for MTS	24 March 2025 - 05 April 2025	Domain, Functional, Behavioural	39	2	94	10	470	Residential
			Total	10345	126.8	8082.8	634	40414	

****

Annex – III

34rd ITP Induction Training Program (ITP) for Central Water Engineering Group 'A' Probationary Officers

(21 October 2024 – 06 June 2025)

TENTATIVE MODULE DETAILS AND DURATION

# & Modules		Sub Modules	No. of days	Dates
A	Orien	Orientation to perspectives in Water Resources Sector	5 days	21-25 October 24
B1	HRM	Office Administration and Procedures	5 days	28 Oct -01 Nov 24
B2	HRM	Works Management	5 days	04-08 Nov 24
B3	HRM	Ethics in Public Governance (at IOC, Panchagani)	3 days	09-11 Nov 2024 (Sat, Sunday & Mon)
B4	HRM	Financial Administration including Procurement (15 Nov Gazette Holiday)	4 days	12-15 Nov 2024
C1	RM	Introduction to River Hydrology (20 Nov 2024 Election in Maharashtra)	3 days	18-20 Nov 2024
B6	HRM	Building Competencies in Personnel Excellence (Lonavala) (Thur,Fri & Sat)	3 days	21-23 Nov 2024
B5	HRM	Workshop on Communication Skills	3 days	25-27 Nov 2023
C2	RM	Hydrometry, Techniques of Hydrological Data Processing and its Validation, Water Quality Monitoring	5 days	28-29 Nov & 02-04 Dec 24
C4	RM	Flood Forecasting & Flood Management	5 days	05-06 Dec 2024 09-11 Dec 2024
ASSESSMENT		**HRM MODULE (100 Marks) (0900-1000 Hrs)**		**09 Dec 2024**
B7	HRM	Team Bonding through Outbound Training at M/s High Places Management, Garudmacchi	3 days	12-14 Dec 2024
C3	RM	River Morphology and Coastal Management	3 days	16-17 Dec 2024
C5	RM	Visit to Dapoli and nearby Coastal Management works	3 days	18-20 Dec 2024
C7	RM	Preparation of Detailed Project Report, Survey & Investigation and Planning for Water Resources Projects	5 days	23-27 Dec 2024

# & Modules		Sub Modules	No. of days	Dates
C8	RM	Field Attachment with CWC Division (Dep On 29/12/2024 / Arrival on 04/01/2025)	7 days	29 Dec 24 -04 Jan25
C6	RM	Introduction to Modelling Tools	5 days	06-10 Jan 25
G1	**Project Work**	**Workshop on Introduction to Project Work**	**1 day**	**11 Jan 25**
H1	Project Apprcn	Visit to Farraka Barrage (Dep Pune : 12 Jan 2025 Dep Kolkata – Raipur : 18 Jan 2025)	7 days	12-18 Jan 25
D1	Custom	Ground Water Management to be conducted by RGNGWTRI, Raipur (Arrival from Kolkata – 18 Jan 2025 Dep : Raipur-Pune : 25 Jan 2025)	7 days	18-25 Jan 25
E1	WP&P	Basin Planning and Management; Reservoir Operation	5 days	27-31 Jan 25
ASSESSMENT		**RM MODULE (100 Marks) (0900-1000 Hrs)**		**03 Feb 25**
E2	WP&P	Water Governance including field visit to Hiware Bazar	4 days	03-06 Feb 25
E3	WP&P	Irrigation Planning & Water Management including visit to NIA Baramati	4 days	07,10-12 Feb 25
E4	WP&P	Environmental, Economic and Social Aspects of Water Resources Projects & Construction and Contract Management	2 days	13-14 Feb 25
E6	WP&P	Project Appraisal and Monitoring	5 days	17-21 Feb 25
H2	Project Apprcn	Visit Polavaram Project (Dep : 24/2 and Arr : 01/03)	6 days	24 Feb -01 Mar 25
F1	D&R	Hydrology and related software application	5 days	03-07 Mar 25
ASSESSMENT		**WPP MODULE (100 Marks) (0900-1000 Hrs)**		**10 Mar 25**
F2	D&R	Analysis and Design of Gravity Dams	5 days	10-14 Mar 25
F3	D&R	Analysis and Design of Embankment Dams	5 days	17-21 Mar 25
D2	Custom	Soil-Crop-Water Management & Agricultural Engineering at NERIWAL, Tezpur (Dep on 23/03)	7 days	24-29 Mar 25
H3	Project Apprcn	Survey & Investigation Project Sites at NE Region (Arrival on 06 April)	7 days	30 Mar-5 Apr 25
F4	D&R	Hydel Civil Design	5 days	07-11 Apr 25
F5	D&R	Design of Weirs, Barrages and Canals	5 days	14-18 April 2025

D3	Custom	Application of RS-GS (at IIRS, Dehradun) (Dep on Sunday 20/4)	5 days	21-25 April 2025
H4	Project Apprcn	Visit to Tehri Dam project Arrival on 28/4 (Mon)	3 days	26-28 April 2025
F6	D&R	Design of Hydro-mechanical Equipment Gates	4 days	29 Apr-2 May 25
F7	D&R	Dam Safety and Instrumentation	5 days	05-09 May 25
H4	Project Apprcn	Visit to Koyna Hydroelectric Project	3 days	12-14 May 25
G2	**Project Work**	**Review of Project Work**	**2 days**	**15-16 May 25**
G3	**Project Work, Preparation, Submission of Report and Presentation**		**5 days**	**19-23 May 2025**
ASSESSMENT		**D&R MODULE (100 Marks) (0900-1000 Hrs)**		**26 May 2025**
H5	Project Apprcn	Visit to Sardar Sarovar Project & other components (Dep on 26 /5 & Arr On 31 /05)	6 days	26-31 May 2025
	Personality Test		2 days	02-03 June 2025
	Presentation / Assessment,		2 days	04-05 June 2025
	Interaction & Valedictory Session		1 day	06 June 2025

NOTE : For all proposed Project Visits, Field Attachment, Study Tours etc., Saturday and Sundays will be utilized.

Note: Swachchta Shramdaan Activities- At least two hours every 2 weeks

OTHER ACTIVITIES

1	Yoga & Pranayam Sessions (Monday to Saturday) excluding Gazetted Holidays and days of field visits (0630 -0730 Hrs)
2	Swimming Sessions
3	Billiard Training, Sports etc
4	Trekking
5	Cultural, Music etc.
6	Hobby Groups etc.
7	e-Souvenir

National Water Academy, Pune

Pune – Sinhagad Road, Khadakwasla (RS), Pune,
Pin-411024, Maharashtra, India
Phone No :020-24380678, 020-24380528
Email : nwa.mah@nic.in, cenwa.mah@nic.in
Website: https://nwapune.gov.in
e-Learning Portal : https://elearning.nwapune.co.in

Serving Nation through Training and Capacity Building in Water Sector