

**GOVERNMENT OF TELANGANA  
IRRIGATION & CAD DEPARTMENT**

From  
Sri B.Nagendra Rao, M.Tech.,  
Engineer-In-Chief (Admn),  
Irrigation & CAD Department,  
Govt. of Telangana,  
1<sup>st</sup> Floor, Jalasoudha,  
Errummanzil, Hyderabad - 82

To  
All the Engineers-in-Chief  
And Chief Engineers of  
Irrigation & CAD Department,  
Govt. of Telangana.

Lr. No.ENC(AW)/EE(Admn)/ADA/AEE3/Other Trq/2020,

Dt.09-10-2020.

Sir,

Sub:- I&CAD Department – Inviting Registrations/Nominations for online certification in Dam and Network Safety Assurance - Calling of online nominations – Participation - Reg.

Ref:- Secretary General, ICID & Former Chairman, CWC, Lr.No.ICID/AFA /DNSA-117, Dt.25-09-2020.

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It is to inform that, the Secretary General, ICID & Former Chairman, CWC, vide reference 1<sup>st</sup> cited, has informed that Dam and Network Safety Assurance Programme Secretariat, New Delhi, is inviting nominations of the Participants for the unique online course and skill enhancement for “**Dam and Network Safety Assurance**”. This course is being delivered through an “Online Learning Management System (LMS) by leading domine experts having a combined experience of more than 800years. The online LMS based delivery mode of the course ensures that skill enhancement doesn't take place at the expense of the organization's time and rather at a time and pace chosen by the trainee.(Copy of Broacher is enclosed).

Further, it is informed that, Dam safety bill has already passed in the Lok Sabha and is now pending with Rajya Sabha. It is likely that the same may come into effect shortly. Already, with DRIP-II in place, there is a need of trained dam safety professionals at the field level who are able to coordinate with various expert committees and panels and who take up the formulation of remedial measures and also supervise the implementation of the same.

The course content has been designated for fresh and practicing engineers who are involved with the dam operations, surveillance and safety assurance works and dam portfolio managers responsible for setting up dam safety programmes.

The course will be delivered through a Learning Management System (LMS), where pre-recorded lectures, videos, presentation, reading material etc, will be uploaded so that, participants can go through these at their own pace, within the time frame of

6months. Live sessions also will be organized wherein participants can directly interact with experts and raise their queries. Preferred mode of receiving questions would remain through email, enabling development of a comprehensive Q&A.

The fee for the Government Departments, Ministries is Rs.6,000 per Participant and GST will be charged extra as applicable (i.e., present rate of GST is 18%).

The registration can be done online using the link [www.damsafety.co./register](http://www.damsafety.co./register). in case of bulk registration, contact ICID/AF Academy at details provided hereunder.

**AF Academy:** Ms.Praggya Sharma, Secretary General, AF Academy, E-166, 2<sup>nd</sup> Floor, Kalkaji, New Delhi – 110 019; Mobile: +91-9818568825, 9873556395, Email:[info@aquafoundation.in](mailto:info@aquafoundation.in); [praggya@damsafety.co](mailto:praggya@damsafety.co)

**ICID:** Mr.Harish Kumar Varma, Executive Director, International Commission On Irrigation And Drainage (ICID), Central office: 48 Nyaya Marg, Chanakyapuri, New Delhi- 110021, [Tel:+91-11-26115679](tel:+91-11-26115679), +91-11-26116837, Email:[icid@icid.org](mailto:icid@icid.org), Website:<https://www.icid-ciid.org>.

Therefore, the concerned Unit officers are requested to nominate the officers working under their control who are involved with the dam operations, surveillance and safety assurance works and dam portfolio managers responsible for setting up dam safety programmes, to the above online course through online.

Further, it is also informed that, the payment of registration fee for the above programme shall be borne by the concerned Chief Engineer under relevant head of account of their office.

Encl:- As above.

Yours faithfully,  
Sd/-B.Nagendra Rao  
Dt.09-10-2020  
Engineer-in-Chief (AW)

  
12.10.2020  
for Engineer-in-Chief (AW)

✓ Copy to the Deputy Executive Engineer(C), to place in Irrigation website.





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# DAM AND NETWORK SAFETY ASSURANCE

(An ICID - AFA Initiative)



AF ACADEMY

URGENT  
3/10/2020

To,  
The E-in-C (AW)  
Irrigation & CAD Department  
Jalasoudha Building, Errum Mazil,  
Hyderabad 500 082  
Telangana

Ref. No.: ICID/AFA/DNSA-117  
Dated: 25/09/2020

## Sub: Inviting registrations/ nominations for online certification in dam and network safety assurance

Greetings from The International Commission on Irrigation and Drainage (ICID) & AF Academy!

E(A)  
Dams in any country represent a major investment and huge benefits to the population in terms of irrigation, power and flood control. Water management projects especially the irrigation projects are long-lasting entities with a practically indefinite life. Being long-lasting structures, they need continued care and surveillance for maintaining their health. As against designing a new dam, this requires slightly different skills and resources.

DA  
FEB 3  
PK  
03-10-2020  
Dam safety bill has already been passed in the Lok Sabha and is now pending with Rajya Sabha. The same may likely come into effect shortly. Already, with DRIP II in place, **there is a need of trained dam safety professionals at the field level** who can coordinate with various expert committees and panels who take up the formulation of remedial measures and also supervise the implementation of the same.

Many countries are facing acute challenges of maintaining and managing their infrastructure and are in dire need of a disciplined approach which the dam safety management brings. The unique course covers the entire gamut of establishing a dam and network safety regime in the country and all the techniques involved in assuring the dam and network safety.

The course is being delivered through an **Online Learning Management System (LMS) by leading domain experts having a combined experience of more than 800 years**. The online LMS based delivery mode of the course ensures that skill enhancement doesn't take place at the expense of the organization's time and rather at a time and pace chosen by the trainee.

We are pleased to enclose a detailed brochure of the course and nomination form.

Through this letter, **we request you to nominate the maximum number of participants** for this unique online course and ensure skill enhancement for 'Dam and Network Safety Assurance'.

Thanking you and looking forward to a positive response

Yours sincerely,

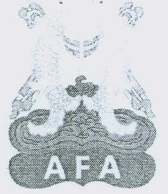
(Ashwin B. Pandya)  
Secretary-General, ICID & Former Chairman, Central Water Commission  
Email: dams@damsafety.co; Phone: +91-9818568825 (Ms. Pragya Sharma)

**Dam and Network Safety Assurance Program Secretariat**

E-166, Second Floor, Kalkaji, New Delhi – 110019 (India)  
Telefax: +91-11-41318030, Ph: +91-9818568825, +91-9873556395  
Email: dams@damsafety.co; Web: www.damsafety.co



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## Registration Form

### Online Certificate Course on Dam and Network Assurance and Safety

Name (Mr./Ms./Dr./Prof./Er.): .....

Organization: .....

Designation: .....

Address: .....

City: ..... State: ..... Pin Code: .....

Ph (0): ..... Ph (R): ..... Mobile: .....

Email 1: ..... Email 2: .....

Mode of Payment: DD No. .... Bank: .....

GST Number: .....

#### Online Transfer Details:

Name of the Bank: ICICI Bank Ltd

Address of the Bank: ICICI Bank, 9 A, Phelps Building, Connaught Place, New Delhi- 110001

Name of the Account holder: AQUA FOUNDATION

A/C No.: 000701260885

IFSC Code: ICIC0000007

Swift code: ICICI NBB CTS

#### Fee Structure:

Government Departments, Ministries	INR 6,000 per participant
Private, PSUs, Boards	INR 10,000 per participant
Students, Research Scholars (full time)	INR 4,000 per participant

- GST will be charged extra as applicable (present rate of GST is 18%).
- In case of multiple registrations same form to be photocopied.





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# CERTIFICATE COURSE ON DAM AND NETWORK SAFETY ASSURANCE



AF ACADEMY

Presented by  
**Industry Stalwarts including**

(in alphabetical order of first name)



*Mr. Ashwin B Pandya*  
(Secretary General, ICID and Ex-CWC, Chairman)



*Dr. A K Dhawan*  
(Ex-Director, CSMRS)



*Dr. B R K Pillai*  
(Commissioner, CAD, MOJS)



*Mr. C S Mathur*  
(Ex-CWC, Chief Engineer)



*Mr. D K Sharma*  
(Former Chairman, BBMB)



*Mr. Gulshan Raj*  
(CE, DSO, CWC)



*Mr. Manohar Singh*  
(Ex-CWC, CE)



*Mr. Murari Ratnam*  
(Ex-Director, CSMRS)



*Mr. N K Mathur*  
(Ex-CWC, Member)



*Mr. N N Rai*  
(Director, CWC)



*Mr. P Ramaraju*  
(Engineer-in-Chief, Retd.,  
W.R.D., A.P.)



*Dr. R Chitra*  
(Joint Director, CSMRS)



*Mr. Rajesh Pandey*  
(Director, Dynasoure Concrete  
Treatment Pvt. Ltd.)



*Mr. Saibal Gosh*  
(Chief Engineer, CWC)



*Dr. Sam Johnsson*  
(Member, ICOLD Committee of  
Dam Monitoring & Surveillance)



*Dr. Sanjay Rana*  
(Chairman, Aqua Foundation)



*Mr. S K G Pandit*  
(Ex-CWC, Member)



*Mr. V Subramanian*  
(Chief Executive/Director,  
CARPI INDIA Waterproofing  
Specialists Pvt. Ltd.)



*Mr. V V Arora*  
(Former Joint Director & Head,  
CCDR, NCB)



*Dr. Yella Reddy*  
(Dean, Agriculture University  
& Ex-Director, WALAMTARI)



*Mr. Y K Handa*  
(Ex-CWC, Chief Engineer)



## Course Focus:

The course is meant for the professionals directly engaged in the works of maintaining and managing the irrigation and multipurpose projects having headworks in form of storage structures of various sizes and associated water distribution networks for providing water to the beneficiaries. The course aims at improving the skills of the professional entrusted with the responsibility in directly managing the facilities and ensuring their safety as well as reporting the status to the higher level of managements. The works of such nature requires exposure to the basics of the sciences and technologies that go into designing and operationalizing such facilities, deteriorations that can be expected over long years of usage, implications thereof towards continued safety of operators and hazard levels posed to the downstream communities, possible field and laboratory investigations techniques for identification of problems and reporting the observations to the expert personnel in a scientific and lucid manner so that the status at the field level is fully appreciated while planning the remedial measures by them.

The areas of safety assurance in general are very wide and comprise of high degree of expertise and skills extending to the cutting-edge level of technologies and involve a fair amount of in-depth experience in each discipline. However, such level of expertise and skill sets cannot be replicated easily with the growing level of asset base and increasing age of the existing assets. A middle layer is required who is generally aware of the issues that can get generated in such a scenario and how to deal with them as a first line of decision and defense. At the higher levels, such personnel will be the key to the setup to monitor and collate the status of the asset portfolio being managed by an organization or department.

Water management projects especially the irrigation projects are long lasting entities with practically indefinite life. Even if the beneficiary land area changes its character in terms of land use, the utility of the head conservation works and the distribution networks remain or improve as they are required to deliver the water for larger economic good in keeping with development in economy of the area. On the other hand, the tenure of a professional employed for managing the project may be limited in keeping with the shortage of personnel and also the aspirations of the individual towards career progression. Many of the developing countries are facing this problem due to a smaller pool of manpower resources not in keeping with the growth in population of the projects. At any point of time, a change of hands is inevitable with concomitant dangers of gaps in knowledge transfer. Presence of exposure to a course of this nature provides necessary awareness to the incoming professional about the scope and nature of the assignment at hand and also makes the charged professionals aware of standard protocols and procedures involved.

This is a first course in a set of courses of increasing levels of expertise and narrowing of focus for advanced exposure of relevant sub sets of professionals.

The professionals at ICID and Aqua Foundation have witnessed such situations first hand and realize that the skill sets are in need of a wider spread in view of growing importance of an assured delivery of water to the beneficiaries and also a continued assurance of performance worthiness of the components involved.

Dam safety bill has already passed in the Lok Sabha and is now pending with Rajya Sabha. It is likely that the same may come into effect shortly. Already, with DRIP II in place, there is a need of trained dam safety professionals at the field level who are able to coordinate with various expert committees and panels who take up the formulation of remedial measures and also supervise implementation of the same. This course will enable the project authorities to create such a group for better progress in their dam safety related works. Similarly, in India, there is increasing emphasis on demand side management for water resources. In such cases, the status of network capacities for delivering the required volumes will also require assurance. Maintenance of networks will therefore receive increasing importance. In this context, the course will be able to fulfil this gap.



## Course Content:

The course content has been designed for fresh and practicing engineers who are involved with the dam operations, surveillance and safety assurance works and dam portfolio managers responsible for setting up dam safety programmes.

### Section 1

This section will expose the participants to the following areas:

- Overview of Dam Safety Aspects
- Legislative Provisions of Dam Safety- Existing and Future
- Overview of Basic Design Philosophy of Dam, Defence Measures and Features Provided for Safety
- Preparing and Maintaining Documentation for Dam and Network for Safety Assessment
  - o Concrete and Masonry Dams and Canal Network Components
  - o Earth and Rockfill Dams and Canal Embankments
  - o Pipelines and Control Structures
- Overview of Basic Design Philosophy for Conveyance Networks and Associated Structures- Canals and Pipelines
- Overview of Flood Risks and Handling them in Real Time, Effect of Flood Operations on the Safety and Upkeep of Dams and Networks
- Overview of Seismic Risks and Protocols for Assessment of Safety and Performance Worthiness
- Instrumentation and Structural Behaviour Analysis
- Durability of Concrete Structures
- Behaviour and Performance Observation Programme
- Specialised Materials and Techniques for Repairs and Rehabilitation- Introduction
- Preparing and Carrying Out On-Site Inspection of a Concrete/ Masonry and Earth/ Rock fill Dams
- Hydromechanical Equipment and Dam Safety
- Evaluation of Different Types of Energy Dissipating Arrangements, and Remedial Measures
- Under Water Inspection Techniques
- Use of Hand-Held Mobiles, GPS and Remote Sensing Techniques for Network Status Assessments and Mapping
- Efficiency Measurement of Conveyance Network
- Network Status Assessment Using Mobile Technologies
- Assessment of Emergency Preparedness and Disaster Management Under Normal and Extreme Conditions, Information Communication, Processing and Decision Protocols, Standard Operating Procedures
- Dam Safety Instrumentation Monitoring in Dams and Allied Structures
- Rock Mechanics Investigations for Dams and Reservoir Slope Stability Problems
- Geomembranes for Seepage Control in Dams
- Latest Format being used for Writing Inspection Reports for Dams in India

### Section 2

This section will expose participants to the latest investigation techniques in the following areas:

- Geotechnical Investigations of Existing Dams
- Concrete Investigations and Testing
- Geophysical Techniques for
  - o Leak Path Detection
  - o Internal Erosion
  - o Identification of Zone of Water Accumulation
  - o Cavity/ Sinkhole
  - o Concrete/ Masonry Degradation (Weak Zones)

