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JALANSH

The Monthly Newsletter of Central Water Commission

UPCOMING EVENT

Message

S. Masood Husain,
Chairman, CWC

The New Year began on a good note. Hon'ble Prime Minister inaugurated the Dolaithabi Barrage Project in the state of Manipur on 04.01.2019. It is one of the 99 prioritized projects under PMKSY-AIBP whose progress has been regularly monitored by CWC.

On 05.01.2019, Hon'ble Prime Minister laid the foundation stone for completion of balance works of North Koel Reservoir Project in Jharkhand. All necessary environmental clearances were obtained after it was decided to restrict the Full Reservoir Level (FRL) and the Union Cabinet approved the proposal to complete the balance works of the Project.
A contract agreement amongst CWC, Water Resources Departments of State Governments of Bihar and Jharkhand and WAPCOS Limited was signed in September 2017 for completion of balance works. Execution of the Project is being actively monitored by the Technical Evaluation Committee (TEC) headed by Member(WP&P), CWC. The project is scheduled for completion by March, 2020.

Shri Nitin Gadkari, Union Minister for Water Resources, River Development and Ganga Rejuvenation and the Chief Ministers of Uttar Pradesh, Rajasthan, Uttarakhand, Haryana, Himachal Pradesh and Delhi signed a Memorandum of Understanding (MoU) for the construction of Renukaji Multi-Purpose Dam Project across Giri river in the Upper Yamuna Basin. The Project is one of the 16 identified National Projects and was accepted by the Advisory Committee of MoWR, RD & GR in its meeting held on 06.03.2017. The Revised Cost Estimate of Rs. 7360.34 crore at Nov, 2018 price level has been submitted by the Project Authority and the same is being processed in CWC and CEA.

Indian National Committee on Surface Water, Central Water Commission (INCSW-CWC), MoWR,RD&GR and WAPCOS Limited under the aegis of International Commission on Irrigation and Drainage (ICID) organized the '9th International Micro Irrigation Conference(IMIC)' during 15-20 January, 2019 at Aurangabad, Maharashtra. The event was extremely successful and about 750 experts, professionals, policy makers, academicians, water industry representatives from India and abroad gathered to deliberate on the issues around micro-irrigation. CWC provided all technical support for the event.

I take great pleasure to invite all the professionals associated with dam safety and related disciplines to the 'International Dam Safety Conference(IDSC) – 2019' to be held at Bhubaneswar, Odisha, during 13-14 February 2019 under the aegis of Dam Rehabilitation and Improvement Project(DRIP). IDSC-2019 is being organized jointly by CWC, Water Resources Department, Govt. of Odisha and the World Bank. The Emergency Action Plan(EAP) for Hirakud Dam prepared under DRIP was submitted to Govt. of Odisha by CWC in January, 2018.

Thirty seven(37) newly recruited Central Water Engineering Service (CWES) Group 'A' officers have reported for work at their respective places of posting after completion of 30 week long 'Induction Training Programme' at National Water Academy(NWA), Pune followed by a Bharat Darshan component as part of the training. I wish all of them a successful professional journey in the challenging water resources sector.

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9th International Micro Irrigation Conference (IMIC)




The 9th International Micro Irrigation Conference was organised by Indian National Committee on Surface Water, Central Water Commission (INCSW-CWC), MoWR, RD&GR under the aegis of International Commission on Irrigation and Drainage (ICID) during 15.1.19 to 20.1.19 at Aurangabad, Maharashtra. Around 750 experts, professionals, policy makers, academicians, water industry representatives from around the globe and farmers from India gathered to deliberate on the issues around micro-irrigation and the avenues that it opens up for the agricultural industry.

The inaugural of the conference on 16.1.19 saw the gathering of around 1200 participants and witnessed an august presence of international and national dignitaries as given below:

- Sh. Nitin Gadkari, Hon'ble Minister (WR,RD&GR) - Govt of India
- Sh. Devendra Fadnavis, Hon'ble Chief Minister of Maharashtra
- Sh. Arjun Ram Meghwal, Hon'ble MoS (WR, RD&GR), GoI
- Dr. Mahendra Reddy, Hon'ble Minister for Agriculture, Water and Maritime Development - Govt. of Fiji
- Sh. Haribhua Bagade, Speaker - Maharashtra Assembly
- Sh. D. K. Shivakumar, Hon'ble Cabinet Minister Water Resources Department - Govt of Karnataka
- Sh. Vinoda Paliencar, Hon'ble Minister of Water Resources - Government of Goa
- Sh. Surya Pratap Shahi, Hon'ble Minister of Agriculture - Government of Uttar Pradesh

Sh. U. P. Singh, Secretary (WR, RD&GR), Er. Felix Reinders, President – ICID and Sh. S. Masood Husain, Chairman - Central Water Commission were also present on the occasion.

During the inaugural event, a book titled 'Water Conservation and Saving in Agriculture' by Water Resource Department, Government of Maharashtra along with a Souvenir on 9th IMIC was released by Sh. Nitin Gadkari, Hon'ble Minister of Water Resources, RD & GR, Government of India and Sh. Devendra Fadnavis, Hon'ble Chief Minister of Maharashtra.

A full day pre-conference special session was organised on 15th January, 2019 at WALMI, Aurangabad for the farmer community on updated Micro Irrigation technology which brought deep collaboration between the farmers and the technology providers. The conference also hosted **Kisan Bazar** and Technical Exhibitions, wherein the farmers, delegates and visitors interacted with the private players showcasing the latest technological innovations in micro-irrigation.

The main technical sessions were held during 16th to 18th January, 2019 wherein 23 technical sessions including 3 Plenary Sessions and 8 special sessions were organized on the following themes and sub-themes:

Main Theme: Micro- Irrigation in Modern Agriculture

Sub-theme 1: Micro-Irrigation Design, Innovations, and New Techniques for increased Crop Productivity

Sub-theme 2:Micro-irrigation fund & Government support through Micro Irrigation

Sub-theme 3: Micro-Irrigation for Cluster Level Farming & small farm holders

Sub-theme 4: Operation & Maintenance Services and Capacity Development for the Micro Irrigation Systems

The valedictory session of the conference was held on 18th January, 2019 which was chaired by Sh. U. P. Singh, Secretary, MoWR, RD&GR in the presence of Sh. S. Masood Husain, Chairman, Central Water Commission, Er. Felix Reinders, President, ICID and others.

The conference witnessed a record number of 750 delegates consistently for three days from across the globe including 100 international delegates from the World Bank, ADB, Islamic Development Bank, CIMMYT, IRRI etc. A total of 150 papers were received during the conference making it a mega-hit for technological exchange. The conference was a grand success in terms of standard of papers presented, logistic arrangements, participation of national and international luminaries, smooth professional conduct of technical sessions, extraordinary cultural programme and elaborate exhibitions.

Agreement for Renukaji Multipurpose Dam Project

On 11th January 2019, a MoU for the Renukaji Dam Multipurpose Projects was signed by Sh. Nitin Gadkari, Hon'ble Minister (MoWR, RD&GR) and Chief Ministers of six states/UT viz. Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Rajasthan and Uttarakhand.

Due to rapid growth of population in and around Delhi, the scarcity of drinking water is touching alarming proportion and taking cognizance of the problem, Renukaji Dam Project has been contemplated as a storage scheme on river Giri, a tributary of river Yamuna, to augment the drinking water supply of National Capital Territory of Delhi. As the dam is situated near the famous religious shrines of Renukaji and historical Renuka Lake, the project has been named as 'Renukaji Dam Project'.

The Project envisages construction of 148 m high rockfill dam at about 5 km upstream of existing Jateon Barrage and about 375 m downstream of confluence of Jogar-ka-khala with river Giri in District Sirmour of Himachal Pradesh The live storage of 498 MCM will ensure a firm water supply to the tune of 23 cumecs during 9 months (October to June) to Delhi. The entire dam complex, storage reservoir and catchment area lies within territorial boundaries of Himachal Pradesh.

It is also proposed to utilize the available head to generate 40 MW (2x20 MW) of power in the power house proposed at the toe of dam. The project will generate 200 MkWh of firm power in a 90% dependable year. Project has been planned purely to supply the drinking water and generation of power is incidental.

The Government of India declared this project as a National

Project in February, 2008. It was accepted by the Advisory Committee of MoWR, RD & GR in its meeting held on 06.03.2017 subject to certain conditions. The Revised Cost Estimate of Rs. 7360.34 crore at Nov, 2018 price level has been submitted by the Project Authority and the same is being processed in CWC and CEA.

The additional water available in Yamuna Basin due to the construction of Renukaji Dam will be made available to Delhi on priority to meet the drinking water needs as worked out by Upper Yamuna River Board. The arrangement will be only until other storages viz. Lakhwar and Kishau Multipurpose Projects in upper Yamuna catchment are created. Thereafter, the releases from Renukaji Dam shall be carried out keeping in view the overall annual allocation of Yamuna water as per MoU dated 12.05.1994 between the party States.

Signing of MoUs for Implementation of CMIS in Gujarat and Maharashtra

Two tri-partite Memorandum of Understanding (MoU) for implementation of Coastal Management Information System (CMIS) were signed amongst CWC, CWPRS and State Govt of Gujarat and Maharashtra for respective states on 7th Jan, 2019 at Gandhinagar. The total cost for the project is Rs. 695.351 Lakh for the establishment of two coastal observation sites in Gujarat (southern region) and Maharashtra (northern region).

The overall objective of the project is to implement CMIS and establish a Centralized Data Center (CDC). This would involve expert agencies of Central and State Govt. to collect field data on coastal processes for formulation of long term plan and coastal protection measures along Indian Coast. Under this activity, the data collection in the near-shore and coastal area would be emphasized. This will help in developing suitable SOP/ Manual/ Guideline for coastal data collection depending on the parameter type, methodology of data collection, etc.

Background

The process of collection of data on coastal processes is essential for the evolution of the long term plans and coastal protection measures. Accordingly, GoI approved the implementation of CMIS under the on-going scheme of MoWR, RD&GR namely "Development of Water Resource Information System (DWRIS).

In October 2016, tripartite MoUs were signed among IIT Madras, CWC and the respective State Govt/UT Administration for the implementation of CMIS on one vulnerable coastal site in each state viz. Kerala, Tamil Nadu and UT of Puducherry.

Subsequent discussion was held between CWC and other expert agencies regarding the extension of implementation of CMIS in other maritime States and UTs. Central Water and Power Research Station (CWPRS) conveyed its agreement to CWC for taking up the implementation of CMIS at 2 sites viz Gujarat (southern region) and Maharashtra (northern region). A similar agreement was also proposed by National Institute of Oceanography (NIO), Goa for other regions/state and the proposal is under consideration for implementation.

Polavaram- National Project

Polavaram Irrigation Project (PIP) is a multipurpose project on Godavari River near Ramayyapeta, Polavaram in West Godavari district, Andhra Pradesh. The project is located 42 kms. upstream of Sir Arthur Cotton Barrage on Godavari River. Water from the project is proposed to meet the demands of Irrigation, Drinking water and Power.

Section 90 of AP Reorganization Act, 2014 declared Polavaram Irrigation Project (PIP) as a National Project. The balance cost of irrigation component of the project was Rs.7158.53 crore as on 1.4.2014 which is to be fully funded by Central Govt. Central Assistance (CA) of Rs.6764.16 crore has been released for the project upto 2018.

Polavaram Project Authority (PPA) was established to act as Special Purpose Vehicle (SPV) in 2014. Government of Andhra Pradesh is executing the project on behalf of the Government of India.

Design & Research Wing of CWC has been entrusted with the works of vetting of the designs & drawings of the Polavaram Irrigation Project. Dam Design and Review Panel (DDRP) under the chairmanship of a former Chairman, CWC and an Expert Committee headed by Member (WP & P), CWC have been constituted to carry out regular monitoring of the project and to strive better coordination in respect of various issues related to design and implementation of the project.

The 11th meeting of the DDRP was held on 06.01.2019 at the project site. The CWC team along with the site officers from WRD, Govt. of Andhra Pradesh visited spillway, fabrication & erection works of Hydro-mechanical equipments and Gate-installations on 07.01.2019. It was also noted that Jet grouting in the foundation of upstream & downstream coffer dams have been completed. Construction of the upstream coffer dam was in progress.

Polavaram Project- Benefits

- Irrigation benefits to 4.0 lakh acres in East Godavari, Visakhapatnam districts under Left Main Canal
- Irrigation benefits to 3.2 lakh acres in West Godavari, Krishna districts under Right Main Canal
- Generation of Hydro Electric Power with an installed capacity of 960 MW
- Water supply for industries in Visakhapatnam
- Drinking water supply to villages & towns
- To release 15 TMC of stored water to downstream existing Sir Arthur Cotton Barrage in lean period
- To release 80 TMC of stored water to be diverted to Krishna River through Right Main Canal

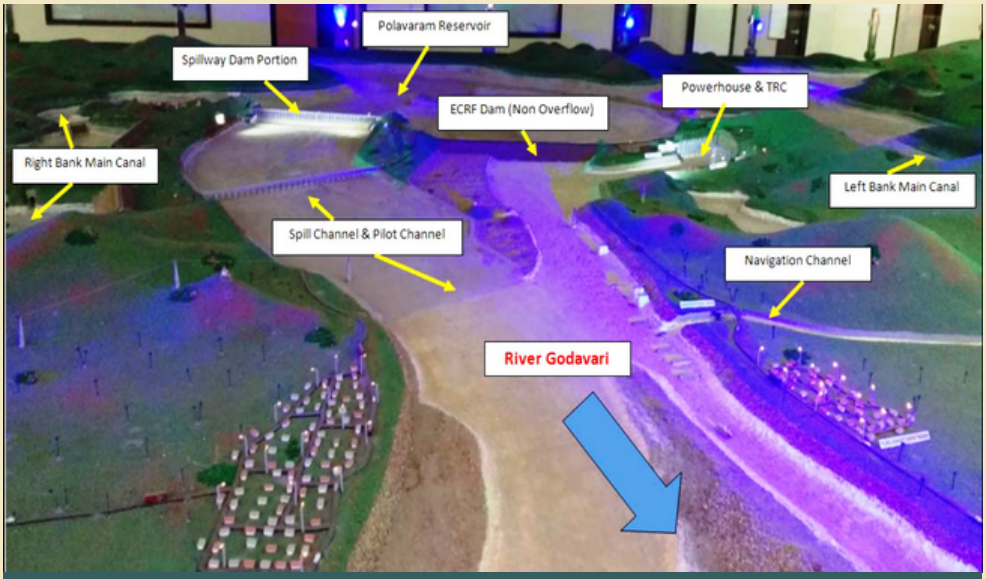
Polavaram Irrigation Project Components

Earth dam in Gap I on left bank of river

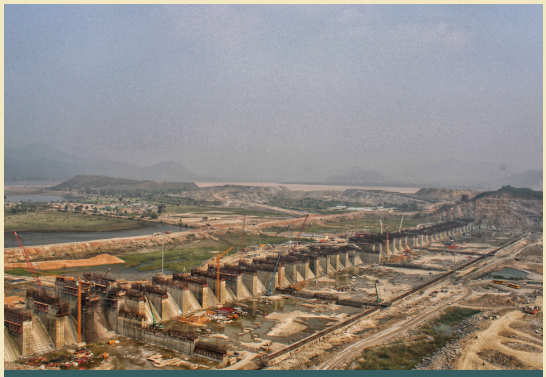
Earth cum rock fill dam in Gap II located in main flow channel of Godavari River

Earth dam in Gap III located on right bank

Spillway located on right bank along with connecting approach channel and spill channel



Project Model



Polavaram Project Construction Site

World Record

Polavaram project has entered the Guinness World Records for non-stop pouring of 32315.5 cubic meters of concrete in 24 hours during 6-7th Jan, 2019. The project broke two world record:

1-The most concrete continuously poured in 24 hours
2-Largest continuous concrete poured

Utilisation of Irrigation Potential of National Projects

Name of the Project	Project Ultimate Potential (Th. Ha.)	Potential Created (Th. Ha.)	Utilization (Th. Ha.)
Saryu Nahar	1404	1096	615.84*
Gosikhurd	250.8	74.45	47.56
Polavaram	291	121	118
Shahpurkandi	37.17	-	-
Teesta	527	197	104

*cropped area as per the study conducted by Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG)

Project Approval

The 139th and 140th meetings of Advisory Committee of MoWR, RD&GR on Irrigation, Multipurpose and Flood Control Projects were held under the Chairmanship of Sh. U. P. Singh, Secretary, MoWR, RD & GR during January 2019 wherein the following project was accepted by the Committee.

Project Name	Ujh Multipurpose Project, Jammu & Kashmir
Project Category	Major, Multipurpose, National Project
Estimated cost	Rs. 5850 Cr (PL July 2017)
River/Location	On river Ujh (tributary of river Ravi) in Kathua district
Benefited Districts	Kathua and Samba, Jammu & Kashmir
Salient Features/Benefits	• 116 m high Dam- on River Ujh (FRL at 608 m) in village Barbari 1.6 km d/s of Panchtirthi • Live storage- 781 MCM • Barrage- 1.5 km d/s of Powerhouse • Powerhouse capacity: 186 MW + (2.5 MW*4 units of dam toe powerhouse) = 196 MW • CCA- 16743 ha • Annual Irrigation - 31380 ha • 10 cusec water earmarked for drinking purpose in district Kathua

Indus Commission Visit to Chenab Basin

The general tour of inspection of Permanent Indus Commission concluded on 31st January 2019. The Pakistan Indus Commissioner, Sh. Syed Mohammad Mehar Ali Shah and Indian Commissioner Sh. P K Saxena along with respective Advisers visited various under construction Indian hydropower projects in Chenab basin namely Pakal Dul (1000MW), Ratle (850 MW) and Lower Kalnai (48MW). The delegation also visited under operation Baglihar hydroelectric project (900MW). This tour is mandatory under the Indus Waters Treaty signed between India and Pakistan in 1960.

Pakistan Commissioner extended an invitation to his counterpart to undertake a visit of Indus basin on Pakistan side. The visit of the Indian Commissioner and his Advisers shall be undertaken in Pakistan at a mutually convenient date to be decided between the two Commissioners.

Indo Pak delegation led by Indus Water Commissioners of both the Countries, Sh. Syed Mohammad Mehar Ali Shah and Sh. P K Saxena at Pakal Dul Dam site

Initiatives of States- Telangana

Mission Bhagiratha

Mission Bhagiratha is an initiative of Telangana Govt. to provide safe and sustainable piped drinking water supply from **surface water sources**. It intends to achieve the following supply norms:

- 100 LPCD (litres per capita per day) for rural areas,
- 135 LPCD for Municipalities
- 150 LPCD for Municipal Corporations

Mission Bhagiratha is a massive project with an outlay of Rs. 43,791 crores and covers 2.72 crore people and 65.29 lakh households. 10% quantity of water has been allocated to meet industrial requirements.

10% of the water in all Irrigation sources has been reserved for drinking water. Total pipeline network for the project is 1.697 Lakh Km.

Water requirement (86.11 TMC) is to be met as under:
- Krishna Basin: 32.43 TMC
- Godavari Basin :53.68 TMC

98% of transmission & distribution systems are to function by gravity. Power requirement for the project is estimated to be 235 MW. Telangana Drinking Water Supply Corporation Limited (TDWSCL) has been formed under the chairmanship of Hon'ble Chief Minister of State for implementation of this flagship scheme.

30th Induction Training Programme

The Valedictory Function of 30th Induction Training Programme (ITP) for newly joined CWES Group 'A'was held on 25.1.19 at CWC, HQ, New Delhi.

1-Chairman, CWC addressing the Valedictory Session of 30th ITP
2-Chairman, CWC awarding 1st prize to Ms.Payal Goyal, AD for 30th ITP
3-Member(D&R) awarding 2nd prize to Sh. Dheeraj Kumar, AD for 30th ITP
4-Member(WP&P) awarding 3rd prize to Sh. Amit Gupta, AD for 30th ITP
5-Three Officers of 30th ITP batch with consolation prizes

Morphological Study for Rivers Krishna and Tungabhadra

The study of river morphology and implementation of suitable river training works have become imperative as large areas of the country are affected by floods every year causing severe damage to life and property in spite of existing flood control measures taken both by Central and State Governments. The large quantity of silt/sediment being carried and deposited in various reaches of the rivers causes erosion/accretion along the river banks. The morphological studies play an important role in understanding the nature of rivers which helps in planning, design and maintenance of flood protection/river training works and water resources projects.

Understanding the need and importance, under the Scheme "R&D Programme in Water Sector", CWC entrusted IIT Madras to conduct morphological studies of Krishna & Tungabhadra rivers using Remote Sensing technology. The major objectives of the work were to study shifting of river course from the base year (say 1970) till 2010, work out the rate of bank erosion/deposition in term of erosion length & erosion area and suggest suitable river training works for restoration of critical reaches.

After submission of Draft Final Report for the study, **two-day Dissemination Workshop was organized by CWC and IIT Madras at Vijayawada during 18-19th Jan 2019**. During this workshop, experts of various States like Karnataka, Andhra Pradesh etc., academicians and other related organizations participated with an objective that the study may reach all the stakeholders so that we can build upon the findings.

The results of the study can be used both by Central and State Govts. in planning new structures, carrying out river restoration works, identifying vulnerable reaches depending on site conditions etc.

Water Sector in News

- Ganga water quality has improved, govt. tells RS (The Hindu, New Delhi, 2.1.19)
- Naidu demands Rs 3715 crore Polavaram dues from Centre (The Hindu, 8.1.19)
- Odisha's Hirakud Dam to get additional spillway (The New Indian Express, 11.1.19)
- India's rightful water share flowing to Pak, says Gadkari (Hindustan Times, 12.1.19)
- Centre refutes TN charges, says DPR nod for Mekedatu dam conditional (The New Indian Express, 12.1.19)
- Government gives green nod for Telangana's Rs 13,384 cr Sita Ram Irrigation project (DNA, 14.1.19)
- Ganga in Bengal has little of Gomukh (Telegraph, Kolkata, 15.1.19)
- NMCG Officials and Partners Come Together to Contribute to Clean Ganga Fund (Focus News, Delhi, 16.1.19)
- Only 38% water use efficiency in agriculture (The Times of India, 16.1.19)
- Steel pipes will link Godavari and Cauvery, says Gadkari (The Hindu, New Delhi, 22.1.19)
- Telangana government spent Rs 99,643 crore for irrigation since 2014 (The New Indian Express, 26.1.19)
- Palamuru Lift Irrigation project gets environment clearance (The Deccan Chronical, 26.1.19)

Panel Discussion- Dam Safety Bill 2018

Sh. N.K. Mathur, Member (D&R), CWC participated in a panel discussion on 'Laws in the making: Dam Safety Bill-2018' on Rajya Sabha TV on 5.1.2019. In the panel discussion, Dr. PSN Rao, Director, School of Planning and Architecture was also present.

Sh. N. K. Mathur mentioned that Dam Owners, State level Dam Safety Organizations, Central Dam Safety Organization at CWC & National Committee on Dam Safety(NCDS) etc. are the various players/mechanisms existing as on date as far as dam safety is concerned. He further stated that Dam safety mechanisms have evolved in the country during the last three decades; however, the Dam Safety Bill envisages formalizing and strengthening of these mechanisms and associated responsibilities. He also detailed about the penal provisions in the Bill.

While commenting on the views of State Govt. on the bill, Sh. Mathur expressed that most of the States are in favour of the bill and they have been consulted through existing NCDS. Few States have expressed apprehension because some dams are owned and operated by one State in the territory of another State. Such States

are in favour of their own monitoring of such dams whereas bill provides jurisdiction of National Dam Safety Authority (NDSA) in such cases. Dr PSN Rao supported the bill and hoped for representation of Town Planning Departments, the role of Independent experts and better implementation of provisions on the ground. Sh. Mathur mentioned that action has been already initiated for empanelment of independent experts under a transparent selection process.

Gallery

Inter-Ministerial Central Team visited Manipur during 2.1.19 to 5.1.19 to assess the damage caused by heavy rainfall during the month of June 2018. Sh. V. D. Roy, Director (M&A), CWC, Guwahati was one of the members of IMCT

Sh. R. K. Singh, Hon'ble MoS(Power), Independent Charge giving CBIP Special Recognition Award 2019- Excellence in Managing Water Hazards for Flood Forecasting activities to Sh. N. K. Mathur, Member (RM), CWC and Sh. M. S. Dhillon, Chief Engineer(FM), CWC on 4.1.19

Sh. U. P. Singh, Secretary, MoWR, RD&GR chairing the 139th Advisory Committee Meeting at CWC, HQ, New Delhi on 7.1.19

Sh. S. Masood Husain, Chairman, CWC and other officers in meeting with Sh. Naveen Patnaik, Hon'ble CM of Odisha for invitation to upcoming International Dam Safety Conference (IDSC) on 10.01.19 (Source: Kalinga TV)

Sh. S. Masood Husain, Chairman, CWC & Sh. N. K. Mathur, Member (D&R) CWC handing over the Emergency Action Plan(EAP) of Hirakud Dam prepared under DRIP to Sh. P.K. Jena, Principal Secretary, WR Dept., Odisha on 10.1.19

Sh. S. Masood Husain, Chairman, CWC speaking to media regarding upcoming International Dam Safety Conference at Bhubaneswar on 10.01.19 (Source: Kalinga TV)

Sh. M. P. Singh, Chief Engineer (MTBO), CWC and Sh. Sh. Kushagra Sharma, SE (C), MTBO, CWC at MoWR, RD&GR stall exhibited by CWC in "Vibrant Gujarat -2019" organized at Gandhinagar during 18.1.19 to 22.1.19

Sh. S Masood Husain, Chairman, CWC at a workshop on "On outcome Measurements in Surface Irrigation" at office of CAG of India on 23.1.19. Session was chaired by Sh. Rajiv Mehrishi, CAG of India

Sh. S Masood Husain, Chairman, CWC chairing the 3rd meeting of Team of Experts/Officials regarding draft DPR of Pancheshwar Multipurpose Project held at CWC, HQ, New Delhi on 23.1.19

Illuminated CWC offices on Republic Day

CBIP Award to CWC for Flood Forecasting

CWC awarded with CBIP Award for Excellence in managing water hazard on 4.1.19 in New Delhi

History- Dr. A N Khosla, Founder Chairman, CWC

Dr Ajudhiya Nath Khosla
Founder Chairman, CWC

CAREER GLIMPSE

- 1916- Punjab Irrigation Department
- 1918–1920- Invented Khosla Disc
- 1943- Chief Engineer & Secretary, Govt. of Punjab
- 1945- Founder Chairman of Central Waterways, Irrigation and Navigation Commission- CWINC (now CWC)
- 1945–53- Chairman, CWINC & Addl. Secretary to GoI
- 1954- Awarded with Padma Bhushan
- 1954–59- Vice Chancellor, University of Roorkee
- 1958–59- Member, Rajya Sabha
- 1959- Member, Planning Commission
- 1962–68- Governor of Odisha
- 1977- Awarded with Padma Vibhushan

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