



भारत सरकार Government of India

केन्द्रीय जल आयोग

Central Water Commission बांध सुरक्षा प्रबोधन निदेशालय

Dam Safety Monitoring Directorate सेवा भवन,रामाकृष्णा प्रम्, नई दिल्ली

8th Floor (N), SewaBhawan, R.K. Puram, New Delhi-110066 Telefax No. 26104104; Email: dsmdte-cwc@nic.in

No. 3/19/NCDS/DSM/2016/36th meeting/ 240 - 279

Date: 2 February, 2016

To

All NCDS Members

Sub:

Minutes of 36th Meeting of National Committee on Dam Safety (NCDS)-Reg.

Sir,

The 36th meeting on National Committee on Dam Safety (NCDS) was held on 11th January, 2016 under the Chairmanship of Chairman, CWC at the Hotel JP Celestial, Bangaluru (Karnataka). A copy of the Minutes of the meeting along with the summary of decisions taken during the meeting is enclosed herewith for taking follow up action on the minutes. It is requested that the action taken report on the minutes and the summary of decisions taken during the meeting indicating status of implementation and effectiveness may please be submitted to this office.

Yours faithfully,

Encl: as above

(L.A.V. Nathan)

Chief Engineer, DSO & Member Secretary, NCDS

Copy for kind information to:

- 1. PPS to Chairman, CWC, New Delhi.
- 2. PS to Member (D&R), CWC, New Delhi.
- 3. Chief Engineer (HSO), CWC, New Delhi.
- Chief Engineer (N&W), CWC, New Delhi.
- 5. Chief Engineer (NW&S), CWC, New Delhi.
- 6. Chief Engineer (BPMO), CWC, New Delhi.
- Director, FE&SA Dte./DSR Dte./ Instrumentation Dte./ SM Dte./Hydrology(S) Dte./ Hydrology (N) Dte./ CMDD (NW&S) Dte./ CMDD(N&W) Dte./ Emb. (NW&S) Dte./RO Dte., CWC,New Delhi.

Chief Engineer, DSO & Member Secretary, NCDS

DAM SAFETY MONITORING DIRECTORATE CENTRAL WATER COMMISSION GOVERNMENT OF INDIA

MINUTES OF 36th MEETING OF NATIONAL COMMITTEE ON DAM SAFETY

held on 11th January, 2015 at Bangaluru (Karnataka)

 $\label{eq:INDEX} \textbf{Minutes of the 36}^{\text{th}} \ \textbf{meeting of National Committee on Dam Safety (NCDS)}$

Item no.	em no. Minutes item	
36.1.0	Confirmation of the minutes of 35 th meeting	1
36.2.0	A. Dams of National Importance B. Other Dams	2
36.3.0	Preparation of Emergency Action Plan(EAP)	5
36.4.0	Reservoir Operation & Maintance	6
36.5.0	Pre & Post Monsoon inspection of dams	7
36.6.0	Instrumentation of Dams	8
36.7.0	Comprehensive Dam Safety Review by an expert Panel(DSRP)	9
36.8.0	National Register of Large Dams	9
36.9.0	Setting up/Strengthening of Dam Safety Organization (DSO)	10
36.10.0	Dam Rehabilitation & Improvement Project (DRIP)	10
36.11.0	Record of Dam Failures and Major Dam Incidents and their Technical Reports	10
36.12.0	Upkeep and archival of records - Data Book and O&M Manual etc.	11
36.13.0	Monitoring of safety aspects of inter-State dams by Sub-Committees	11
36.14.0	Dam Safety Bill	12
36.15.0	Setting up Hydrology units and Design Floods Review	13
36.16.0	Any other item with the permission of the Chair	13

Annexure

Annexure-I	List of Participants
Annexure-II	The Summary of the decisions taken during the meeting

Minutes of the 36th Meeting of National Committee on Dam Safety (NCDS) held on 11th January, 2016 at 1000 hrs.

36th meeting of National Committee on Dam Safety (NCDS) was held on 11th January, 2016 at 1000 hrs at the Hotel J.P. Celestial, Bengaluru (Karnataka) under the Chairmanship of Shri G.S. Jha, Chairman, CWC and Chairman of the National Committee on Dam Safety (NCDS). List of Officers from different states/organizations present in the meeting is enclosed at **Annexure-I.**

Chairman, NCDS welcomed all the members of the National Committee on Dam Safety (NCDS) to the meeting and stated that for the dam safety endeavor, emphasis on the institutional arrangements is necessary to make the system sustainable and person independent and hence, the Dam Safety Organizations need to be strengthened. He further stated that the response from the state government is not forthcoming on the various agenda points and they need to implement the decisions taken in the meeting in a time bound manner without delay.

Chief Engineer (DSO) & Member Secretary, NCDS welcomed the members and requested all the participants to introduce themselves. Thereafter, Chairman, NCDS requested Member Secretary, NCDS to take up the agenda items. Member Secretary, NCDS stated that NCDS is a forum on exchange of information on dam safety issues and updation of the information by state governments/members on regular basis would be very much helpful in long run.

Director, CSMRS suggested calling for a resolution by state governments/DSOs to take action on the various agenda points in a time bound manner. Chief Engineer, Kerala Irrigation expressed some apprehensions on the issue, whereas, Chief Engineer, Telangana strongly supported the move, which was also appreciated by Chief Engineer, Jharkhand. Chairman, NCDS stated that member states/DSOs, may commit a timeframe for the activities listed under various agenda items after taking care of all administrative aspects and the matter may be reviewed in the subsequent meetings, if the things beyond control happen and the time frame could not be adhered to.

36.1.0 Confirmation of the minutes of 35th meeting:

Member Secretary, NCDS informed that the minutes of the 35th meeting of NCDS was circulated and since no comments to the minutes have been received from the members of the Committee, therefore, the minutes of the 35th meeting of NCDS may be treated as confirmed.

36.2.0 A. Dams of National importance:

Member Secretary, NCDS stated that as per NRLD, there are 59 nos. of large dams of

national importance, i.e. large dams either with a height of 100 m and above or storage capacity

of 1 BCM. NCDS has received request for advice on rehabilitation matters in respect of following

dams of National importance.

(i) Bhakra Dam (Punjab):

Member Secretary, NCDS informed that the matter regarding observed maximum

deflection at Bhakra Dam showing the increasing trend over the years was discussed in the

previous meeting of NCDS and BBMB was requested to carry out the detailed investigation/

studies to supply the necessary data required for the FEM modeling.

Senior Design Engineer, BBMB informed that BBMB had desired a meeting between

CWC & National Council of Cement & Building Material (NCCBM), Ballabgarh to discuss the

safety of Bhakra dam vis-a-vis extraction of core samples from the body of the dam and the

same has been proposed on 19th January, 2016. Thereafter, the matter will be taken up by

NCCBM, Ballabgarh and data would be supplied. He informed that the matter has been delayed

as it involves several extractions of the core samples from the body of the dam. Director, DSR

stated that the matter has already been delayed considerably for a period of 3 years or more at

the level of BBMB, who should have been able to sort out these basic matters at their level only

without referring to CWC on every small issue. Director DSR, CWC stated that similar matters

related to deflection were dealt by Kerala Irrigation Department in case of Idukki dam and DVC

for Konar dam within a period of three month or so.

Chairman, CWC requested BBMB to avoid delay and bring seriousness to the issue

brought to this forum. He further stated that deflection is a serious issue and needs to be

addressed on priority. Director, Instrumentation stated that during the visit to Bhakra dam,

matter related to instrumentation for measuring strain and stress was discussed and BBMB was

requested to send relevant data which is still awaited. Director, BBMB stated that further action

for installation of instrumentation is under process and procurement started in respect of Bhakra

dam, whereas in case of Pong and Pandoh dam, the matter is under consideration.

Chairman, NCDS requested all members to have an obligation, commitment and

seriousness on implementation of various decisions taken in the meeting in a time bound

manner.

After discussions, it was decided that BBMB will take up the matter with NCCBM

Ballabgarh and supply required data within six months.

(Action: BBMB, Director, DSR Dte., CWC)

2

(ii) Srisailam Dam (Andhra Pradesh):

The Chief Engineer, CDO, AP intimated that for D/S protection works adjacent to blocks 5 to 9, the Government has accorded administrative approval dated 26.12.2015 and agency will be fixed soon, after completion of tendering process. He further informed that administrative sanction for the work "conducting preliminary investigation from the area near 'Pamulapadu' village to Kundu River for studying the feasibility of diversion of portion of flood waters of NSRS Srisailam Project has been awarded by Government of Andhra Pradesh and investigation work is in progress. The agency has commenced the work. CE, CDO, AP further informed that regarding increasing the spillway capacity of the dam, based on the recommendations of the expert committee, a final report of PMF was furnished to the Director, Hydrology(S),CWC, New Delhi. CWC has examined and observations are communicated to Government of Andhra Pradesh and it has been recommended that the PMF studies may kindly be got reviewed by the IMD. CE, CDO, AP informed that based on the CWC suggestions, a letter was addressed to the Director, IMD New Delhi for confirmation/vetting of SPS/PMP values, SRRG Data. In turn the IMD has requested, CE, AP State Hydrology to furnish the Index Map of the Srisailam Project in scale 1: 1000000 with catchment area delineated along with Longitudes and Latitudes and duly marking rain gauges in and outside of catchment area vide their mail dated 12th Feb, 2015. The issue is under process.

Director, Hydrology(S), CWC indicated that, if required, CWC is ready to shoulder the responsibility on the aforesaid matter. Chief Engineer, Telangana stated that the Srisailam dam is operated and maintained by State Government of Andhra Pradesh, whereas Nagarjuna Sagar Dam is operated and maintained by State Government of Telangana. However, both the dams are owned by both the states and matter related to Srisailam has implications for Telangana as well. In this regard Member Secretary, NCDS stated that such matters are first dealt by Krishna River Management Board. Director, DSR, CWC informed that Expert Committee constituted for increasing the spillway capacity of Srisailam dam has recommended to State Government of Andhra Pradesh to carry out investigations for diversion from rim of the reservoir.

Regarding increasing the spillway capacity of Srisailam Dam as per design flood review, Chairman, NCDS stated that states of Andhra Pradesh and Telangana may decide with mutual consent the necessary steps to be undertaken within three months and issues related to Nagarjuna Sagar dam may also be resolved on similar pattern.

(Action: State of Andhra Pradesh, Telangana, Director, Hyd.(S) Dte., CWC)

B. Other Dams

(i) Gararda Dam (Rajasthan):

Member Secretary, NCDS requested the views of State government, CWC and CSMRS on Gararda Dam. The representative from Rajasthan was not present in the meeting. Chief Engineer, Design (NW&S), CWC informed that the project authorities had some apprehension on the embankment material and foundation investigation carried out earlier (Report July, 2015) at the breached Gararda dam. Therefore, on the request of project authority a team of CWC and CSMRS visited the project site again on 01.10.2015 and suggested some additional investigations. It was observed from the previous reports, field visits and personal visit that there was no cut off trench, filter zone and proper compaction of dam material was not carried out while laying the dam. There were continuous cracks from upstream to downstream in the foundation of breached portion of the dam. Further it was suggested that the views of GSI regarding the presence of the similar cracks in the bed rock in other reaches of the existing dam, as are seen from the breached portion, may also be obtained. Director, CSMRS stated that it is the case of failure of a dam. Therefore, the state Government of Rajasthan should carry out further recommended additional tests with a sense of urgency.

It was decided during the meeting that the state Government may be requested to expedite the required investigations. Chairman, NCDS desired that to this effect the State Government of Rajasthan should be requested separately.

(Action: State of Rajasthan, CSMRS, New Delhi Chief Engineer (NW&S), CWC)

(ii) Temghar Dam (Maharashtra)

Member Secretary, NCDS requested the views of State government, Maharashtra on Temghar Dam. Superintending Engineer, Dam Safety, DSO, Maharashtra stated that final report of the Expert Committee constituted for suggesting rehabilitation proposals for the dam would be submitted by January end and the remedial measures would be completed in two years time. Director, DSR, CWC stated that matter requires urgent attention of the state government and should not be delayed at any cost as the condition of the dam is very critical. After discussion it was decided that submission of final report of Expert Committee constituted for suggesting rehabilitation measures would be made by January 2016 end and thereafter the various sanctions/administrative approval would be taken up in six months and the rehabilitation measures will be completed in one and half years henceforth.

(Action: State of Maharashtra)

(iii) Maudha Dam (Uttar Pradesh):

Chief Engineer, Uttar Pradesh stated that the main problem of Maudha Dam is excessive seepage from drainage gallery. Maudha Dam was inspected by a consultant from IIT, Roorkee, wherein keeping the safety of the dam in view, it was recommended not to fill up the dam above 147.87 mtrs and visit by Centre team has been recommended.

It was decided that Director, DSR, CWC and Director, CMDD N&W, CWC would visit the Maudha dam within next month and make recommendations for rehabilitation. Government of Uttar Pradesh would process the recommendation within two months and thereafter complete the rehabilitation measures within next six months.

(Action: State of Uttar Pradesh, Director (DSR), CWC, Chief Engineer (N&W), CWC and CSMRS)

iv) <u>Durgawati Dam (Bihar)</u>

Director, DSR, CWC informed that a team from CWC recently visited Durgawati dam and found that the dam is in a poor state and appropriate recommended remedial action needs to be taken by the state governments urgently. He informed that the river gap of the dam was completed last year after 30 years and there are issues related to construction of the closure section as apparent during inspection of the team. While the dam has taken 30-35 years for its completion, the closure section was completed in a short period of six months. Director, DSR informed that CWC would be submitted detailed report shortly and requested state government to take suggested measures urgently. The state government informed of measuring the seepage through V-notch for various reservoir levels. Director, CSMRS informed that dispersive action of soil may be responsible and requires geological investigations for which CSMRS can offer desired guidance and assistance. After discussions, it was decided that state government of Bihar would carry out investigations within two months and dewater the affected area within six months. After receiving CWC's report, Government of Bihar would process the recommendations within 2-3 months and thereafter complete the rehabilitation measures within 12 months.

(Action: State of Bihar, Director (DSR), CWC, and CSMRS, New Delhi)

36.3.0 Preparation of Emergency Action Plan (EAP)

Member Secretary, NCDS requested state governments to honestly complete the EAPs as a part of disaster management. It was informed that not much progress has been made by the states regarding preparation of EAPs except for Maharashtra and Himachal Pradesh. Superintending Engineer, Dam Safety Cell of Himachal Pradesh intimated regarding preparation of EAPs of all large dams in the state of Himachal Pradesh. Deputy Director, WRD, Odisha informed the status of EAP for DRIP and non-DRIP dams and a draft EAP is under preparation.

Chairman, NCDS requested all the states to take up the matter seriously and decide a time frame in this regard. The matter related to EAP was discussed in context of preparation of inundation maps and Member Secretary, NCDS stated that states can take CWC's assistance for carrying out dam break studies or engage external consultants and go ahead. State government should step up the efforts using satellite imagery investigations. Director, DSO, Punjab was requested to expedite preparation of inundation maps for Dam Break Analysis for Bhakra and Nangal Dams. Chairman, CWC stated that one draft of EAP of each state serving as model EAP would be completed by June 2016 and submitted to CWC. Further, all States/DSOs were requested to send the half yearly return in respect of completed EAPs prepared as per proforma enclosed with Agenda Notes. The status regarding preparation of EAPs enclosed with Agenda Note may be reviewed by the states and changes if any, intimated.

(Action: All States/DSOs)

36.4.0 Reservoir Operation:

Member Secretary, NCDS stated that the issue of dam safety becomes more relevant during the period of stress, i.e., the monsoon period, for the dams. One critical issue of dam safety management is in reservoir operations and particularly so where dams are in cascade; it can take the form of a "snow balling" effect and can be disastrous if reservoir operations are not carefully orchestrated. It is all the more critical for reservoir operations if it involves inter-state coordination also in the process. Adequate flood forecasting system with wireless communication need to be established for reservoirs by state / DSOs / Project authorities where such system is likely to help in giving advance information about incoming flood volume useful for reservoir operation. While reservoir operations remains in the domain of the dam authorities, they should keep in mind that the rule curve for gate operations has to be carefully framed having a clear knowledge of the "safe flood" or acceptable conveyance capacity in the downstream particularly at places of dense habitations. Whenever a release exceeding a threshold value is likely to be released from spillways advance intimation to all local authorities has to be sent a day in advance.

Member Secretary, NCDS stated that there should be a threshold value of flood for each dam for issuing notice to district authorities. Deputy Director, WRD, Odisha and Superintending Engineer, Himachal Pradesh explained prevalent procedures in their states on the matter. Deputy Director, WRD, Odisha mentioned that stage to stage correlation model was functioning well since last 50-60 years for flood forecasting. He further informed that real-time flood forecasting of Mahanadi Basin would be done using SWAT Model through DFID. Director, Hydrology (S), CWC informed that the SWAT model is not suitable for flood forecasting events and for flood forecasting the shape of hydrograph is important. Deputy Director, WRD, Odisha stated that he will take advice from Director, Hydrology(S), CWC in this regard. Chief Engineer, Tamil Nadu informed that they have compendium for flood release rules. Chief Engineer,

Jharkhand informed that they are in the process of framing the rule curve for reservoir operation. Superintending Engineer, DVC informed that they are having rule curve since 1962 and the same has been revised recently.

Superintending Engineer, Dam Safety Cell, Himachal Pradesh stated that after the incidence of Larji HEP, to create awareness among tourists, pamphlets are given at tourist entry check points, information is given through message on mobile that they should avoid going to nearby river and other measures taken i.e., huge sign boards warning for venturing near river, mobile vans with Public Address System, fencing around the river and placing the police personnel etc. Member Secretary, NCDS mentioned about the name of "hydro floods", wherein therewould be sizeable flood releases for half an hour,say, which also disappears in an hour or so.He also mentioned about gadgets providing vocal warnings in the local vernacular to keep people away during the period of sudden release of floods. Director, FE&SA, CWC informed regarding the notification of NDMA guidelines on sudden release of water which had already been circulated to all the states for implementation.

Chairman, NCDS informed that the aforesaid aspect of reservoir operation could be covered under EAP for future meetings. Chief Engineer, BPMO, CWC informed that aforesaid system of reservoir operation is in place in DVC devised by DHI, wherein there is provision of dissemination of information by e-mail/SMS and that system can be followed by other states/DSOs. The details in this regard may be obtained by concerned states/DSOs directly from DVC.

(Action: All States/DSOs)

36.5.0 Pre & Post Monsoon inspection of Dams:

Member Secretary informed that Pre & Post monsoon inspection of each large dam is required to be carried out by the concerned State/DSOs and Annual Consolidated Reports of such inspections need to be compiled by the respective Dam Safety Organization (DSO) and forwarded to Dam Safety Organization, CWC in April for the previous year.

The inspection reports normally cover the observations of inspecting team, suggested remedial measures and discussion on action taken on suggested remedial measures. It has been observed that all the large dams under a particular State are not inspected as per the Annual Consolidated Reports of pre & post monsoon inspections submitted. Further, the details of action taken on suggested remedial measures are invariably not included in Reports. State Govts./DSOs/Dam authorities should ensure that pre & post monsoon inspections for all the large dams are carried out regularly and remedial actions taken on the deficiencies noticed during the pre-monsoon and post-monsoon inspections are included in the subsequent Reports.

It was informed that the annual consolidated report of pre and post monsoon are awaited from Chhatisgarh, Jharkhand, Karnataka, Uttarakhand and West Bengal who were requested to expedite the submission of the same for all large dams for the year 2014-15. Deputy Director, WRD, Odisha informed that maximum number of inspection reports have been accommodated in the latest annual consolidated report submitted to CWC. Superintending Engineer, Maharashtra mentioned about sending the annual consolidated report having inspection reports for 1237 nos. large dams. Chief Engineer, Jharkhand informed that the pre monsoon inspections reports for category II & III of dams would be submitted by May 2016, wherein for Category-I dams, CWC would be consulted. Chief Engineer, Jharkhand was requested to send detailed report regarding Latratu dams and other dams, wherein expert opinion of CWC has been desired. All states/DSOs were emphasized that timely remedial measures be taken on deficiencies noticed during pre & post monsoon inspections and the same be included in the next annual consolidated report. Further, all the States/DSOs were requested to send the yearly Pre & Post monsoon inspections report for each dam as per the provided proforma.

(Action: All States/DSOs)

36.6.0 Instrumentation of Dams:

36.6.1 Strengthening of seismic instrumentation as per the decision of National Committee on Seismic Design Parameter (NCSDP)

Director (DSM), CWC informed that during the 29th meeting (extraordinary) of the National committee on Seismic Design Parameter (NCSDP) held on 19th May, 2015 at New Delhi, in the aftermath of Nepal earthquake on 25th April, 2015, it was decided to strengthen seismic instrumentation in the dams especially in seismic zone IV and Seismic Zone V.

Accordingly, States/DSOs were requested that strengthening of seismic instrumentation at different locations in the dams under their jurisdiction may be carried out under intimation to Instrumentation Directorate, CWC.

(Action: All States/DSOs)

36.6.2. Strengthening of instrumentation of large dams:

Director (DSM), CWC informed that during last meeting it was decided that States/DSO's may submit separate detailed report on performance of existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format to the Director, Instrumentation Directorate, CWC on yearly basis. It was emphasized that the State Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of non-functioning of the instruments in the existing dams. Status of Instrumentation has been submitted by States of Telangana, Himachal Pradesh (three projects), BBMB, MePGCL, Andhra Pradesh, Maharashtra, and KSEB. The state of Andhra Pradesh has provided the instrumentation data of Srisailam

project although not in prescribed format. It was decided that remaining States/DSO's may submit separate detailed report on performance of existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format already attached with the agenda note to the Director, Instrumentation Directorate, CWC on yearly basis.

(Action: All States/DSOs)

36.7.0 Comprehensive Dam Safety Review by an expert panel:

Member Secretary, NCDS informed that as per Dam Safety Procedures, the States/DSOs shall arrange comprehensive safety review of dams which are more than 15 meters in height or which store 50000 acre feet (60Mm3) or more of water by an independent panel of experts once in 10 years. Status regarding constitution of DSRP and on the number of Dam Safety Reviews carried out by DSRPs in the states/DSOs was reviewed. Member Secretary, NCDS informed that no reports from the DSRPs are coming to Central Dam Safety Organization (CDSO) except for DRIP states where DSRP reports are mandatory. Chief Engineer, Jharkhand desired the information regarding the constitution of DSRPs. It was informed that the guidelines for inspection of dams by DSRP's were enclosed for guidance of State Govts./DSOs/Dam owners with the minutes of the 32nd meeting of NCDS. Director, DSR, CWC informed that DSR Directorate is maintaining a list of experts in the relevant fields and details in this regard can be obtained from them.

The State Governments of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttarakhand, West Bengal, Himachal Pradesh and Meghalaya Power Generation Corporation and other States/DSOs, wherein DSRP with independent panel of experts have not been constituted, were requested to expedite the constitution of DSRP. State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. It was observed that even in cases where DSRP exist, a few numbers of dam safety reviews only have been actually carried out. All States/DSOs were requested to carry out comprehensive dam safety review of large dams and submit updated status in this regard which are awaited. The final report on each dam by DSRP may also be furnished to CDSO.

(Action: All States/DSOs)

36.8.0 National Register of Large Dams - Updation as per new format:

The status of submission by State Governments/Dam Safety Organizations was reviewed and it was observed that the updated information has not been received from Maharashtra, Uttar Pradesh, Karnataka, Rajasthan, Jharkhand, West Bengal, Uttarakhand and Madhya Pradesh and it was decided that the aforesaid State Governments would submit the updated information by reviewing/revalidating all the data/records available with them.

Particularly discrepancy in the number of large dams (Viz. elimination of duplicate entries etc.), and submitting the authenticated list approved by the respective Head of the Department in the prescribed proforma by June, 2016. Also in most of the cases under Column 'River', no names are provided except as local nalla etc., which may again be checked up and name of river/tributaries of river etc. and the details of river basins (wherever not provided) be submitted by **June 2016** by all States/DSOs.

(Action: All States/DSOs)

36.9.0 Setting up/Strengthening of Dam Safety Organization (DSO):

Chairman, NCDS desired to know which states are not having DSOs and in this context, it was informed that there is no separate Organization for dam safety for Rajasthan and Director (Dam) in the Water Resources Department oversees the activities for safety of Dams. Punjab has informed that Dam safety Committee exists to oversee the activities of safety of Dams. Director, DSO, Punjab informed of having the dam safety organization in Punjab, although not with adequate staff strength and funding for carrying out regular activities. Chairman, NCDS requested Director, DSO, Punjab to take up the matter with state government for strengthening of the dam safety organization in Punjab and matters related to funding etc. It was decided that State of Rajasthan may take necessary steps for strengthening of DSO set-up in the state

(Action: All States/DSOs)

36.10.0 Dam Rehabilitation & Improvement Project (DRIP):

Director, DSR mentioned regarding Dam Health and Rehabilitation Monitoring Application (DHARMA) Software being developed under DRIP, under which initially all the DRIP states would be made licensee and thereafter all the NCDS members would join subsequently. Director, DSR circulated the DHARMA License Application Form and requested all NCDS members to submit the duly filled application form to Director, DSR.

(Action: All States/DSOs & Director, DSR,CWC)

36.11.0 Record of Dam Failures and Major Dam Incidents and their Technical Reports:

Member Secretary, NCDS informed that the status of Record of Dam Failures and Major Dam Incidents and their Technical Reports was reviewed, and it was observed that out of 36 recorded failures, technical reports for the cause of failure have been received for only 8 dams and it is required to be furnished for remaining dams in the states of Madhya Pradesh (10 dams), Rajasthan (11 dams), Uttarakhand (1 dam), Uttar Pradesh (1 dam) and Gujarat (5 dams) as per details in Agenda Notes. The representative from Madhya Pradesh and Rajasthan were not present in the meeting and these states were requested that the technical reports in this regard

be submitted at the earliest. The Joint Director, GERI, Gujarat informed that the technical reports in this regard from Gujarat state would be submitted within three months. The above mentioned states were requested to furnish the technical details with causes of failures and remedial action undertaken within three months.

(Action: All States/DSOs)

36.12.0 Upkeep and archival of records - Data Book and O&M Manual etc.:

Member Secretary, NCDS stated that the project authorities should prepare operation & maintenance (O&M) manuals for all the large dams in their States on priority. Accordingly, State Govts./DSOs were requested to prepare data books along with complete set of designs and drawings as per CWC Guidelines on Standardized Data Book Format available at (http://www.cwc.gov.in/Dam_safety.html). Member Secretary, NCDS requested all State Government/DSOs to expedite preparation of data books and O&M manuals for all the large dams under their jurisdiction. Status regarding the preparation of data book and operation & maintenance (O&M) manuals received from States/DSOs has been compiled, which may be reviewed and changes if any, intimated to NCDS Secretariat and submit the updated status.

(Action: All States/DSOs)

36.13.0 Monitoring of safety aspects of inter-State Dams by Sub-Committees:

(a) Subarnarekha River System Sub-Committee (SRSS):

Chief Engineer, Jharkhand informed that the aforesaid sub-committee involves the states of Odisha & West Bengal. No meeting of the sub-committee has been held after 2008. Chief Engineer, Jharkhand further informed that the date for the next meeting would be finalised in an inter-state meeting of the aforesaid states to be held in the first week of February,2016. It was informed that the matter related to regulation of Chandil dam and health status of the dams etc. would be discussed in the meeting. Deputy Director, Odisha informed of having their agenda items in this regard, which would be discussed in the aforesaid meeting to be held in first week of February 2016. Charman,CWC stated that the next meeting may be held by June 2016. Member Secretary, NCDS informed that the monitoring report of Inter-state dams are not being received and may be submitted by Chief Engineer, Dam Safety and Member Secretary, Odisha.

(Action: Chief Engineer, Design & Research, Odisha, (Member Secretary & Convenor), SRSS, Chief Engineer Design & Research, West Bengal (Member), Chief Engineer, Design, Master Planning & Hydrology, Jharkhand (Member)

(b) Mahanadi River System Sub-Committee (MRSS):

Deputy Director, WRD, Odisha informed that the 8th meeting of the sub-committee was held in February 2014, wherein some decisions related to soil conservation measures to be prepared on the basis of land use and land cover maps to be prepared in consultation with

Nation Remote Sensing Centre (NRSC), flood forecasting –Telemetry station in upper Mahanadi, hydrological review of major dams in Chhattisgarh etc. Member Secretary, NCDS suggested to include the preparation of EAPs of the dams also in agenda.

Member Secretary, NCDS stated that the next meeting may be held by June 2016. It was further requested that the monitoring report of Inter-state dams are not being received and may be submitted by Chief Engineer, Dam Safety and Member Secretary, Odisha by December 2016.

(Action: Chief Engineer, Dam safety, Odisha (Member Secretary & Convenor), MRSS

Chief Engineer, Mahanadi Project, Chhattisgarh (Member)

Chief Engineer & Basin Manager, Upper Mahanadi Basin, Odisha (Member)

and Chief Engineer, Minimata Bango Project, Chhattisgarh (Member)

Special Note:

Although not included in the of 36th meeting agenda, Chief Engineer, Kerala desired to know the status of Kerala's request made to MoWR, RD & GR regarding continuation of PAP Sub-committee, which was referred to CWC. Member Secretary, NCDS informed that Ministry had desired a brief note in this regard from CWC, which has been sent to MoWR, RD &GR and a copy of same would be forwarded to Chief Engineer, Kerala. He further informed regarding the arbitration option available to Kerala. Sr. Joint Commissioner (Pen.Riv.), MoWR, RD &GR informed that the matter is under process and a suitable decision in the matter would be taken in a month or so.

36.14.0 Dam Safety Bill

Director, DSR informed that with the dissolution of the 15th Lok Sabha, the earlier Dam Safety Bill (2010) lapsed and CWC has submitted a new draft including recommendations of the Parliament Standing Committee of the Dam Safety Bill, 2014 to the MoWR, RD & GR, and Ministry is further processing the case.

The Bill proposed under Entry 56 of the Union List of the Constitution seeks to enjoin responsibility on Central Government, State Governments and owners of specified dams to set up an institutional mechanism for ensuring safety of such dams and reporting the action taken. It defines the duties and functions of these institutions in relation to perpetual surveillance, routine inspections, operation and maintenance, maintenance of log books, instructions, funds for maintenance and repairs, technical documentation, reporting, qualifications and trainings of concerned manpower etc. Provisions have been made concerning the necessities of periodical inspections, instrumentations and establishment of hydrological and seismological stations. The Bill addresses the issues of emergency action plan and disaster management, and also enlists the requirements of comprehensive dam safety evaluation.

(Action: Director, DSR Dte. CWC)

36.15.0 Setting up Hydrology units and Design Floods Review:

Member Secretary, NCDS requested that States/DSOs to take necessary steps for

review of Design floods for large dams and for setting up the hydrological units and to regularly

intimate NCDS Secretariat regarding the status in this regard. States of Chhattisgarh,

Jharkhand, Uttar Pradesh, Uttarakhand and West Bengal were requested to constitute the

hydrological units for review of design floods for large dams and carry out design flood review of

large dams.

Further, the States/DSOs, i.e, Andhra Pradesh, Bihar, Gujarat, Kerala, Karnataka,

Maharashtra, Madhya Pradesh, Odisha, Punjab, Rajasthan, Telangana, Himachal Pradesh,

KSEB and MePGCL having hydrology units but not reported much progress for the Hydrological

review of the large dams were again requested to make special efforts to carry out the

Hydrological review of dams for all large dams, which is one of the important aspects of dam

safety.

The status of setting up of hydrology units and number of hydrological review carried out

for large dams as per information received from States/ DSOs attached with the Agenda Note

may be reviewed and changes, if any intimated.

(Action: All States/DSOs)

36.16.0 Any other item with the permission of the Chair:

Chief Engineer, BPMO, CWC raised the issue on licensing of authorities for capability for

operation and maintenance of dams to which Director, DSR, CWC informed that the provision of

accreditation of dam safety authorities exists in Dam Safety Bill.

Director, DSO, Punjab and Chief Engineer, CDO, Andhra Pradesh raised matter

regarding siltation of dams to which Director, DSR, CWC informed that de-siltation activities are

taken up in DRIP and they may furnish the details in this regard to DSR Dte., CWC.

In his closing remarks, Chairman, NCDS stressed on the institutional strengthening of

dam safety organizations. He further reiterated that the agenda items, where sufficient response

is not received from the state governments would be considered as non-serious issues and

would not be taken up in future meetings of NCDS and therefore requested to all States /DSOs to

attach due importance to agenda items and make serious efforts in their implementation.

(Action: All States/DSOs)

The Summary of the decisions taken on the points above is enclosed at Annexure-II.

The meeting ended with a vote of thanks to Chair. Thanks were also offered for courtesy

extended by Karnataka Water Resources Department in facilitating for organizing the NCDS

meeting.

13

${f 36}^{th}$ MEETING OF NATIONAL COMMITTEE ON DAM SAFETY HELD ON 11 TH JANUARY, 2016 AT BANGALURU LIST OF PARTICIPANTS

SI.No.	Name, Designation & Organization			
I - CW	I - CWC, MoWR, RD & GR and CSMRS			
1.	Shri Ghanshyam Jha, Chairman, CWC& Chairman - NCDS			
2.	Shri. L.A.V. Nathan,CE(DSO),CWC & Member Secretary-NCDS			
3.	Shri Y.K.Handa, Chief Engineer(N&W),CWC			
4.	Shri S .K. Kamboj, Sr. Joint Commissioner, MoWR, RD & GR,			
5.	Shri R.K. Jain, Chief Engineer(BPMO),CWC			
6.	Shri Murari Ratnam, Director, CSMRS			
II - An	dhra Pradesh			
7.	Shri M.Giridhara Reddy, Chief Engineer, Central Design Organisation			
8.	Shri K.V.V. Narasimha Rao, Executive Engineer, Central Design Organisation			
III - Bihar				
9.	Shri R.P.Ranjan, Chief Engineer, Central Design Organisation			
10.	Shri Anil Kumar Sinha, Deputy Director, DSO			
11.	Shri H.K.Uday Kumar, Resident Officer, WRD			
IV – Chhattisgarh				
12.	Shri K.S.Dhruw , Superintending Engineer			
13.	Shri R.K. Shivhare , Executive Engineer			
V - Gujarat				
14.	Shri P.B. Chaudhari, JD(I), GERI			
15.	Shri Dipak Rathod, Executive Engineer, DSO, GERI			
VI - Himachal Pradesh				
16.	Shri H.M.Dhareula, Chief Engineer, Directorate of Energy			
17.	Shri Sanjeev Kumar Arya, Superintending Engineer, Dam Safety Cell			
VII – J	harkhand			
18	Shri D.K. Singh, Chief Engineer (Design, Master Planning &Hydrology)			

19. Shri Sanjiv Kumar, Executive Engineer, WRD.		
20. Shri Devendra Kumar Sinha, Ex. Engineer, WRD.		
VIII- Kerala		
21. Shri Mahanudevan V.K, Chief Engineer, I&D , WRD		
22. Shri N.S. Hariarayanan, Chief Engineer (ISW)		
IX – Karnataka		
23. Shri Shankare Gowda, Superintending Engineer		
24. Shri B. Nagabhushana Raje Urs, Assistant Executive Engineer, KERS		
X - Madhya Pradesh		
25. Shri K.S.Venulkonda, Superintending Engineer, DSO		
26. Shri Sanjiv A. Tatu,DSO		
XI - Odisha		
27. Shri Saroj Kumar Pattnaik, Superintending Engineer, WRD		
28. Shri Tapas Ranjan Pattnaik, Deputy Director, DSO		
29. Shri Muralidhar Panda, Deputy Director, DSO		
XII - Punjab		
30. Shri Sanjeev Suri, Director, Kandi Water Shed Design		
XIII - Tamil Nadu		
31. Shri D.Khaleel Ahamed, Chief Engineer (O&M),PWD		
32. Shri K. Nehru, Superintending Engineer, PWD/WRD		
33. Shri Meenakshisundaram, Director, Dam Safety		
XIV - Telangana		
34. Shri. A. Narender Reddy , Chief Engineer(CDO)		
35. Shri K.S.S. Chandra Sekhar, Superintending Engineer & Director Dam safety (CDO)		
36. Shri S. Srinivasulu, Executive Engineer(CDO)		
XV - Uttar Pradesh		
37. Shri S.P. Kaushik, Chief Engineer Designs, WRD		
XVI - Bhakra Beas Management Board (BBMB)		
38. Shri H.D. Kapila , Sr. Design Engineer		
XVII - Damodar Valley Corporation(DVC)		

39.	Shri Samir Kumar Singh,		
40.	Shri A. Bhattacharya, Deputy Chief Engineer (Civil),WR		
41.	Shri S.K. Maji		
XVIII -	Kerala Electricity Board(KSEB)		
42.	Shri S. Rajeev, Chief Engineer(DS&DRIP), KSEB		
XIX- N	leghalaya Power Generation Corporation Limited (MePGCL)		
43.	Shri K. Tiewsoh, Chief Engineer, MePGCL		
XX - N	National Hydro Power Corporation(NHPC)		
44.	Narendra Kumar,GM(D&E)		
45.	Shri RMA Khan, Sr. Manager (C)		
46.	Shri Mukesh Kumar, Manager (Civil), D&E Division		
XXI - Geological Survey of India(GSI)			
47.	Shri B.K. Bhandaru, Director		
XXII - Central Water Commission (CWC) & Others			
48.	Shri L.K.Taneja, Director, D & R Co-Ordination		
49.	Shri Sunil Jain, Director, DSM Dte & Instrumentation Dte.		
50.	Dr. B.R.K.Pillai, Director, DSR Dte.		
51.	Shri. Preveen Kumar, Director, SM Dte.		
52.	Shri Bhopal Singh, Director, HYD(S) Dte.		
53.	Shri. O.P.Gupta, Director, FE&SA Dte.		
54.	Shri Kuldeep Singh, Deputy Director, DSM Dte.		
55.	Shri R. Narayanasami, Assistant Director, DSM Dte.		
56.	Shri Upananda Rath, Assistant Director, DSM Dte.		
57.	Dr. C. Raj Singh, WR Expert, World Bank		
58.	Shri. Sameer Khaitan, WR Expert, World Bank		
59.	Mrs. Vinit Arya, AICTE, New Delhi		
60.	Prof. N.K. Goel, IIT Roorkee		

CENTRAL DAM SAFETY ORGANISATION National Committee on Dam Safety 36th Meeting

Summary of the Decisions Taken at the Meeting

Date of Meeting: 11.01.2016 Time: 1000hrs to 1330hrs

Venue: Hotel J.P. Celestial, Bengaluru

Present:

Chairperson: Shri G.S. Jha, Chairman, CWC

Members & Invitees (Name, Designation, Organization): At Annexure-I

Apologies (Name, Designation, Organization): Chief Engineers of Madhya Pradesh,

Rajasthan, Uttarakhand & West Bengal,

Director General, IMD, President ISEG & President, IAH

SI.No.	Agenda Point / Decision	Responsibility	Remarks
36.1.0	Confirmation of the minutes of 35 th meeting:		
	The minutes of the 35 th meeting of the NCDS were confirmed.		
36.2.0	A. Dams of National Importance (i) Bhakra Dam (Punjab)		
	It was decided that BBMB will take up the matter with NCCBM, Ballabgarh and supply the required data for FEM Modelling within six months to DSR Directorate.	BBMB/Director(DSR), CWC	
	(ii) Srisailam Dam (Andhra Pradesh)		
	Regarding increasing the spillway capacity of Srisailam Dam as per design flood review, Chairman, NCDS stated that states of Andhra Pradesh and Telangana may decide with mutual consent the necessary steps to be undertaken within three months and issues related to Nagarjuna Sagar dam may also be resolved on similar pattern.	State of Andhra Pradesh / Telangana in consultation with Director, Hyd.(S), CWC	
	B. Other Dams (i) Garada dam (Rajasthan)		
	It was decided during the meeting that the state Government may be requested to expedite the required investigations and recommended additional tests with a sense of urgency.	State of Rajasthan in coordination with CSMRS/Chief Engineer (NW&S), CWC	
	(ii) Temghar Dam (Maharshtra)		
	It was decided that submission of final report of Expert Committee constituted for suggesting rehabilitation measures would be made by January 2016 end and thereafter the various sanctions/administrative approval would be taken up in six months and the rehabilitation measures will be	State of Maharashtra	

CENTRAL DAM SAFETY ORGANISATION National Committee on Dam Safety 36th Meeting

	completed in one and half years henceforth.	
	(iii) Maudha Dam (Uttar Pradesh)	
	It was decided that Director, DSR, CWC and Director, CMDD N&W, CWC would visit the Maudha dam within next month and make recommendations for rehabilitation. Government of Uttar Pradesh would process the recommendation within two months and thereafter complete the rehabilitation measures within next six months.	State of Uttar Pradesh in coordination with Director (DSR), CWC, Chief Engineer (N&W), CWC and CSMRS
36.3.0	Preparation of Emergency Action Plan (EAP)	
	(i) Director, DSO, Punjab was requested to expedite preparation of inundation maps for Dam Break Analysis for Bhakra and Nangal Dams.	ВВМВ
	(ii) Chairman, CWC stated that one draft of EAP of each state serving as model EAP would be completed by June 2016 and submitted to CWC.	All States/DSOs
36.4.0	Reservoir Operation	
	(i) The rule curve for gate operations has to be carefully framed having a clear knowledge of the "safe flood" or acceptable conveyance capacity in the downstream particularly at places of dense habitations. There should be a threshold value of flood for each dam for issuing notice to district authorities.	All States/DSOs
	(ii) Notification of NDMA guidelines on sudden release of water which had already been circulated to all the states for implementation.	
36.5.0	Pre & Post Monsoon inspection of Dams:	
	(i) Pre monsoon inspections reports for Category -II & -III of dams would be submitted by May 2016 for Jharkhand and for Category-I dams, CWC would be consulted, Latratu dams and other dams, wherein expert opinion of CWC has been desired.	State of Jharkhand
	(ii) All states/DSOs were emphasized that timely remedial measures be taken on deficiencies noticed during pre & post monsoon inspections and the same be included in the next annual consolidated report. All the States/DSOs were requested to send the yearly Pre & Post monsoon inspections report for each dam as per the provided proforma.	All States/DSOs
36.6.0	Instrumentation of Dams:	
36.6.1	Strengthening of seismic instrumentation as per the decision of National Committee on Seismic Design Parameter (NCSDP)	

CENTRAL DAM SAFETY ORGANISATION National Committee on Dam Safety 36th Meeting

States/DSOs were requested that strengthening of seismic instrumentation at different locations in the dams under their jurisdiction may be carried out under intimation to Instrumentation Directorate, CWC. 36.6.2 Strengthening of instrumentation of large dams: (i)All States/DSOs to submit report on performance of existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format attached with the agenda note to the Director, Instrumentation Directorate, CWC on yearly basis. (ii) It was emphasized that the state Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of nonfunctioning of the instruments in the existing dams 36.7.0 Comprehensive Dam Safety Review by an expert panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. 36.8.0 National Register of Large Dams - Updation as per new format: (i) It was decided that State Governments would Karnataka. Raiasthan. Jharkhand. West		1		
(i)All States/DSOs to submit report on performance of existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format attached with the agenda note to the Director, Instrumentation Directorate, CWC on yearly basis. (ii) It was emphasized that the state Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of nonfunctioning of the instruments in the existing dams 36.7.0 Comprehensive Dam Safety Review by an expert panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. 36.8.0 National Register of Large Dams - Updation as per new format: State of Maharashtra, Uttar Pradesh,		seismic instrumentation at different locations in the dams under their jurisdiction may be carried out under intimation to Instrumentation Directorate, CWC.	All States/DSOs	
existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format attached with the agenda note to the Director, Instrumentation Directorate, CWC on yearly basis. (ii) It was emphasized that the state Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of nonfunctioning of the instruments in the existing dams 36.7.0 Comprehensive Dam Safety Review by an expert panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. 36.8.0 National Register of Large Dams - Updation as per new format: State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttarakhand, West Bengal, Himachal Pradesh and MePGCL. All States/DSOs State of Maharashtra, Uttar Pradesh,	36.6.2	Strengthening of instrumentation of large dams:		
Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of nonfunctioning of the instruments in the existing dams 36.7.0 Comprehensive Dam Safety Review by an expert panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. 36.8.0 National Register of Large Dams - Updation as per new format: State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh and MePGCL. All States/DSOs State of Maharashtra, Uttar Pradesh,		existing instruments installed in the dam body and foundation including analysis of data with permissible limits of Instruments in prescribed format attached with the agenda note to the Director, Instrumentation	All States/DSOs	
panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh and MePGCL. All States/DSOs State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Himachal Pradesh and MePGCL. All States/DSOs State of Maharashtra, Uttar Pradesh, Uttar P		Governments/DSOs may regularly monitor the performance of the instruments and induct new and appropriate technological solutions in view of non-	All States/DSOs	
panel: (i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by DSRP may also be furnished to CDSO. State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh and MePGCL. All States/DSOs State of Gujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh and MePGCL. State of Sujarat, Jharkhand, Rajasthan, Uttar Pradesh, Uttar Pradesh, Uttar Pradesh and MePGCL. State of Maharashtra, Uttar Pradesh, Uttar Pradesh,	36.7.0	Comprehensive Dam Safety Review by an expert		
per new format: State of Maharashtra, Uttar Pradesh,		(i)The State Governments wherein DSRP with independent panel of experts have not been constituted were requested to expedite the constitution of DSRP. (ii) State/DSOs were requested to carry out comprehensive Dam Safety Reviews on regular basis once in ten years, as per aforesaid norms of Dam Safety Procedures. The final report on each dam by	Uttar Pradesh, Uttarakhand, West Bengal, Himachal Pradesh and MePGCL.	
per new format: State of Maharashtra, Uttar Pradesh,	20.00	National Devictor of Large Dame Undation of		
submit the updated information by reviewing/revalidating all the data/records available with them. Particularly discrepancy in the number of large dams (Viz. elimination of duplicate entries etc.), approved by the respective Head of the Department in the prescribed proforma by June, 2016. (ii) Also in most of the cases under Column 'River', no names are provided except as local nalla etc., which may again be checked up and name of river/tributaries of river etc. and the details of river basins (wherever not provided) be submitted by June 2016 by all States/DSOs.	36.8.0	per new format: (i) It was decided that State Governments would submit the updated information by reviewing/revalidating all the data/records available with them. Particularly discrepancy in the number of large dams (Viz. elimination of duplicate entries etc.), approved by the respective Head of the Department in the prescribed proforma by June, 2016. (ii) Also in most of the cases under Column 'River', no names are provided except as local nalla etc., which may again be checked up and name of river/tributaries of river etc. and the details of river basins (wherever not provided) be submitted by June	Karnataka, Rajasthan, Jharkhand, West Bengal, Uttarakhand and Madhya Pradesh.	

CENTRAL DAM SAFETY ORGANISATION National Committee on Dam Safety 36th Meeting

	JO INCCLI	<u> </u>
36.9.0	Setting up/Strengthening of Dam Safety Organization (DSO):	Out of David
	(i)It was decided that Director, DSO, Punjab to take up the matter with state government for strengthening of the dam safety organization in	State of Punjab
	Punjab and matters related to funding etc.	State of Rajasthan
	(ii) It was decided that State of Rajasthan may take necessary steps for strengthening of DSO set-up in the state.	
36.10.0	Dam Rehabilitation & Improvement Project (DRIP):	
	All NCDS members to submit the duly filled DHARMA License Application Form to Director, DSR.	All States/DSOs, Director (DSR), CWC
36.11.0	Record of Dam Failures and Major Dam Incidents and their Technical Reports:	
	It was decided that State Governments would submit the technical report with causes of failure and remedial action undertaken within 3 months.	States of Madhya Pradesh, Rajasthan, Gujarat, Uttarakhand & Uttarpradesh
36.12.0	Upkeep and archival of records - Data Book and O&M Manual etc.:	
	It was decided that State Governments to expedite preparation of Data Books and Operation & Maintenance Manual and submit the updated status.	All States/DSOs
36.13.0	Monitoring of safety aspects of inter-State Dams by Sub-Committees: (a)Subarnarekha River System Sub-Committee (SRSS):	
	The meeting of the Sub-Committee will be held before February 2016 and the next meeting will be held by June 2016 . The report of the Sub-Committee may be submitted to CDSO, CWC.	State of Jharkhand, West Bengal and Odisha.
	(b)Mahanadi River System Sub-Committee (MRSS):	
	8 th Meeting of the Sub-committee was held in February 2014. It was suggested to hold the next meeting by June 2016 and also include the preparation of EAPs in the Agenda. It was requested to submit the monitoring report of interstate dams by Chief Engineer, Odisha by December 2016 .	State of Odisha and Chattisgarh

CENTRAL DAM SAFETY ORGANISATION National Committee on Dam Safety 36th Meeting

	Special Note: not included in 36 th meeting Agenda		
	Chief Engineer, Kerala desired to know the status of Kerala's request regarding continuation of PAPS subcommittee and It was decided that suitable decision in the matter would be taken by MoWR, RD & GR in a month or so.	Sr.Joint Commissioner (Pen.Riv.), MoWR ,RD&GR	
36.14.0	Dam Safety Bill		
	It was informed that with the dissolution of the 15th Lok Sabha, the earlier Dam Safety Bill (2010) lapsed and CWC has submitted a new draft including recommendations of the Parliament Standing Committee of the Dam Safety Bill, 2014 to the MoWR, RD & GR, and Ministry is further processing the case.		
36.15.0	Setting up Hydrology units and Design Floods Review:		
	(i) States of Chhattisgarh, Jharkhand, Uttar Pradesh, Uttarakhand and West Bengal to take necessary steps for setting up the hydrological units.	States of Chhattisgarh, Jharkhand, Uttar Pradesh, Uttarakhand & West Bengal	
	(ii)All States/agencies were requested to carry out review of hydrological reviews of large dams and submit updated status in this regard	All States/DSOs	
36.16.0	Any Other Items with Permission of the Chair		
	(i)Regarding the issue of licensing of authorities for capability for operation and maintenance of dams, it was informed that the provision of accreditation of dam safety authorities exists in Dam Safety Bill.	All States/DSOs	
	(ii)Regarding the issue of siltation of dams it was informed that de-siltation activities are taken up in DRIP and the concern may furnish the details in this regard to DSR Dte., CWC.	All States/DSOs, Director (DSR), CWC	
	(iii)Chairman, NCDS stressed on the institutional strengthening of Dam Safety Organizations. He reiterated that the agenda items, where sufficient response is not received from the state governments would be considered as non-serious issues and would not be taken up in future meetings of NCDS and therefore requested to all States /DSOs to attach due importance to agenda items and make serious efforts in their implementation.	All States/DSOs	