

**Minutes of the 34<sup>th</sup> Meeting of National Committee on Dam Safety (NCDS)**  
**held on 23<sup>rd</sup> March, 2015 at 1100 hrs.**

34<sup>th</sup> meeting of National Committee on Dam Safety (NCDS) was held on 23<sup>rd</sup> March, 2015, at the Hotel Benzz Park, Chennai (Tamil Nadu) under the Chairmanship of Shri A.B. Pandya, Chairman, CWC & Chairman of the National Committee on Dam Safety (NCDS). Shri L.A.V Nathan, Chief Engineer (DSO), CWC & Member Secretary of NCDS conducted the proceedings. List of Officers from different states/organizations present in the meeting is enclosed at **Annexure-I**

Chairman, NCDS welcomed the members of the National Committee on Dam Safety (NCDS) to the meeting being held at Chennai along with the First National Conference on Dam Safety to set the tone for dam safety paradigm for the country. He stated that the dam safety is attracting attention, as the rate of addition of storages is tapering off consequent to non addition of new storages due to R&R, environment and other multiple issues. Therefore, the existing assets need to be managed well, to serve the desired purpose of food scarcity, economic growth etc. Dams constituting the basic components of the irrigation as well power systems, consequently dam safety, i.e. sustained maintenance and vigilance for dam safety needs to be provided to the old dams. Chairman, NCDS stressed the importance of NCDS and requested the State/DSOs to perform the above task of dam maintenance, safety with utmost sincerity.

Chairman, NCDS, thereafter requested Chief Engineer (DSO) & Member Secretary, NCDS to take up the agenda items. Member Secretary, CWC stated that the states/Dam Safety Organizations (DSOs) are primarily responsible for performing the task of sustained maintenance, rehabilitation and dam safety activities of the dams in their respective jurisdiction and giving necessary feed back in this regard to NCDS for providing performing better advisory role in this regard.

**34.1.0 Confirmation of the minutes of 33<sup>rd</sup> meeting:**

The comments of Kerala on the Minutes of 33<sup>rd</sup> meeting regarding modifications on Item Nos 33.14 (b) and 33.17 was discussed as follows:

**(i) Item No. 33.14 (b) - Parambikulam Aliyar Project Sub-Committee (PAPS)**

Chief Engineer, Tamil Nadu also stated that the minutes have been recorded as per discussions held and State of Tamil Nadu agrees with the same. Chief Engineer, IDRB, WRD, Kerala quoting his letter dated 10<sup>th</sup> November, 2014 insisted for the change of minutes emphasizing that PAP Sub-Committee is a sub-committee of NCDS, who should deal with the matter of non-functioning of the sub-committee. Regarding the issue, Chief Engineer (DSO) & Member Secretary, NCDS stated that the minutes have been recorded as per the actual discussions held during the 33<sup>rd</sup> meeting. Chairman, CWC concluded that NCDS cannot force any sub-committee to meet.

**(ii) Item No. 33.17 Other Item**

Chief Engineer, IDRB, WRD, Kerala insisted on the role of NCDS on desilting issue. In this regard, Member Secretary, NCDS informed that the matter related to de-siltation of dams has been appropriately recorded in the minutes, and therefore there is no need for any modifications in the minutes. Chairman, CWC reiterated that NCDS is not having a jurisdiction, whatsoever on such issues and States have to comply with the various statutory requirements.

As no other comments were received from other members, the minutes of the 33<sup>rd</sup> meeting of the NCDS were confirmed.

**34.2.0 National Register of Large Dams:**

**34.2.1 Updation as per new format:**

Member Secretary informed that updated NRLD data in the revised proforma has been received only from Kerala Irrigation Department (24 no. of large dam), Uttar Pradesh (34 nos. of large dams) and Damodar Valley Corporation (4 numbers of large dams) and the same is awaited from other member States/DSOs. However, during the meeting Himachal Pradesh, Gujarat, Andhra Pradesh, Odisha, Punjab, Telangana, BBMB and NHPC have submitted the NRLD data. Clarification has been sought from Uttar Pradesh as Data is not complete. Director, Dam Safety, Uttar Pradesh stated of

having submitted the information related to duplicate dams, to which Director, DSM, CWC stated that same have not been received. Regarding details of large dams under NRLD submitted by Uttar Pradesh, it was informed that the data of only 34 large dams have been furnished, wherein the height of the large dams already appearing in the NRLD have been changed and State Government of Uttar Pradesh have been informed but reply is still awaited. Director, DSM, CWC requested Director, Dam Safety, Uttar Pradesh to furnish the consolidated details of all the large dams of the state after thorough verification of the data along with the comments on duplicate dams sought. Director, Uttar Pradesh agreed to submit the desired information within one month. The states of Chhattisgarh, Jharkhand, Karnataka, Uttar Pradesh, Uttarakhand, Maharashtra, Tamil Nadu, Madhya Pradesh, Rajasthan, West Bengal, Meghalaya Power Generation Corpn. Ltd. and KSEB were requested to submit updated NRLD as per **Annexure-II** after verification.

(Action: Chhattisgarh, Jharkhand, Karnataka, Uttar Pradesh, Uttarakhand, Maharashtra, Tamil Nadu, Madhya Pradesh, Rajasthan, West Bengal, Meghalaya Power Generation Corpn. Ltd. and KSEB)

#### **34.3.0 A. Dams of National importance:**

##### **(i) Bhakra Dam (Punjab):**

BBMB had desired to conduct dam safety analysis of Bhakra Dam by CWC. Deputy Chief Engineer, BBMB informed that BBMB would submit the data to CWC for FEM studies shortly and mentioned about the difficulty regarding providing online support for software up gradations during the period of analysis and sought CWC's intervention. Director, DSR, CWC stated that CWC team had visited Bhakra dam and BBMB was requested to provide data for FEM analysis to validate the performance of the Bhakra dam for deflection. BBMB has been requested to arrange online support for the period of analysis through the concerned agency. Such an arrangement is required upgradations of the software, and earlier existed for the similar studies done for Idukki dam. Deputy Chief Engineer, BBMB was requested to liaison with concerned agency to finalize the

arrangement for online support during the period of analysis and furnish the data to CWC for updating FEM analysis.

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

(ii) **Srisailem Dam (Andhra Pradesh):**

Member Secretary, NCDS requested Andhra Pradesh members to give latest status of protection works opposite Block 6<sup>th</sup> & Block 7<sup>th</sup> to which Chief Engineer, CDO, Andhra Pradesh stated that the rehabilitation works would be taken up after receipt of revised administrative approval from government. Director, Hyd (S), CWC informed that the project authorities have been sent observations of CWC regarding calibrating 2009 flood to calculate PMF for increasing the spillway capacity of Srisailem dam and offered further assistance in this regard. Director, DSR, CWC stated that the project authorities were advised to send the proposal for rehabilitation of Srisailem dam under DRIP. However, the same has not been submitted and it has become too late as the proposals for inclusion of other dams/states is in advance stage of inclusion.

Chairman, NCDS stated that non structural measures in addition to structural measures of increasing the spillway capacity may also be considered from cost management point of view. Director, DSR pointed out regarding the huge erosion in energy dissipation area, and requested the project authorities to take the necessary remedial measures in this regard. Chief Engineer, Andhra Pradesh enquired about the views of the Krishna Water Board and Godavari Water Board on the issue, Member Secretary, NCDS opined that the views of the aforesaid Boards would have to be taken in addition to CWC's comments from HSO.

State Government of Andhra Pradesh was requested to comply with the recommendations of the CWC Expert Committee and further CWC observations on PMF studies sent by HSO, CWC.

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

## **B. Other Dams**

### **(i) Gararda Dam (Rajasthan):**

Member Secretary, NCDS requested the latest status of the Gararda dam from the representative of Government of Rajasthan. As no representative of Govt. of Rajasthan was present in the meeting, Director, CSMRS informed that the matter has been taken up seriously after the last meeting and 4-5 visits have been made and all the investigations have been completed and report would be released by mid April, 2015. State Govt. of Rajasthan was requested to liason with concerned agencies and ensure that the rehabilitation measures are taken up urgently.

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

### **(ii) Nand Gavan Dam (Maharashtra):**

Member Secretary, NCDS requested the latest status of the Nand Gavan Dam from the representative of Government of Maharashtra. Superintending Engineer, Maharashtra intimated that a detail report on reasons of failure is still awaited from field officers and as soon as the same is received, it would be submitted to CWC. However the repairs and restoration works are yet to be taken in hand. The dam owner, i.e., Municipal Council, Digras is unable to take up rehabilitation due to financial issues. Water Resources Department, Government of Maharashtra cannot directly involve as it is a Water Supply Project, not an Irrigation Project. Superintending Engineer, Maharashtra was requested to liason with concerned agencies and work out the modalities to ensure that the rehabilitation measures are taken up urgently for Nand Gavan dam.

(Action: State of Maharashtra)

### **(iii) Temghar Dam (Maharashtra)**

Member Secretary, NCDS requested the latest status of the Temghar dam from the representative of Government of Maharashtra. Superintending Engineer, Maharashtra informed that the Executive Director, Maharashtra Krishna Valley Development Corporation, Pune vide his Office Order dated 27/08/2014 has formed an expert

committee under the chairmanship of Shri V. M. Ranade (Ex. Secretary), Water Resources Department, Maharashtra for delivering guidance to reduce leakages from Temghar dam and make recommendations for remedial and safety measures.

It was informed that three meetings of the expert committee were held (including site visit), a draft final report of Temghar Dam Expert Committee would be finalized by June, 2015 and as per recommendations of Expert committee further remedial measures would be taken up by Project Authorities for the dam's early rehabilitation. Superintending Engineer, Maharashtra was requested to take up the matter with MKVDC on priority and ensure that the rehabilitation measures are taken up urgently for Temghar dam.

(Action: State of Maharashtra)

**(iv) Maro and Maudha Dam (Uttar Pradesh):**

Director, Dam Safety, Uttar Pradesh informed that the performance of the Maro dam after completion of rehabilitation work has been checked and found in order. For Maudha dam, he informed that the project report is under checking and action would be taken shortly. Director, Dam Safety, Uttar Pradesh was requested to send the status of aforesaid projects to CWC for the aforesaid two dams. On query from Chairman, CWC, Director, Dam Safety, U.P. informed that no seepage has been observed in Maro Dam by filling up to FRL. Director, Dam Safety, Uttar Pradesh was requested to liason with concerned agencies and to ensure that the rehabilitation measures are taken up urgently for Maudha dam.

(Action: State of Uttar Pradesh)

**34.3.1 Provision of funds for Operation and Maintenance of Dams in distress condition/(s).**

Member Secretary, NCDS informed that States/DSOs were requested to regularly visit distressed dams and make necessary provisions for regular maintenance/rehabilitation of the large dams. Chairman, NCDS stressed the need to have provision of the funds by state governments for dam rehabilitation/safety. He further suggested that the aforesaid

financial requirements related to dam safety/rehabilitation can be incorporated under the dam safety portion of participating Irrigation Management, as and when the system of water charges, service fees etc get implemented. In this context, he requested States/DSOs to assess the fund requirement for dam safety/maintenance and make provisions accordingly and approach Central Government in case of difficulty faced by state governments with the requisite data in this regard. He mentioned that the Central Government would get to know the scale of investment required for dam safety maintenance/operation in the country for future planning.

Chief Engineer, NHPC informed that on the basis of pre and post monsoon inspections, estimates of the cost of repairs for remedial measures are prepared and financial provisions of the O&M requirements are made. Director, DSM stated that the all other states/DSOs may also make financial/budgetary provisions for the rehabilitation of the dams on above lines.

Director, GERI, Gujarat has informed that provision for the said purpose for the year 2014-15 was Rs. 119.07 crore and Rs.83.12 crore was actually spent. Funds allocated for the year 2015-16 is Rs. 70.66 crore. Chief Engineer, Andhra Pradesh also intimated about action taken for making such financial provisions. It has been informed that steps are being taken by Tamil Nadu to allot funds under separate head for carrying out works needed for dam safety. DVC intimated of approaching the appropriate authority in this regard.

Superintending Engineer, DSO, Maharashtra has informed that for taking the review of action taken report on deficiencies pointed out in health Status Report 2013, a review meeting was held by the Principal Secretary, WRD, Government of Maharashtra on 08/08/2014. In this meeting all the regional Chief Engineers were present. Review was also taken for the funds required for the O & M. Government of Maharashtra vide circular dated 01/01/2015 instructed all field officers to prepare special repair estimates on remedial actions proposed by Dam Safety Organisation(DSO). Special repairs of dams which have been prioritized for rehabilitation by DSO will be sanctioned by Government of Maharashtra.

Director, DSR, CWC mentioned about the provisioning made under DRIP for the dam rehabilitation cost (under 9 items for dam safety) as well as annual maintenance cost (i.e. for weeding of grass, denting, painting etc.)

(Action: All States/DSOs)

#### **34.4.0 Preparation of Emergency Action Plan (EAP)**

Member Secretary, NCDS informed that States/DSOs should expedite the preparation of EAPs of the large dams on urgent basis as a part of disaster management, considering that only a few number of EAPs of large dams have been reported to be prepared. The carrying out of the mock drills of EAPs was also stressed. Chairman, NCDS emphasized the importance of carrying out mock drills involving State Disaster Management Authorities for better preparedness during any eventuality. Dy. Chief Engineer, Dam Safety, BBMB informed regarding carrying out mock drills for the internal situations in case of Bhakra dam having 4 alert levels along with issuing advance flood warnings. Deputy Chief Engineer, Dam Safety, BBMB was requested to carry out such mock drills under PMF, Dam break conditions and normal spillway operations. Further, Deputy Chief Engineer, Dam Safety, BBMB mentioned that the preparation of the inundation map has to be undertaken by Punjab, Himachal Pradesh, as they are the downstream riparian states, to which Member Secretary, NVDS informed that it is the responsibility of the dam owner, i.e., BBMB to incorporate inundation maps of downstream areas in liaison with the state governments of Punjab and Himachal Pradesh. Member Secretary mentioned that it is upto BBMB to get the topographic details of downstream areas and prepare the inundation map in consultation with the downstream states. He also informed that the EAP is to be prepared for normal operating conditions as well as extreme flood conditions under SPF, PMF as well as dam break.

Superintending Engineer, Himachal Pradesh informed that as a follow up to Beas tragedy, Disaster management Plan (DMP), EAP, mock drills etc. have been got



prepared/conducted by respective dam owners and to safeguard the public against discharge from Dam/barrage, vulnerable stretches from which the tourists/public can have access to the river bank have been identified, fenced and hoardings of appropriate size displaying bilingual advisory warnings at prominent locations clearly visible to the public from distance have been got ensured in place from the respective dam owners.

He further informed that pre warning system comprising of mobile van equipped with public address system and sirens / Hooters of adequate capacity audible up to a range of 5 to 8 kms. operated from power house/barrage control room both on AC/DC supply, in the respective domain of hydro electric projects have been got ensured in place from the respective dam owners.

Dy. Chief Engineer, Dam Safety, BBMB enquired about the submission of various reports/returns concerning dam safety to State Government of Himachal Pradesh to which Chairman, CWC informed that the aforesaid and other related information related to dam safety needs to be furnished to State Government of Himachal Pradesh as the dams come under the jurisdiction of State Govt. of Himachal Pradesh.

Chairman, CWC advised State/DSOs to have action plans for safe operations of dam spillways under normal operating conditions. Chairman, CWC mentioned when the spillway releases after a long break, it attracts tourists and with people gathering all around the dams and spill way components, it can become a safety issue for people & the dams and a law & order problem as well. In order to avoid a Beas river like tragedy, the public awareness programme by each State/DSOs/authorities concerned in local language to make people to aware of the associated risks with entering in rivers/projects need to be taken up a part of dam safety activities.

Director, CSMRS opined that BBMB, NHPC & State Government of Himachal Pradesh can organize a joint workshop on disaster management. In case of logistics support for conducting aforesaid workshop, Director (DSR), CWC may be approached for providing the same under DRIP. The partner states under DRIP can benefit as well.

The status of preparation of EAPs by States/DSOs was reviewed. It was observed that some states are indicating status of EAPs prepared at field levels/as “under progress” or “Updating is under progress”, etc. Such phrases need to be avoided and details of only completed EAPs prepared may be intimated. Kerala (Irrigation) has earlier indicated that EAP has been prepared for Neyyar Dam & Kerala Electricity Board (KSEB) for Idukki dam. However, the same is not included in the latest information furnished by Kerala (Irrigation) and Chief Engineer, KSEB did not confirm the preparation of any EAP. Accordingly the status regarding preparation of EAPs as received from States/DSOs has been compiled and enclosed at **Annexure-III**, which may be reviewed and changes if any, intimated.

In view of the importance of the matter, Member Secretary, NCDS mentioned about the audit note of CAG on EAPs and requested state governments/DSOs to make all out efforts for the preparation of EAPs of all the large dams under their jurisdiction and to send the half yearly return in respect of completed EAPs prepared as per proforma enclosed at **Annexure-IV**. States/DSOs were also requested that a report on the mock drills/test carried out for EAPs since July 2009 with dates along with action taken to revise EAPs in the light of experiences gained during these exercises may kindly be furnished to the NCDS Secretariat at the earliest.

(Action: All States/DSOs)

#### **34.5.0 Pre & Post Monsoon inspection of Dams:**

Member Secretary, NCDS informed that the annual consolidated inspection reports for the year 2013 have been received only from 10 states and 2 DSOs, namely, Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, Odisha, Tamil Nadu, Punjab (2014), Kerala State Electricity Board & National Hydro-Electric Power Corpn. and still awaited from the states of Chhattisgarh, Jharkhand, Kerala (Irrigation), Karnataka, Uttarakhand and West Bengal.

Member Secretary, NCDS stated that pre and post monsoon inspection of each large dam is required to be carried out by the concerned State/DSOs and Annual Reports of such

inspections are compiled by the respective Dam safety Organization (DSO) and forwarded to Central Dam Safety Organization (CDSO), CWC. It has been observed that all the large dams under a particular State are not covered in the Health status reports received from States/ DSOs. It was emphasized that the details of action taken on suggested remedial measures need to be included in Health Status Reports.

Member Secretary, NCDS requested all the states/DSOs to send annual consolidated report (both pre and post monsoon) for each of the large dams in the prescribed proforma in the month of April.

States/DSOs were requested to follow the aforesaid schedule for submission of Annual Consolidated health Status Report strictly and further requested to submit the summary of pre and post monsoon inspections as per proforma enclosed at **Annexure- V**.

(Action: All States/DSOs)

#### **34.6.0 Instrumentation of Dams:**

Member Secretary, NCDS stated that during the 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 enclosed at **Annexure-VI** 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 the non-functioning of the instruments in the existing dams. The State Governments/DSOs were advised to ensure proper functioning of instruments and make sure that at least the basic instruments, i.e. plumb line, V-notch & survey settlement point etc. are in working order.

Chief Engineer, Andhra Pradesh stated to have submitted the instrumentation data to Instrumentation Directorate for analysis, to which Director, Instrumentation, CWC stated that due to manpower constraints in Instrumentation Directorate, project authorities should

carry out the analysis of instrumentation data and thereafter submit to Instrumentation Dte. Necessary advice in this regard can be obtained by Instrumentation Dte, CWC and CSMRS.

Regarding the installation of the instruments in old dams, it was pointed out that the instruments measuring the parameters pertaining to the serious maintenance issues / problems faced by the dams need to be installed. Further, extra survey points (for deformation), crack meters (cracks), Joint meter (differential settlement), instruments for measuring uplift pressure & pore pressure, plumb line etc. can be considered for installation in old dams.

(Action: All States/DSOs)

#### **34.7.0 Comprehensive Dam Safety Review Panel (DSRP):**

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 metres in height or which store 50000 acre feet (60Mm<sup>3</sup>) or more of water by an independent panel of experts once in 10 years. The State/DSO’s shall develop their own mechanism for safety review of the balance dams in their state, based on assessment of safety of dam, hydrological, structural and seismological assessment.

Status regarding formation of DSRP and on the number of dam safety reviews carried out by the States/agencies has been compiled as per **Annexure-VII**, which may be reviewed considering all the reviews made in last 10 years and changes if any, intimated to NCDS Sectt. Member Secretary, NCDS requested the states of Gujarat, Himachal Pradesh, Jharkhand, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal and Kerala Electricity Board (KSEB) and Meghalaya Power Gen. Corpn. Ltd. where the DSRPs have not been constituted as per available information, to constitute the DSRPs. It was also mentioned that some of the states partnering DRIP have constituted more than 1 DSRP. All States/DSOs were requested to carry out comprehensive dam safety review of large dams and submit updated status in this regard.

(Action: All States/DSOs)

#### **34.8.0 Dam Rehabilitation & Improvement Project (DRIP):**

Dam Rehabilitation and Improvement Project (DRIP) has become effective from 18.4.2012 with funding assistance from the World Bank in five States of India i.e. Madhya Pradesh, Odisha, Kerala, Tamil Nadu and Karnataka. About 223 distressed dams would be rehabilitated through this project over a period of six years. Inclusion of some more States/Organisation (namely Uttaranchal Jal Vidyut Nigam Limited, and Damodar Valley Corporation) is under process. Proposals for involvement of Academic/Research Institutes in DRIP for their capacity building in the field of dam safety were shared with the World Bank for an early agreement on the allocation and manner of resource allocation from Central DRIP component. Bank has agreed with the Proposals. All the implementing agencies are in the process of tendering works for DRIP dams.

(Action: Director, DSR Dte., CWC)

#### **34.9.0 Record of Dam Failures and Major Dam Incidents and their Technical Reports:**

Member Secretary, NCDS informed that the record of dam failure in the country as per information received from State Govts. /DSOs were circulated with the minutes of the last meeting for updation and no further dam failure has been reported. Member Secretary, NCDS stated that the list of dam failures in the country as per information received from state governments/DSOs and enclosed at **Annexure-VIII** may be updated by State Govts./DSOs/Agency operating and maintain dams on regular basis and sent to NCDS Secretariat.

Further, the state governments/DSOs are requested to furnish record and technical reports of Major Dam incidents related to

- (i) any structural damage to the dam and appurtenant works,
- (ii) occurrence of any flood, the peak of which exceeds the available flood discharge capacity or seventy per cent, of the approved design flood,

- (iii) occurrence of a flood, which resulted in encroachment on the available freeboard, or the approved design freeboard,
- (iv) Any other incidence which a prudent dam engineer may relate to dam safety concerns and Dam Failures.

(Action: All States/DSOs)

#### **34.10.0 Data Book and O&M Manual:**

Member Secretary, NCDS informed that the project authorities should prepare the 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](http://www.cwc.gov.in/Dam_safety.html)). Member Secretary, NCDS requested all State Government/DSOs to expedite the preparation of data books and O&M manuals for all the large dams under their jurisdiction

Status regarding on the preparation of data book and operation & maintenance (O&M) manuals received from States/DSOs as per **Annexure-IX** has been compiled, which may be reviewed and changes if any, intimated to NCDS Sectt. and submit the updated status.

(Action: All States/DSOs)

#### **34.11.0 Monitoring of safety aspects of inter-State Dams by Sub-Committees:**

##### **(a) Mahanadi River System Sub-Committee (MRSS):**

Deputy Director, DSO, Odisha intimated that the regular meetings of the committee are being held and during the last meeting of the committee held on August 2014, wherein a joint committee including senior officers from each member states has been formed to study the comprehensive basin management so as to moderate the flood inflow into Hirakud dam and not alter the non monsoon flow into Hirakud.

(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))

**(b) Parambikulam Aliyar Project Sub-Committee (PAPS):**

Chief Engineer (DSO) & Member Secretary, NCDS informed that considering the concerns of Kerala, Government of Tamil Nadu has been requested to restart the meeting the PAP Sub-Committee.

Chief Engineer, IDRB, Kerala stated that since the sub-committee have been constituted under NCDS and requested to restore the meetings of the PAP sub-committee.

Chief Engineer, Tamil Nadu reiterated that Tamil Nadu stand of disbanding the PAP Sub-Committee since 22<sup>nd</sup> meeting of the NCDS. He further added that inter-state issues be taken by MoWR, RD & GR. After discussions, Chairman, CWC stated that as there is no meeting ground for the two states, the role of NCDS ceases and the committee may inform MoWR, RD & GR. He further added that there is an established procedures/dispute resolution mechanism, the state can raise the dispute and approach MoWR, RD & GR. Chairman, NCDS stated that this agenda item may not be included in the future meetings of NCDS.

(Action: States of Kerala & Tamil Nadu)

**(c) Subarnarekha River System Sub-Committee (SRSS):**

Deputy Director, DSO, Odisha stated that during 6<sup>th</sup> meeting of Inter-state subcommittee held at Jamshedpur on 24.10.2008 it was decided to hold 7<sup>th</sup> meeting at Kolkata, which could not be materialized. Since the matter is inordinately delayed it is proposed to fix a suitable date and venue to convene the

7<sup>th</sup> meeting to monitor the safety aspects of the inter-state dams in Subarnarekha system.

Engineer-in-Chief, Odisha intimated that the inter-state issues with Jharkhand related to Chandil Dam are being amicably settled by having meetings with Principal Secretary, Jharkhand.

(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)

#### **34.12.0 Dam Safety Bill:**

Dam Safety Bill 2010, which was introduced in the Parliament on 30<sup>th</sup> August, 2010, was subsequently referred to the Parliamentary Standing Committee On Water Resources for examination. The Parliamentary Standing Committee submitted the recommendations vide its Seventh Report on Dam Safety Bill, 2010 in the Parliament in August, 2011, and subject to its recommendations and observations, the Standing Committee has recommended passing the Bill by the Parliament. The observation and recommendations of the Parliamentary Standing Committee on Water Resources were examined by Ministry of Water Resources for necessary compliance. However, with the dissolution of the 15<sup>th</sup> Lok Sabha, Dam Safety Bill has come to lapse. Hence, the Bill needs to be prepared afresh. In light of recommendations of the Parliamentary Standing Committee, CWC has submitted the new draft of the Dam Safety Bill, 2014 to the MoWR, RD & GR vide letter dated 03.6.2014 and Ministry is further processing the case.

Chief Engineer, Tamil Nadu stated that Tamil Nadu had earlier suggested some modification to the Bill, and these needed to be incorporated in the fresh Bill. The committee noted the statement of Tamil Nadu with respect to the Dam Safety Bill.

(Action: Director, DSR Dte., CWC)



#### **34.13.0 Setting up Hydrology units and Design Floods Review:**

Member Secretary, NCDS stated that during the last meeting, all States/DSOs were requested 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. As per information available, out of 18 states and 5 DSOs, the States of Chhattisgarh, Jharkhand, Himachal Pradesh, Telangana, Uttar Pradesh, Uttarakhand, West Bengal, Kerala State Electricity Board and Meghalaya Power Gen. Corpn. Ltd. (DSOs) are yet to constitute the hydrological units.

Director, Hydrology (South), CWC informed that Central Water Commission and India Meteorological Department have jointly prepared the PMP Atlases for various basins in the country. The PMP Atlases are quite exhaustive and covers a lot of details and would be very handy to the practicing engineers/meteorologist in the assessment of design storm.

The grid wise PMPs given in the Atlas can be readily used for quick/direct assessment of applicable PMP/SPS for any catchment. However, such assessment should be limited to small and medium catchments only and should not be used for large catchments.

The Atlas also covers very useful information such as patterns of key storms along with their synoptic situations, rainfall statistics at various stations and for various river basins, temporal distribution patterns of rainfall etc. which shall be very useful even for carrying the detailed storm analysis for a project.

Member Secretary, NCDS requested States/agencies of the States of Chhattisgarh, Jharkhand, Himachal Pradesh, Telangana, Uttar Pradesh, Uttarakhand, West Bengal, Kerala State Electricity Board and Meghalaya Power Gen. Corpn. Ltd. to take necessary steps for setting up the hydrological units. The status of setting up of hydrology unit and number of hydrological review carried out for large dams as per information received from States/DSOs has been compiled and is enclosed at **Annexure -X**. which may be reviewed and changes if any, intimated. Further, all States/agencies were requested to

carry out review of hydrological reviews of large dams and submit updated status in this regard.

(Action: All States/DSOs)

**34.14.0 Any other item with the permission of the Chair:**

**Balimela Dam:**

Engineer-in Chief, Odisha informed the Committee that Balimela dam of Odisha has been included under Dam Rehabilitation and Improvement Project. He further stated that Balimela dam is a joint venture project of Odisha and Andhra Pradesh with equal sharing of water of Balimela dam. The share of Andhra Pradesh from the Balimela reservoir was earlier planned through AP tunnel. The diversion of water through this tunnel was operational for three years i.e. 1974 to 1977. After that they are not operated. The Andhra share is being released from a river sluice gate which is jammed and not operable. Because of the continuous flow, a deep channel has been formed due to erosion which is also endangering the road on the left of the spillway. Dam Safety Review Panel of Odisha after inspection of this dam has suggested making operational the tunnel for passing the water without continuously opening the river sluices, and for repair of downstream erosions.

Engineer-in-Chief, WR, Odisha informed that Odisha would organize a joint meeting with Andhra Pradesh Government and APGENCO to resolve the issue of Balimela Dam

(Action: States of Odisha, Andhra Pradesh)

**The Summary of the decisions taken during the meeting are also separately enclosed at Annexure-XI.**