Annex – VI

MINUTES OF THE 1st MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 17TH - 18th OCTOBER, 2023 FROM 10:30 AM – 05:30 PM BY HYBRID MODE (PHYSICAL- INDUS HALL, MoEF&CC AND ONLINE).

The 1st meeting (hybrid mode) of the re-constituted EAC for River Valley & Hydroelectric Projects organized by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi, was held on 17th - 18th October, 2023, under the Chairmanship of Prof. G. J. Chakrapani. After initial introduction of all, the committee deliberated on the various issues and challenges for sustainable development of hydroelectric and river valley projects and expressed their absolute commitment, cooperation and team work for the EAC. The list of Members present in the meeting is shown in the **Annexure**.

Agenda Item No. 1.1: Confirmation of Minutes of 51st EAC meeting

The EAC confirmed the minutes of 51st EAC meeting held on 12th September, 2023.

Agenda Item No. 1.2

Vijayanagar Pump Storage Project (130 MW) in an area of 127.54 ha at Village Kurekuppa, Sub District Sandur, District Ballari, Karnataka by M/s JSW Energy PSP Two Limited – Environmental Clearance (EC) – reg.

[Proposal No. IA/KA/RIV/444768/2023; F. No. J-12011/05/2022-IA.I (R)]

1.2.1: The proposal is for grant of Environmental Clearance (EC) to the project for Vijayanagar Pump Storage Project (130 MW) in an area of 127.54 ha at Village Kurekuppa, Sub District Sandur, District Ballari, Karnataka by M/s JSW Energy PSP Two Limited.

1.2.2: The Project Proponent and the accredited Consultant M/s EQMS Global Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

i. The proposed Vijayanagar Pumped Storage Project is a self-identified, green field project by the JSW Renewable Energy (Vijayanagar) Ltd., a subsidiary of JSW Energy Limited, for captive use in JSW Steel Plant.

ii. The project has been conceived as an off-stream closed loop pumped storage project of installed capacity 130 MW/845 MWH pumped storage component with twin cycle consisting of hydropower generation during morning and evening peaks by pumping twice during 24-hour period. The project shall be located in Vidya Nagar area of JSW Steel Plant, Taluka Sandur, District Bellary, Karnataka.

iii. The project with an installed capacity of 130 MW by utilizing a design discharge of 108.01 cumecs with rated net head of 136.32 m for two daily cycles of peaking (4.0 hours in the morning and 6.50 hours in evening/night)

25	Expert required for study of impact on ecology, including fisheries, biodiversity of riverine ecosystem.	ICAR-DCFR a premier organization working in area of cold-water fisheries and ecology, resource assessment and aquaculture. Institute has completed number of impact assessment studies on HEPs including CIA & CC study of Sutlej basin and has enough expertise for study of impact on ecology, including fisheries, biodiversity of riverine ecosystem. As Fish migration through different tags electronic/sensors is critical behaviour in determining the spawning ground, ICAR-CIFRI expertise may be consulted in this regard.
28	Impacts on fisheries due to fluctuations in Water Level, HEP components (hydraulic turbines, Spillways, penstock etc).	General recommendations on impacts on fisheries will be given based on the available data on the fluctuations in water level.

The EAC during the present meeting deliberated on the modifications of modification of some additional TOR for conducting Cumulative Impact Assessment and Carrying Capacity Study (CIA & CCS) of Yamuna River Basin in Himachal Pradesh by Indian Council of Forestry Research and Education (ICFRE), finalised during 41st EAC meeting held on 15.02.2023.

The EAC after detailed deliberations was of the view that the all additional points finalized by the earlier EAC is justified and well deliberated and essential for comprehensive assessment of carrying capacity and cumulative impacts of the anthropogenic proposed/ ongoing activities in the river basin. EAC member emphasised on Habitat Simulation or Micro-Habitat Modeling Methodologies for biological sustainability of aquatic ecosystem study and E-flow assessment on the basis of Velocity/Depth & cross section, Drone Based aerial survey in the CIA&CC of River basin. ICFRE needs to expand their resources to carry out said study in appropriate manner. The Committee members also desired to expedite the collection of Primary and Secondary base line data and regular perusing with concerned department. The EAC also suggested the Committee constituted by the Ministry to examine the other aspect of the study like increased expenditure on study through drone survey, fresh collection of baseline data for Uttarakhand etc. in consultation with ICFRE for timely completion of the study.

Item No.- 1.10:

Cumulative Impact Assessment and Carrying Capacity Study (CIA & CCS) of Sutlej River Basin Study in Himachal Pradesh by Indian Council of Forestry Research and Education (ICFRE), Dehradun - Reconsideration of Study Report - reg.

The Indian Council of Forestry Research and Education (ICFRE), Dehradun along with its partner institutions viz. Alternate Hydro Energy Center (AHEC/HRED), Indian Institute of Technology

(IIT), Roorkee; ICAR Directorate of Coldwater Fisheries (DCFR), Bhimtal and Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, made a presentation before the EAC (River Valley and Hydroelectric Projects) on the draft report on "Cumulative Environmental Impact Assessment (CEIA) & Carrying Capacity Study (CCS) of hydroelectric projects in Sutlej river basin in Himachal Pradesh".

The ICFRE, Dehradun informed that:

i. The CIA&CCS report for Sutlej River Basin for 38 HEPs (>10 MW), Himachal Pradesh part presented before EAC (RV&HEP) of MoEF&CC during its 91st meeting held on 08.02.2016.
ii. During 91st EAC meeting it was suggested to include all HEPs including less than 10MW in CIA&CCS study; including Luhri project (775 MW) to be studied as Luhri stage I (210MW), stage II (170MW) & stage III (355MW).
iii. Study Report including <10 MW HEPs submitted to MoEF&CC in November. 2018 & presented before EAC (RV&HEP) of MoEF&CC, New Delhi during its 21st meeting held on 28.01.2019.
iv. The suggestions made by the EAC during its 21st meeting on the study report were compiled and incorporated in the corrected study report which was presented before EAC (RVHEP) during its 29th meeting held on 05.12.2019.
v. The recommendations of the study report were further corrected during the 30th EAC meeting held on 27.01.2020. Accordingly, the ICFRE, Dehradun has incorporated the corrections/ modifications in the final draft report on Cumulative Environmental Impact Assessment (CEIA) & Carrying Capacity Study (CCS) of Hydroelectric projects in Sutlej River Basin in Himachal Pradesh and submitted vide letter dated 10.06.2020 to MOEF&CC.
vi. During examination of the report in the Ministry certain factual errors were observed and the same was communicated to ICFRE vide letter dated 26.10.2021.
vii. The corrected final draft report on Cumulative Environmental Impact Assessment (CEIA) & Carrying Capacity Study (CCS) & Carrying Capacity Study (CCS) of Hydroelectric projects in Sutlej River Basin in Himachal Pradesh was submitted by the ICFRE vide letter dated 16.11.2021 to the MOEF&CC.
viii. The corrected final draft report on Cumulative Environmental Impact Assessment (CEIA) & Carrying Capacity Study (CCS) of Hydroelectric projects in Sutlej River Basin in Himachal Pradesh was deliberated in 41st EAC meeting (15.02.2023). The EAC after detailed deliberations was of the view that the issues of Govt. of Himachal Pradesh related to report on Cumulative Environment Impact Assessment (CIA&CCS) Sutlej River Basin in Himachal Pradesh needs to be discussed by Government of Himachal Pradesh expeditiously with ICFRE, Dehradun on priority basis so that the same can be addressed before finalisation of the study report. The ICFRE may modified the report accordingly and submit for further deliberations by the EAC.
ix. Accordingly, meeting of officials from DoE, GoHP, Shimla, SJVNL, NTPC, HPPCL held on 02.08.2023 at DHRE, IIT, Roorkee to discuss w.r.t recommendations of CIA & CCS of Sutlej River in Himachal Pradesh made in the 41st EAC meeting held on15.02.2023 . During discussion with officials from Govt of Himachal Pradesh most of the issues were settled.

The EAC during the present meeting deliberated on recommendations of CIA & CCS of Sutlej River in Himachal Pradesh made in the minutes of the 41st EAC meeting (15.02.2023). During the meeting Govt of Himachal Pradesh officials were also present.

The EAC after detailed deliberation found that the corrected final draft report on "Cumulative Environmental Impact Assessment (CEIA) & Carrying Capacity Study (CCS) of Sutlej River Basin in Himachal Pradesh is in order and as per the TOR given by the Ministry. Accordingly, the EAC recommended the study report for acceptance by the Ministry.

Item No.- 1.11: Cumulative Impact Assessment and Carrying Capacity Study (CIA & CCS) of Tirap Basin. Inclusion of Chinglum Hydroelectric Project in Subansiri Basin – Conducting study – Reg.

The officials from Government of Arunachal Pradesh did not attend the meeting; hence EAC decided to defer the proposal.

Item No.- 1.12
Proposal for conducting Cumulative Impact Assessment (CIA) & Carrying Capacity Study (CCS) of Ravi River Basin in Himachal Pradesh –Consideration of proposal – Reg.

The Member Secretary, EAC (RV&HEP), MoEF&CC informed that:

i. MOEF&CC vide letter dated 05.02.2015 written to Chief Secretary, Govt of Himachal Pradesh to hand over all records related to Carrying Capacity and CIA studies of River Basins in Himachal Pradesh.
ii. Centre for Inter-disciplinary Studies of Mountain & Hill Environment (CISMHE), University of Delhi and WAPCOS were requested by MOEF&CC vide letter dated 03.02.2016 for preparing draft ToRs and submit to this Ministry.
iii. The CISMHE, University of Delhi submitted draft TOR for conducting CIA&CCS study of Ravi River Basin in Himachal Pradesh.
iv. The Centre for Interdisciplinary Studies of Mountain & Hill Environment (CISMHE) University of Delhi, made a presentation before the 1st EAC (River Valley and Hydroelectric Projects) on the TOR proposal for conducting CIA&CC study of Ravi River Basin in Himachal Pradesh.
v. The CISMHE, Delhi University during discussion informed that they have prepared draft TOR covering following aspects:

    a) Characteristics of Ravi Basin
    b) Scope of Work
    c) Approach and Methodology
    d) Outcome of the Study
    e) Organizational Set up and Staffing
    f) Scheduled Work Plan

The EAC during the present meeting deliberated on the TOR proposal for conducting CIA&CCS study of Ravi River Basin in Himachal Pradesh presented by CISMHE, Delhi University.