

**SSP EXPERTS' COMMITTEE ADVISES MoEF NOT TO PERMIT ANY FURTHER CONSTRUCTION****Official report raises serious questions about ability & intentions of CWC and NCA**

The officially appointed Environmental Expert Committee under the Chairmanship of Dr. Devendra Pandey, Director, Forest Survey of India to review the studies, planning and implementation of environmental safeguards for Sardar Sarovar and Indira Sagar Projects has submitted its Interim Report to the Ministry of Environment and Forests (MoEF).

The Report dated 13<sup>th</sup> Feb 2009 has exposed the false claims of the Governments of Gujarat and Madhya Pradesh as also Maharashtra related to the full or substantial compliance in various aspects including catchment area treatment, compensatory afforestation and down stream impacts, command area development, archaeology, health impacts, and seismicity.

In its Interim Report, the Committee has concluded that "a study of the available documents, coupled with the Committee's interaction with the Project Authorities/affected people / representatives strongly suggested that there were major shortfalls in compliance with the prescribed environmental conditionality and requirements".

The committee has also rejected the report of the NCA (Narmada Control Authority) appointed Committee to ascertain the Back Water Levels (BWL) on the following grounds.

"(i) Firstly, because the award directed that calculations of Back Water Levels be done resulting from the Maximum Water Level of 140.21 m (460 feet) at Sardar Sarovar dam. However, the computation for Back Water Levels by the NCA (June 2008) has been done with the maximum level of 137.17 meter at the dam site.

(ii) Secondly, the Back Water Levels calculations are to be carried out by the Central Water Commission (CWC) as per the award and not by a sub-committee of the NCA even if one member in the sub-committee is from CWC as has been done in the instant case.

(iii) Since SSP is designed & constructed for discharging the highest flood (30.7 Lakh cusecs), calculations of BWLs for the observed flood of 24.5 Lakh

cusecs (reduced to 16.9 Lakh cusecs upon routing) are not applicable.

(iv) As per the award of NWDT and stipulations of clearances (environment, forests and investment) accorded to the project by the Central Government, the E & R planning needed a higher level of flood protection. Thus the use of outflow of moderated flood from ISP of 10 Lakh cusecs for determining of BWL by the NCA sub committee is unsafe

for planning of R&R and environmental issues as the rehabilitation and environmental safeguard measures have to be complied with respect to submergence caused by Back Water of highest flood."

Moreover, the committee noted "The revised Back Water Level calculations of NCA have many technical infirmities as indicated below.

(i) The report has used the highest flood at SSP to be 24 Lakh cusecs which is lower than 24.5 Lakh cusecs worked out for a return period of 100 Years. The highest flood for spillway design has to be the probable

maximum flood for a dam of this size for a return of 10,000 years as specified under CWC guideline.

(ii) Against HEC IIB model used by CWC in its report of 1984 BWL calculation, present study by NCA has used Mike-11 model (one dimensional analysis) on the ground of this being more advanced and robust. Such a model is applicable where the river valley is long and narrow and the flood wave

characteristics over a large distance from the dam are required to be calculated. Whereas in the present case, the submergence in SSP is wide spread to 1.77 km average width away from the main stream involving 245 villages.

(iii) Further, the strength of the MIKE 11 model lies in the application of its several modules, which require elaborate data collection and are compatible with Geographic Information System through which the map of the areas to be submerged can be generated and used for planning purposes.

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**The report of the official committee has also rejected the report of the NCA appointed Committee on Back Water Levels as the report used parameters in violation of CWC guidelines and NWDT award. In fact the Backwater study should have been completed 20 years back, but is still remains to be completed. This in what the project authorities claimed as *the most studied project*.**

Normally calibration of the model has to be done by simulating observed flows and matching simulated levels with observed levels at a number of locations. However, the NCA report has used only one location (at 224 kms upstream) which is highly inadequate. If the anticipated flood arrives following the construction of piers it may lead to disaster in the affected areas upstream.

(iv) The NCA report has used single module Mike-11 model with input values of routed observed flood (less than 100 years) instead of routed design flood (1000 years). The model thus estimates lower submergence compared to the BWLs determined by the CWC in their report of 1984 (corresponding to 100 years) and much lower submergence to the levels stipulated by the NWDT award (1000 years). It is to be mentioned here that in the year 2005 CWC carried out similar study using Mike 11 model for Indira Sagar Project with routed design flood (1000 years) which has not been accepted by Hon'ble High Court of Madhya Pradesh, Jabalpur Bench in a PIL filed against this report (in case No WP 322 of 2005 dated.08.09.2006 2006(3) MPJR 218) and CWC has been asked to carry out the study again. The flood actually submerged more villages than could be explained by the study through Mike-11 model.

(v) Further, the values of various coefficients and parameters deduced in this study are at variance with the parameters adopted by the CWC in their report of 1984. The study also mentions that these values are yet to be firmed up/ notified by the CWC. The CWC in their study of 1984 on BWLs calculation has adopted Coefficient of rugosity 'n' to be 0.028 for river channel, 0.06 for over bank and Eddy loss coefficient 'K' as 0.3 for gradually diverging reaches and 0.1 for gradually converging reaches, whereas the NCA report of June 2008 has used 0.024 for rugosity 'n' for river channel and 1.5 times of it (0.036) for over bank. This results in a lower computed value of the submergence level."

These remarks by the official expert committee in fact raise very serious questions about the Narmada Control Authority and the Central Water Commission. The NCA and CWC are not only charged with using technically

wrong model and values, they have also used values that are in violation of their own guidelines and also the legal stipulation of the Narmada Water Disputes Tribunal Award. More seriously, NCA and CWC have also been charged with doing all this to ensure that less area is shown in submergence zone, less people are shown as affected, less number of people need to be rehabilitated and the dam construction can be pushed ahead without rehabilitation of people. In fact the Backwater study should have been completed 20 years back, but it still remains to be completed. This in what the project authorities and proponent have been claiming to be *the most studied project*.

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The Expert Committee has advised the MoEF not to permit further raising of the dam height even through construction of piers and bridges, which are to precede erection of 17 m high gates on the present dam wall (122 m).

The Committee also has noted that "the recommendation for raising the Sardar Sarovar dam height upto 121.92 m by the Environment Sub Group on 6<sup>th</sup> January, 2006 was despite the fact that full compliance with the stipulated environmental conditions and requirements was admittedly not there. It is evident from the Minutes of the said meeting that the ESG recommended raising of height with the assurance that the pending work would be completed. However, there is no evidence or verification reports to indicate compliance".

These remarks by the official committee also raise the issue as to how effectively the Environment Sub Group of NCA, chaired by Secretary, MoEF, is performing the statutory role given to it by the NWDT and the Supreme Court. MoEF also has a lot to explain. (The interim report of the Expert Committee dated 130209, NBA PR 230409)