

Minutes of the 7th Meeting of the Committee for Environmentalists, Social Scientists and other Experts on Interlinking of Rivers held on 31.07.2009 at New Delhi.

The 7th Meeting of the Committee for Environmentalists, Social Scientists and other Experts on Interlinking of Rivers was held on 31.07.2009 at New Delhi. The meeting was chaired by Secretary, Ministry of Water Resources.

The list of participants of the Meeting is given at Annexure-I.

At the outset, Chairman welcomed all the members of the Committee, Special Invitees and other participants. In his opening remarks, he mentioned that in previous meetings, NWDA made various presentations covering various aspects of interlinking of rivers programme including Terms of Reference for preparation of Detailed Project Report of Ken-Betwa link project. He stated that NWDA has completed the DPR of Ken-Betwa link including its Environmental Impact Assessment (EIA) studies and the reports have been forwarded to the State Govts for suggestions/appropriate action. He also informed that the ToR for EIA studies of Par-Tapi-Narmada link have also been approved by MoE&F. Then, he requested Director General, NWDA and Member-Secretary of the Committee to take up the agenda Items for discussions.

Item No 7.1: Confirmation of the minutes of the 6th Meeting of the Committee held on 13.1.2009 at New Delhi.

The Director General, NWDA mentioned that the minutes of the 6th meeting held on 13.1.2009 were circulated vide letter dated 9.2.2009. Comments on the minutes have been received from Shri Himanshu Thakkar, Shri A.C. Kamaraj and Shri Z. Hasan.

Shri Himanshu Thakkar mentioned that he requested for inclusion of his letters dated 22.8.2008, 30.7.2008 and 25.1.2008 in the minutes of the meeting. Director General, NWDA informed that it has already been taken on record. Shri Thakkar stated that his very purpose of above request is that these letters should be actually included in the minutes which will be kept on the website of NWDA and can be seen by all. Shri Thakkar stressed that very important issues have been raised in these letters which are relevant to the mandate of the Committee.

After brief discussion, Secretary (WR) & Chairman decided that these letters with enclosures may be enclosed with the minutes of the meeting. He also urged members to send a gist of their view point expressed during the meeting so that the same can be recorded in the minutes exactly to avoid confusion.

Director General, NWDA mentioned that the views of Shri Thakkar, Shri Kamaraj and Shri Hasan as given in Agenda may be accepted as suggested by them.

The Committee confirmed the modified minutes of the 6th meeting incorporating the suggestions of Shri Thakkar, Shri Kamaraj and Shri Hasan. The modified minutes are enclosed at Annexure-II.

Item No 7.2: Follow up action on the important decisions taken during the 6th meeting of the Committee held on 13.1.2009.

Shri Himanshu Thakkar vide his email dated 30.7.2009 has submitted a note under Agenda item 7.2 and requested to include it in the record of the minutes of the 7th meeting (copy enclosed at Annexure-III)

Director General, NWDA explained the follow up actions taken on the decisions of 6th meeting. He informed that, as desired by Shri A.C. Kamaraj, data regarding reservoir capacity and the working tables of Daudhan dam has been sent to him. The report on visit of Shri Rajendra Singh to the Ken-Betwa area was obtained and circulated to members. Regarding Shri Kamaraj's NAWAD proposal to CWC for examination, he informed that it is still awaited. For use of Discussion Forum on the website of NWDA, the Login ID has been received from most of the members and password provided to them. The rest of the members were requested to convey their User Login ID. He also informed that the summary of Detailed Project Report in local language was prepared and sent to members for suggestions. The suggestions of Shri Thakkar and Shri Hasan on the same were received and the summary will be modified in due course incorporating the suggestions of the members. Intervening the discussions, Shri Thakkar desired that the response of NWDA to the representations received from local people during his field visit also needs to be included in the summary.

Prof. Vijay Paranjpye expressed that the views of locally affected people should be included in the summary. It will generate a feeling among the local people that system is responsive. Only salient features have been given in the summary and the same will not serve any purpose.

Director General, NWDA explained that the concerns of likely affected people are basically related to R&R package and submergence area etc. Since R&R and land issues are to be handled by individual State governments, these have been forwarded to Madhya Pradesh to respond appropriately. Director General, NWDA further mentioned that the representations pertaining to UP State would be sent to Govt. of UP. The response of the State Govts. will be included in the Hindi summary of the DPR of Ken-Betwa link.

Shri Thakkar mentioned that in the representations other aspects such as viability and desirability of the project have also been raised. It was clarified by NWDA that the process of establishment of technical and economic viability have been as per current standards in vogue, which are established by Planning Commission and other expert organizations. The prioritization for implementation of a project is decided by the States. Director General, NWDA mentioned that mandate of NWDA is to prepare DPR and the prioritization of developments are to be decided by concerned States.

The rationality of the studies of finding surplus and deficits in a basin was discussed. It was clarified that the deficits and surpluses can be worked out at the basin levels only and such exercises have been carried out by NWDA at earlier stages before embarking upon the preparation of DPRs. Standard accepted methodologies have been used while carrying out such studies. Secretary (WR) informed that it is a larger issue. The transfer from surplus to deficit basin is the only way to supplement the deficit basin. The alternative method for augmenting of deficit locally may be examined for which we may obtain the response of the States.

Director General, NWDA informed that the members may give specific suggestions for examination. Shri Thakkar has made two suggestions by way of additional study that NWDA/MOWR should do. The details of the views expressed by Shri Thakkar and conveyed in writing on 3.8.2009 are given at Annexure-IV.

Shri Rajendra Singh mentioned that the catchment areas of Ken and Betwa basins appear to be similar. There are now no tigers in Panna reserve and due to degradation of forest land, such areas are likely to come under agriculture generating additional demands in the catchment areas of these dams. This will reduce water availability in donor basin. Therefore, we have to keep the provision for such area. It was clarified that adequate provision has been made for existing, ongoing and proposed projects in upstream of Daudhan dam to account for such uses.

Prof. Vijay Paranjpye mentioned that the basis of interlinking of rivers is water balance study and a copy of the comprehensive water balance studies of Ken and Betwa basins may be provided to members. Director General, NWDA informed that due to data used in these studies being of classified nature these water balance studies cannot be provided. However, as decided during the 6th meeting a water balance study of a sub-basin of Peninsular Component had already been sent to Prof. Paranjpye. Secretary (WR) informed that as a policy of Govt., the classified data are not made available.

Director General, NWDA further informed that flow data of Ganga and Brahmaputra basins due to international dimensions are of classified nature and NWDA itself has obtained these data after furnishing secrecy undertakings. However, the data can be made available to individuals, institutions by following the laid down procedure of CWC/MOWR.

Chairman, CWC informed that the water problem is increasing in every country and considering the international dimensions, the data cannot be released. Shri Thakkar mentioned that if flow data is not made available to the members, a full appreciation of the project proposals can not be achieved by them.

In view of the fact that DPR of Ken-Betwa link has already been prepared, Prof Paranjpye wanted the discussion on Ken-Betwa link to be dropped. He requested to provide the comprehensive water balance studies related to Par-Tapi-Narmada & Damanganga-Pinjal links, so that suggestions for better planning of proposals in this respect can be made. Director General, NWDA agreed to provide the Feasibility Reports of these links.

Shri Rajendra Singh stressed that NWDA should make efforts to inform the public about the benefits and losses to the people in the project area. Even, no public hearing was organized by NWDA. He also wanted that the report prepared by Tarun Bharat Sangh on Ken-Betwa link may be examined by NWDA. Chairman desired that NWDA should examine and convey the comments on the report. Regarding organizing public hearings, these are to be organized by the concerned state governments, for which adequate information has been provided.

Shri Rajendra Singh mentioned that NWDA should use latest long term data. Chief Engineer (South), NWDA informed that long term data to the extent available is considered in the studies. However, there exists a gap of 3-4 years. The Agency maintaining the data takes some time to process it and check its consistency. Secretary (WR) desired that IMD may be requested to provide the latest data.

Shri Kamaraj informed that as a follow up action of the decision taken in the last meeting, NWDA sent the working table of one year. At least 10 years working table may be provided to study the capacity of reservoir. The change in capacity will have impact on the economics of project. Regarding more technical details of National Waterways Project (NWP) proposal of Shri Kamaraj, he mentioned that earlier, he had discussions with CWC and officials of MOWR. Keeping in view the past interaction with CWC, he proposed to take one segment for feasibility study using NWP proposal. He further requested the committee to frame the Terms of Reference with clear mandate and governance criteria to get best out of the proposed feasibility study. He also suggested that NWP proposal can be implemented like national Highways project as per the Constitution-Article 246 - 7th Schedule List 1/24.

The details of the views expressed by Shri Kamaraj are given in Annexure-V.

Director General, NWDA clarified that the data of Ganga basin is classified in nature, therefore, the working table of 75% dependable year was sent to Shri Kamaraj.

Shri P. Sen expressed the opinion that the work of preparation of DPR of Godavari-Krishna-Pennar-Cauvery-Vaigai link may be taken up immediately to meet the scarcity of water in the drought prone areas. He also desired that Shri Kamaraj should make available more

technical details of his NWP proposal. The NWP proposal in its present form is vague and cannot be examined technically. More technical details are also required as the proposal is completely based on a new concept.

Shri Rajendra Singh mentioned that the water potential in a basin and local use is a decentralized issue and therefore, should be studied with specific reference to Ken-Betwa area. The revival of old system and the wisdom of old and traditional system should not be overruled by the new engineering knowledge. It was pointed out that by virtue of these projects the existing traditional commands of Banda district and other Bundelkhand areas will get strengthened. Shri Rajendra Singh mentioned that the encroachment, pollution and over exploitation in rivers are the major problems. MOWR should take steps to check the encroachment, pollution and over exploitation of river.

Chairman, CWC mentioned that with increasing population, the demand of water is increasing, the new projects are necessary in addition to old system. He also mentioned that the requirement of minimum flows are assessed and provided appropriately.

Secretary (WR) informed that the traditional water bodies are not being neglected. The project for revival of old systems in 11 States and ground water recharge project in 7 States has been undertaken. The river interlinking project is also one of the options to augment the deficit basin. The most cost effective system is to be adopted. He also clarified that the aspects like pollution control are being dealt by MoE&F and merely leaving certain quantity of water as downstream flow in river will not be helpful unless measures to control pollution are taken. The control of pollution is not the mandate of MOWR.

As regards the perception that dams store all the water and consume the same in their reservoirs only, it was pointed out that the reservoirs rather ensure more areas spread and regulated temporal distribution of the water in the areas down stream. Almost all reservoirs in the country are designed on a yearly cycle and release the flows received by them in a hydrological year within that year only.

Shri P. Sen mentioned that the law exists in various countries that in no case the releases downstream of the dam should be less than the flow during the lean season

Shri Madhyastha, intervening discussions, desired that Shri Suresh Prabhu, Ex. Chairman, Task Force on ILR has a very vital experience on the subject of interlinking of rivers and desired that he may be invited to share his views on the subject during one of the meetings of the Committee.

**Item No 7.3: Comprehensive Environmental Impact Assessment (CEIA)
studies of Ken-Betwa link and presentation by NWDA.**

A power point presentation on Environmental Impact Assessment of Ken-Betwa link was made by Shri Dharma Reddy, representative of AFC Ltd., Hyderabad. At the onset of the presentation, Chief Engineer (North), NWDA explained the salient features like details of proposed Daudhan dam, command area and canal etc. of the project. He informed that due to construction of Daudhan dam, the benefit in downstream of Daudhan dam will also increase as the storage will be more at Daudhan as compared to Gangau weir. Therefore, apprehensions of Shri Rajendra Singh on the scarcity of water is not factually correct. In fact, water availability will increase due to storage.

After initial remarks about project proposal by Chief Engineer (North), NWDA, detailed power point presentation was made by the representative of M/s AFC Ltd., Hyderabad and following observations were made by the members :

Members observed that changes in the regime of Ken river due to Daudhan dam may not occur due to regulated release and this needs to be checked. Also change in hydrological cycle is not anticipated due to project. Shri Himanshu Thakkar indicated discrepancy in the presentation as compared to the draft CEIA report in the quantity of minimum river flow which is indicated in the presentation as 1.15 cumec whereas the same in the report is indicated as 2.52 cumec. Such discrepancies need to be reconciled.

Prof. M.N. Madhyastha observed that since large area of forest having vegetation is likely to come under submergence in Daudhan reservoir, theoretical assessment of organic carbon to be produced should be assessed and indicated in the report. Also, due to

submergence of large vegetation in forest area, problem due to eutrophication of reservoir water is anticipated. He further mentioned that reservoir will form barrier for migration or movement of some of wild animals as per enquiry made by him from local villagers during his visit. Malaria and water borne diseases are prevalent in area. Due to creation of water body, these may aggravate needing proper attention.

Chairman decided that the suggestions/discrepancies pointed out by the members in the EIA studies of Ken-Betwa link needs to be incorporated in the final report. It was also decided that NWDA will send soft copy of the final EIA study of Ken-Betwa link to the members for their comments/suggestions.

Dr (Mrs.) Mala Kapur Shankardass mentioned that to make the project more viable and for equitable distribution of water, provision should be made for development of irrigated agriculture in areas to be brought under cultivation in future. This will also reduce the risk of vulnerability of the project. There is a need to have a comprehensive study to decide the priorities for equitable distribution of water.

Item No. 7.4 : Terms of Reference (ToR) for Comprehensive Environmental Impact Assessment (CEIA) studies of Par-Tapi-Narmada & Damanganga-Pinjal Links.

Shri Thakkar informed that he had made suggestions on the ToR of CEIA studies and NWDA may provide the response on these suggestions. Secretary (WR) mentioned that Shri Thakkar's suggestions have been included in the ToR of CEIA studies of Par-Tapi-Narmada & Damanganga-Pinjal Links. Reacting to this, Shri Thakkar mentioned that the Committee has been bypassed and NWDA had submitted the ToR to Ministry of Environment & Forests (MoE&F) without discussing these in the Committee. He desired that in future, ToR should be discussed in the Committee before submission to MoE&F for approval. On EIA studies of Damanganga-Pinjal link, Shri Thakkar felt that the decision of MoE&F that the studies are not needed for the project is not correct as the project has a power component also. It was informed to the committee that inspite of such a decision by MoE&F, comprehensive EIA studies are proposed to be carried out by NWDA.

Director General, NWDA informed that the ToR for DPR and EIA studies are very comprehensive and these do not undergo changes from link to link and project to project. The ToR for DPR and EIA studies of Ken-Betwa link prepared by NWDA were discussed in the meetings of the Committee and the suggestions were incorporated in the ToR. During the 4th meeting, two new members joined and their suggestions were also included while finalizing the ToR of DPR/EIA studies of Par-Tapi-Narmada & Damanganga-Pinjal Links.

Secretary (WR) mentioned that the ToR for the EIA studies of Par-Tapi-Narmada link as approved by MoE&F are enclosed with Agenda for the reference of the members.

Prof. Paranjpye mentioned that though the ToR are being discussed in the Committee, the issue of the climate change has not been included in the ToR. The issue of climate change has been accepted as scientific state of affairs. This should be included in the ToR for EIA studies of Par-Tapi-Narmada and Damanganga-Pinjal links. For high profile projects like ILR at least last 10 years data on climate change may be included to study climate change impact on projects. Since it has not been considered in the DPR of Ken-Betwa link. Due consideration should be given to future projects.

Item No. 7.5 : Presentation on Par-Tapi-Narmada & Damanganga-Pinjal links

Director General, NWDA informed that the work of preparation of DPR of Par-Tapi-Narmada & Damanganga-Pinjal links is under progress. The work is scheduled to be completed by December, 2011.

A hard copy of the presentation on Par-Tapi-Narmada & Damanganga-Pinjal links was circulated to the members.

The meeting ended with a Vote of thanks to the Chair.

Annexure-I

List of Participants of the 7th Meeting of the Committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers held on 31.07.2009 at New Delhi.

Shri U.N.Panjiar, Secretary (WR)

In Chair

Members of the Committee:

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| 1. | Sh. A.K.Bajaj, Chairman, CWC | Member |
| 2. | Sh. P.Sen | Member |
| 4. | Prof. M.N. Madhyastha | Member |
| 5. | Sh. Rajendra Singh | Member |
| 6. | Prof. Vijay Paranjpye | Member |
| 7. | Sh. Himanshu Thakkar | Member |
| 8. | Sh. A.C.Kamaraj | Member |
| 9. | Dr.(Mrs.) Mala Kapur Shankardass | Member |
| 10. | Sh. A.D.Bhardwaj, Director General, NWDA | Member-Secretary |

Apology:

1. Secretary, Ministry of Social Justice & Empowerment.
2. Secretary, Ministry of Environmental & Forests.
3. Sh. Z. Hasan
4. Shri Ashok Khosla

Special Invitees:

1. Shri S. Manoharan, Additional Secretary, Ministry of Water Resources
2. Shri A.B. Pandya, Commissioner (PR), Ministry of Water Resources.
3. Shri C.K. Agrawal, Chief Engineer (EMO), CWC, New Delhi.

Apology:

1. Sh. Ranjit Kumar, Learned Amicus Curiae.

Other participants:

1. Sh. M.K.Sinha, Chief Engineer (N), NWDA, Lucknow.
2. Sh. P.R.Rao, Chief Engineer (S), NWDA, Hyderabad.
3. Sh. R.K. Jain, Chief Engineer (HQ), New Delhi.
4. Shri H. N. Dixit, Director (Tech), NWDA, New Delhi.
5. Sh. Muzaffar Ahmad, Superintending Engineer-I, NWDA, New Delhi.
6. Shri N.C. Jain, Superintending Engineer-III, NWDA, New Delhi.
7. Shri K.P. Gupta, Superintending Engineer, NWDA, Valsad.
8. Shri O.P.S. Kushwah, Superintending Engineer, NWDA, Gwalior.
9. Shri Dharma Reddy, AFC Ltd., Hyderabad.
10. Sh. Jabbar Ali, Dy. Director, NWDA, New Delhi.

Annexure-II

Modified Minutes of the 6th Meeting of the Committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers held on 13.1.2009 at New Delhi.

The 6th Meeting of the Committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers (ILR) was held on 13.1.2009 at New Delhi. The meeting was chaired by Secretary, Ministry of Water Resources.

The list of participants of the Meeting is given at Appendix-I.

At the outset, Secretary (WR) welcomed all the members of the Committee, Special Invitees and other participants and wished them a very happy new year and thanked the members for their valuable suggestions on the ILR programme in general and on preparation of DPR of Ken-Betwa link including EIA studies in particular. He informed the members that the suggestions made by them have been considered by NWDA while preparing the DPR of Ken-Betwa link. He expressed satisfaction on the completion of the DPR of Ken-Betwa link as per schedule. He also informed that the work on the preparation of DPR of Par-Tapi-Narmada link and Damanganga-Pinjal link has also been started by NWDA as the concurrence of the concerned States of Maharashtra & Gujarat for the preparation of DPR of these two links has been received. The work is scheduled to be completed by December, 2011. He then requested Director General, NWDA & Member-Secretary of the Committee to take up the agenda items for discussion.

Item No. 6.1: Confirmation of the minutes of the 5th Meeting of the Committee held on 24.7.2008 at New Delhi.

Director General informed the members about the comments on the minutes of the 5th meeting received from Shri Himanshu Thakkar and Shri A.C. Kamaraj. It was decided that the views of Shri Himanshu Thakkar received vide letters dated 22.8.2008, 30.7.2008 & 25.1.2008 already circulated amongst the members may be treated as taken on record. ***However, as desired by Shri Thakkar and decided in the 7th meeting of the Committee, the above mentioned letters alongwith enclosures are appended at Appendix-II(A), II(B) & II(C) respectively.*** In regard to the comments of Shri A.C. Kamaraj, Director General, NWDA explained that the matter regarding review of NWP proposal by CWC was recorded in the minutes as per the decision taken by the Committee in the last meeting. Regarding the details

of differences in NWP and Dastur's Plan as explained in detail by Shri Kamaraj in the last meeting, Chairman desired that the same may be taken on record.

The minutes of the 5th meeting with above modifications were confirmed by the Committee.

Item No. 6.2 : Follow up action on the decisions taken during the previous meeting of the Committee.

Director General, NWDA informed the members about the follow up action taken on the decisions of the 5th meeting. The same were discussed by the members and following decisions were taken.

1. The information requested by Shri Kamaraj regarding reservoir capacity and the working tables of Daudhan Dam would be provided by NWDA.
2. Shri Rajendra Singh may be again requested to make available a copy of the report of the field visit of 5 experts to the Ken-Betwa link area to NWDA for circulation amongst the members.
3. Shri Kamaraj may send a copy of his updated proposal with more technical details to CWC for examination.
4. The presentation on Ken-Betwa link of Shri Thakkar may be scheduled for the next meeting of the Committee.
5. Members may send the details such as User Login ID etc. for providing them password for using the Discussion Forum.

Item No. 6.3 : EIA studies of Ken-Betwa link.

Director General, NWDA informed the members that EIA studies of Ken-Betwa link have been completed and the draft final report has been circulated amongst the members of the Committee for their comments. Shri Z. Hasan desired that the effect on the downstream area of dams likely to be benefited due to reduced intensity of the floods due to the construction of the Daudhan reservoir and other dams may be included in the Volume-IV of the report. Prof. Paranjpye wanted that the impact of the project on the local climate may be covered in the future EIA studies. He cited the example of certain area of the Krishna basin where abnormal increase in rainfall in some areas and decreasing pattern in some other areas have been noticed. He was of the opinion that hydrological studies may be based on established norms using long term data. However, the issues like recent trends in rainfall pattern, climate change

etc. should not be ignored completely. These issues should be a matter of concern for planners and decision makers as the surplus and deficit worked out by NWDA in its various studies may undergo change.

Director General, NWDA explained that the hydrological studies have been carried out on the basis of the long term data only. Commissioner (PR), MOWR also explained that as per IMD data, there is no significant change in the rainfall pattern of the country and changes in 3-4 years can not be generalized. Due to climate change the extreme events are likely to increase in the long term and to take care of such events we should plan more storages. Shri Thakkar mentioned that on the website of CWC, there is a report of a detailed study on the climate change including the changes in rainfall pattern. This information may be utilized.

Chairman mentioned that the impact of climate change and its assessment on water resources projects is under consideration in MOWR and a cognizance of such issues needs to be taken. However, in the absence of long term data required for hydrological studies, the same may be done as per the accepted scientific and engineering principles.

Shri Thakkar mentioned that NWDA has forwarded a copy of his comments on First Interim Report of EIA studies to M/s AFC Ltd. (consultant for EIA studies) so a copy of the response of M/s AFC may be made available to him. He also desired that the consultant can make a presentation before the Committee on the EIA studies of Ken-Betwa link. ***Also, a copy of the DPR of Ken-Betwa link may be provided to the members so that they can send their comments to the draft EIA in an informed way.*** Director General, NWDA responding to the request of Shri Thakkar informed that as per present policy of Govt. in regard to hydrological data of Ganga basin, raw data cannot be provided, however, processed information of Ken-Betwa hydrological studies can be provided to members.

Chairman mentioned that the DPR of the Ken-Betwa link is likely to be modified as per the comments received from the State Govts. The members may study the draft final EIA report of Ken-Betwa link and send their views to the NWDA at the earliest. A presentation to the Committee on the EIA studies of Ken-Betwa link can be arranged by NWDA in the first week of February, 2009. Regarding making available the hydrological data to the members, Chairman

clarified that all important parameters pertaining to the hydrological data are available in the EIA report.

Shri Thakkar mentioned that as per the MoU of Ken-Betwa link, UP & MP have to utilize the quantum of water as given in the MoU. ***He further mentioned that during the field visit of the members to the Ken-Betwa area an impression was given to them that UP is utilizing more water than its share as MP has not created infrastructure.*** He wanted to know the status of present utilization by UP and plan of Govt. of Uttar Pradesh to utilize extra water. For further studies in this respect, he requested NWDA to provide the data of 50%, 75% & 90% dependable yield including the storage capacity of Daudhan dam and the simulation studies carried out by NWDA.

Shri Kamaraj mentioned that EIA studies of Ken-Betwa link have been done appropriately. However, the reservoir capacity as fixed by NWDA appears to be on higher side and for further studies the working table of the reservoir may be made available to the members. ***He also mentioned that the delay in implementation in ILR project is causing a loss of thousands of crores every day to the nation due to floods and droughts and, therefore, the NWP proposal framed by NAWAD Council deserves serious consideration as it is acceptable to the State Govts. especially in Peninsular India.***

Item No. 6.4 : Views of Shri P. Sen related to environmental issues and R&R aspects.

Director General explained the views expressed by Shri P. Sen on the issues related to the R&R and lean season flow to be considered in NWDA studies. The suggestions expressed by Shri Sen were noted by the members.

Prof. Paranjpye expressed the need to have a look on DPR from social aspects like R&R issue as the cost of social issues will have a bearing on Benefit Cost ratio. There should be a correlation in the different chapters of DPR to reflect the backwater effect and the cost of social aspects in the B-C ratio. He also stressed the need of preparation of summary of the project in local languages in a manner so that it can be easily understood by the common man. It will help to educate the people about the benefits of project.

Shri Thakkar stressed the need of responding by NWDA to the letters/representation received by him from affected people during his field visit to Ken-Betwa link area.

Chief Engineer (N), NWDA informed that NWDA has prepared a brief summary of the project in local language highlighting the benefits to the area and distributed it among the people in the project area.

Chairman mentioned that the hydrological data and social aspects are covered in the EIA studies of Ken-Betwa link and cost of the R&R plan is reflected in Environmental Management Plan (EMP). Therefore, it is reflected in the B-C ratio. Also the EIA studies have been done for getting the project cleared from MoE&F and any changes suggested by MoE&F will be incorporated in the DPR taking into account all aspects. Chairman desired that NWDA should prepare a summary of Ken-Betwa project in local language based on DPR for local people and draft be sent to members for their suggestions.

Item No. 6.5 : Presentation on intra-state links.

As decided in the 5th meeting, a presentation was made by Chief Engineer (HQ), NWDA on the status of the intra-state links being studied/to be studied by NWDA. Shri Hasan wanted to know the criteria for acceptance of intra-state links by NWDA for studies. He expressed the opinion that NWDA is carrying out the studies of interbasin water transfer links based on the criteria of surplus and deficit basins and same should be applied to the intra-state links also. The intra-state links suggested by State Govts. may also be for interlinking of two surplus basins. ***He was of the opinion that the NWP proposal of Shri Kamaraj for storing flood waters in the link canals connecting two rivers at same level appears to be attractive. He expressed the need of undertaking the pre-feasibility studies of such intra-State links based on the topographic maps prepared by Survey of India.***

Prof. Madhyastha wanted to know the status of intra-state links pertaining to Puducherry. He also informed about the news coverage related to the visit of delegation consisting of Shri Suresh Prabhu and 5 other MPs to China to see their experience of interlinking of rivers.

Chief Engineer (S), NWDA informed that Puducherry proposal is for inter-state links and not intra-state links so Govt. of Puducherry has been advised to contact the Govt. of Tamil Nadu.

Shri S. Sahni, Air Vice Marshall (Retd.) from Development Alternatives representing Dr. Ashok Khosla, mentioned that considering the Bundelkhand region as drought prone area, appropriate measures should be taken to reduce the transmission losses. He mentioned that the check dams constructed by project authorities become unserviceable after 1 or 2 years and the whole money is wasted. Therefore, all canals should be lined to reduce the transmission losses. Director General, NWDA informed that in the NWDA proposals, the main canals are invariably considered to be lined canals. Chairman informed the members that the repair & maintenance of the canal network is the State subject, however, MOWR is regularly pursuing the matter with the State Govt. to sensitize on these issues.

Item No. 6.6 : Any other Item.

Nil

The meeting ended with a vote of thanks.

Appendix-I to the Minutes of 6th Meeting

List of Participants who attended the 6th Meeting of the Committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers held on 13.1.2009 at New Delhi.

Sh. U.N. Panjiar, Secretary, MoWR

In Chair

Members of the Committee:

S/Shri

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| 1. | A.K. Bajaj, Chairman, CWC | Member |
| 2. | Prof. M.N. Madhyastha | Member |
| 3. | Z. Hasan | Member |
| 4. | A.C. Kamaraj | Member |
| 5. | Prof. Vijay Paranjpye | Member |
| 6. | Himanshu Thakkar | Member |
| 7. | A.D. Bhardwaj, Director General, NWDA | Member-Secretary |

Apology:

1. Secretary, Ministry of Social Justice & Empowerment
2. Secretary, Ministry of Environment & Forests
3. Dr (Mrs.) Mala Kapur Shankardass
4. Sh. Rajendra Singh
5. Sh. P. Sen

Special Invitees:

1. Sh. S. Manoharan, Additional Secretary (WR)
2. Sh. Indra Raj, Commissioner (PR), MoWR

Apology :

1. Sh. Ranjit Kumar, Learned Amicus Curiae

Other participants:

1. Air Vice Marshall S. Sahni (From Office of Dr. Ashok Khosla, Member of the Committee)
2. Sh. C.K. Agrawal, Chief Engineer (EMO), CWC
3. Sh. M.K. Sinha, Chief Engineer (N), NWDA, Lucknow.
4. Sh. P.R. Rao, Chief Engineer (S), NWDA, Hyderabad.
5. Sh. N.K. Bhandari, Chief Engineer (HQ), NWDA, New Delhi.
6. Sh. R.K. Jain, Director (Tech.), NWDA, New Delhi.
7. Sh. N.C. Jain, Superintending Engineer, NWDA, New Delhi.
8. Sh. Muzaffar Ahmad, Superintending Engineer, NWDA, New Delhi.

Minutes of 6th Meeting

Appendix-II(A)

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From: Himanshu Thakkar <ht.sandrp@gmail.com> | [Add to Address Book](#) | [This is spam](#)

To: nwda <se1nwda@rediffmail.com>

Subject: Re: 5th Meeting of Expert Committee

Date: Fri, 22 Aug 2008 12:40:52 IST

Cc: secy@mowr.nic.in, secywel@sb.nic.in, secy@menf.delhi.nic.in, cwcchairman@netscape.net, zafarul_h@hotmail.com, ackamaraj@hotmail.com, djsen@iitkgp.ernet.in, jalpurushtbs@gmail.com, mkshank2001@yahoo.co.in, vol_org@yahoo.co.in, akhosla@hotmail.com, madhyasthamn@yahoo.co.uk, paranjpye@yahoo.co.uk, aswrs-mowr@nic.in, commpr-mowr@nic.in, kranjit13@hotmail.com, nwdaald@rediffmail.com, cfsnwda@yahoo.com, dgnwda@vsnl.net, cehqnwda@rediffmail.com

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Email and Registered Letter

From: Himanshu Thakkar
South Asia Network on Dams, Rivers & People
86-D, AD block, Shalimar Bagh, Delhi 110 088
Ph: 27484655; Email: ht.sandrp@gmail.com

August 22, 2008

To

1. Secretary, Union Ministry of Water Resources and
Chairman, the Committee of Environmentalists, Social Scientists and other Experts on ILR

2. Director General, NWDA, New Delhi and
Member Secretary, the Committee of Environmentalists, Social Scientists and other Experts on ILR

Respected Sirs,

I have just received over email from NWDA the minutes of the 5th meeting of the Expert Committee on ILR, held on July 24, 2008. This is my quick response on the minutes, I request your point wise response on these specific points, as soon as possible. PI also include this letter along with the minutes of the 5th meeting, along with any response that you may like to add.

1. On July 30, 2008, I had sent an email to you and also copied to the members of the committee, with some comments on the meeting and also detailed comments on the First Interim report on EIA of the Ken Betwa Link, as requested by you. I am surprised to see that the minutes of the 5th meeting that I received has no mention of this mail. Can I request you to please attach my email letter of July 30, 2008, along with the attachment therein with the

minutes of the 5th meeting? For quick reference, I am attaching my email letter of July 30, 2008 and the note on the First Interim Report of the EIA of the Ken Betwa link.

2. On July 22, 2008, I had sent the report of the visit to the Ken Betwa Link area, arranged by NWDA. May I request you to kindly attach that message and the visit report with the minutes of the 5th meeting?

3. May I request that my note of January 25, 2008 be attached with the minutes of the 5th meeting or 4th meeting, which ever you find convenient? I had sent that note to NWDA officials about two weeks before the minutes of the 4th meeting were circulated. In my covering email of January 25, 2008 with that note, I had requested, "I would like this note to be circulated with the minutes of the 4th meeting (or separately if you prefer it that way) and would also like to get point wise responses." Unfortunately that note has not been attached with either the minutes of the 4th meeting or the minutes of the 5th meeting.

4. As noted in point 3 above, I had requested point wise response on this note. I have not received that response, seven months after that note was sent. Now the minutes of the 5th meeting says, "Director General, NWDA clarified that the issues raised/suggestions made by the members are welcome and duly incorporated in the NWDA studies. There are certain issues which are beyond the scope of work of NWDA. However, NWDA will respond to the issues raised by him related to NWDA work in due course of time." I find this rather strange. During the 5th meeting I had asked when I can expect to get the response to this note and also to the points raised in the Ken Betwa Visit report (dated July 22, 2008), to which DG, NWDA said, "shortly". I hope this gets properly recorded in the minutes of the 5th meeting and I get the responses shortly as promised.

5. I would also request response on the comments on the First Interim report of the Ken-Betwa EIA, as requested in my note of July 30, 2008.

6. May I also request, Chairman, Expert Committee on ILR and secretary, MWR, to respond to the points raised in the notes of January 25, 2008, July 22, 2008 and July 30, 2008, where necessary?

7. The minutes of 5th meeting says under Item 4.3(c), "Chief Engineer (N), NWDA informed the members that recently NWDA organized a meet of Gram Pradhans/Sarpanchs, Block Pramukhs and representatives of local self Govt. to create mass awareness about the project in Jhansi district." May I request details of this meeting, including where it was held, on which date it was held, agenda and duration of the meeting, number of participants, who participated from NWDA and who were the other prominent participants?

Thanking you,

Yours Sincerely,

Himanshu Thakkar (Member, Expert Committee on ILR)

On 20 Aug 2008 10:02:59 -0000, nwda <se1nwda@rediffmail.com> wrote:

Himanshu Thakkar

South Asia Network on Dams, Rivers & People,
c/o 86-D, AD block, Shalimar Bagh,
Delhi, India

himanshuthakkar@iitbombay.org, ht.sandrp@gmail.com
www.sandrp.in

Minutes of 6th Meeting

Appendix-II(B)

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To: dgnwda@vsnl.net, nwda <se1nwda@rediffmail.com>, secy@mowr.nic.in, "CEHQ NWDA" <cehqnwda@rediffmail.com>

Subject: Comments on the First Interim Report of the Ken Betwa EIA

Date: Wed, 30 Jul 2008 16:00:18 IST

Cc: secywel@sb.nic.in, secy@menf.delhi.nic.in, cwcchairman@netscape.net, zafarul_h@hotmail.com, "KAMARAJ NADAR" <ackamaraj@hotmail.com>, djsen@iitkgp.ernet.in, "Tarun Bharat Sangh" <watermantbs@yahoo.com>, mkshank2001@yahoo.co.in, akhosla@hotmail.com, madhyasthamn@yahoo.co.uk, "Vijay Paranjpye/Gomukh" <paranjpye@yahoo.co.uk>, sushmas@nic.in, sksk52@yahoo.com, kranjit13@hotmail.com, khanna_env@yahoo.com, nwdaald@rediffmail.com, cfsnwda@rediffmail.com

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July 30, 2008

To

1. Secretary, Union Ministry of Water Resources and Chairman, of the Committee of Environmentalists, Social Scientists and other Experts on ILR,
2. Director General, NWDA, New Delhi
3. Chief Engineer (HQ), NWDA, New Delhi
4. Superintending Engineer, NWDA (HQ), New Delhi

cc: to other members and special and other invitees of the Expert Committee on ILR

Respected Sirs,

I am attaching the comments on the first interim report of the EIA for the Ken Betwa link proposal. This report was circulated to the members of the Expert Committee on the ILR before the 5th meeting of the committee. At the Fifth meeting, I had presented these comments and as promised, I am sending it in written form too.

I would look forward to the comments from NWDA, Ministry of Water Resources and others concerned on the note I had sent on the ILR issues on January 25, 2008 and also on the visit report of the Ken Betwa Link area, dated July 22, 2008. As mentioned at the 5th meeting, there are points in both these notes where the responses from the NWDA and Ministry of Water Resources are requested. At the fifth meeting, I had also raised the issue of briefing the committee about what is going on with respect to the Intra state links, in view of the TOR of this committee.

With this letter, I would also like to request that the DPR of the Ken Betwa Link, which is under preparation now, should be shared with the committee, as soon as it is ready so that the committee can apply its mind and give its response as required in the TOR of the committee.

Another important issue I would like to raise here is that during the 2nd meeting of the committee on 28.10.05, Shri P Sen had raised an important issue (the note from Shri Sen in this regard was attached at Appendix 1 - Annexure V of the Agenda notes for the 4th meeting of the Expert Committee), namely, that a detailed water balance study should be made on 10 daily basis, for the lean season, taking a lean discharge hydrograph in the basin. I would like to request NWDA to share this with the committee, along with the detailed water balance studies of the Ken and Betwa basins.

Thanking you,

Yours Sincerely,
Himanshu Thakkar
(Member, Expert Committee on ILR)

**Comments on the
First Interim Report of the EIA
For Ken Betwa Link proposal**

| | |
|--------------------------|---|
| Consultant Agency | Agriculture Finance Corporation Limited |
| Sponsoring Agency | National Water Development Agency |
| Date | July 28, 2008 |
| Comments by | Himanshu Thakkar, SANDRP |

1. **Pro Project Bias** The report shows clear, strong bias of the EIA agency, in favor of the Ken Betwa and ILR link proposal. The EIA report is supposed to be an objective assessment of the environmental impacts of the project. One of the possible conclusions of the EIA could be that the project as proposed is not viable. However, by showing the pro project bias at the outset, the EIA agency has foreclosed that option. This makes the situation of the EIA agency untenable.

2. **TOR violated** The report does not follow crucial components of the Terms of Reference of the EIA, as cleared by the Ministry of Environment and Forests in April 2007. For example, issues like the downstream river related impacts, water logging & salinisation in the command area, siltation of the reservoirs, cropping pattern, hydrological assessment & drainage issues in the command area.

3. **Whole impact zones excluded** The report excludes whole impact zones of the project, including the command areas (whole of the command area of the KMPP command, targeted command and also most of the en route command).

4. **Social Impact zones left out** When talking about social impacts, the report only mentions the impacts due to the reservoir. However, the canals, the colonies, the roads, the mining & blasting (for the materials required for the project), the downstream area, impact on erosion and land slides in the upstream, impact on the downstream river bed cultivation, etc, will all have adverse social impacts and they all must be part of the EIA. The report also does not contain information about the people to be displaced due to the proposed dams in the upstream Betwa basin.

5. **Outdated water use figures** All the water use figures in the report are the figures as given in the Ken Betwa Feasibility report. However, the EIA is being done following the MOU between the UP and MP and the water use figures agreed to in the MOU are totally different than those given in the Feasibility report. The EIA report that uses these outdated water use figures would not be useful for the project if it is go as per the MOU.

6. **Ignorance about developments in WRD** The authors of the report show their ignorance about the current policies in the water resources development. For example, they repeatedly refer to National Water Policy 1987 (e.g. para 3.07), when the current policy is the NWP 2002.

7. **Patently wrong statements** The report keeps making patently wrong statements at many places. For example, in para 3.02 on page 12 (also para 3.57 on page 34) they say, "No Major and Medium irrigation projects worth mentioning on the Ken Betwa in MP upto the Gangau weir...." One is not sure what is the meaning of phrase "worth mentioning". Do the authors want to imply that only giant projects are "worth mentioning"? In any case, we have a list of 25 medium irrigation projects of Madhya Pradesh, all defined as large dams (see Annexure 1)

downloaded from the Madhya Pradesh govt's website. The list includes latitudes and longitudes as given on the website, which helps ascertain the dams located in the Ken basin, for example. It is clear that the report makes a number of wrong statements.

8. No references The report gives no references for any of the figures it quotes, most of which, it is clear, are not based on the primary observations of the reporting agency. Without complete references with relevant page number of the reference or the URL, as the case may be, it is not possible to ascertain the credibility of the figures used by the agency.

9. Impact of the proposal on existing projects ignored The report does not mention what impact the proposed project would have on the existing projects like the Rajghat, Matatilla, Dhukwan, etc in the Betwa basin, and similarly in the downstream regions in the Ken basin. Similarly, the use and operation of the Barwa Sagar and the drainage line from Barwa Sagar to Parichha weir is proposed to be changed in the project, and the impact of such changes on the existing projects and its uses is not even mentioned.

10. Unwarranted assumptions The report makes unwarranted assumptions at a number of places. For example, in para 1.11, it talks about "water short areas of Betwa basin". How did they arrive at this conclusion is not mentioned anywhere. Similarly in para 1.12, the same phrase is used without substantiation. Similarly in para 3.04 it says Raisen and Vidisha districts "are often drought prone", without any substantiation.

11. Wrong facts At many places the report gives wrong facts. For example, in para 3.03 it says the KMPP is also known as Greater Gangau project is located 210 km downstream of the existing Gangau weir.

12. No basis for the demarcation of study area The EIA agency has rather arbitrarily decided that the study area will include area 1 km on either side of link canal and area of 10 km radius of the project site. No basis is given for these limits. For example, why limit 1 km on either side of link canal when the command of the project is going to extent much beyond 1 km? Why limit the study area to 10 km radius when the impact area in the downstream would extent much beyond that limit? Why is the study area as demarcated in map on page 21 does not include the Barwa sagar and the existing natural drainage from Barwa Sagar to Betwa river, since these will be significantly impacted by the project? Similarly, the canals, command and downstream areas of the proposed Upper Betwa dam has to be included in the study area.

13. Operation phase scoping matrix also flawed The study area listed in table 3.3 is similarly flawed for the operation phase too. The impact on the drainage, impact on the floods in the downstream area, the impact of the back water effect, etc has to be included in the study area in operation phase.

14. Climate change There is no word in the report about the possible impact of climate change on the operation of the project, nor about the contribution that the project would make towards climate change. The contribution would come from two sources: the contribution from the materials used and work during the construction phase and the methane emission during the project operation phase.

15. TOR issues I had sent a detailed comment on the TOR of the Ken Betwa EIA, as part of the note I sent to the Expert Committee on January 25, 2008. These comments are annexed at

Annexure 2 for easy reference. Most of these issues remain unaddressed in the first interim report of the EIA.

Conclusion It is clear that the first interim EIA report of the proposed KB link is seriously flawed on many counts. The best possible course would be to make a fresh start and get this report done by a more credible agency with better track record. As I had shown in my note of January 25, 2008, AGFC has been criticized for shoddy EIAs in the past on a number of occasions, including some by the official agencies.

Himanshu Thakkar (ht.sandrp@gmail.com)
July 30, 2008

**List of Completed Large Dams in Ken Basin in Madhya Pradesh
Upstream of the proposed Greater Gangau Dam**

| Sr No | Name of Dam | Year of Completion | Latitude | Longitude | Catchment Area (sq km) | Submergence (th sq m) | Gross Capacity (Th cum) |
|-------|-----------------|--------------------|----------|-----------|------------------------|-----------------------|-------------------------|
| 1 | Jumnera | 1910 | | | | | 1312 |
| 2 | Gorhabandha | 1912 | 235200 | 801200 | 14.89 | | 1250 |
| 3 | Pabra | 1912 | 235100 | 795915 | 3 | | 675 |
| 4 | Chiraipani | 1913 | 235440 | 793700 | 11.52 | 460 | 2550 |
| 5 | Majhgawan | 1914 | | | 7.1 | | 4050 |
| 6 | Hasduamudar | 1917 | | | 6.35 | 498 | 1590 |
| 7 | LowerSakarwara | 1919 | 234630 | 795500 | 7.12 | | 3482 |
| 8 | Chandia | 1926 | 241900 | 796300 | 79.98 | | 6000 |
| 9 | Ghatera | 1956 | 233233 | 785445 | 15.54 | 103 | 3580 |
| 10 | Jabera | 1959 | 233333 | 794300 | 16.36 | 1821 | 4050 |
| 11 | Barrach | 1961 | 243705 | 800900 | | 440 | 1588 |
| 12 | Daroli | 1962 | 232200 | 793400 | 37.54 | 171 | 5160 |
| 13 | Jamber | 1964 | 233313 | 785445 | 3.37 | 708 | 1320 |
| 14 | Bhonhari | 1969 | 234900 | 785730 | 1.84 | | 886 |
| 15 | Burha | 1969 | 240530 | 793920 | 47.9 | 4391 | 10849 |
| 16 | Asrar | 1976 | 240000 | 802300 | 3.15 | 192 | 696 |
| 17 | Karhi | 1977 | 241100 | 801200 | 13.83 | 736 | 4760 |
| 18 | Mansurwari | 1978 | 232525 | 785705 | 30.72 | 1800 | 13280 |
| 19 | Kakarahi | 1979 | -- | -- | | 404 | 990 |
| 20 | Gurma | 1980 | 244313 | 802153 | 139 | 3317 | 39160 |
| 21 | Jamunia | 1981 | 234500 | 792400 | 6.67 | 1620 | 4210 |
| 22 | Pipriya | 1982 | -- | -- | | 92 | |
| 23 | Chhewla | 1985 | 231600 | 790015 | 2.59 | 277 | 1267 |
| 24 | Upper Chhirpuri | 1994 | 235425 | 793620 | 3.38 | 443.1 | 1280 |
| 25 | Balwantpura | | 240515 | 790515 | 7.8 | | 1732 |

Note: For one dam (Pipriya), the storage capacity is not given. This is not an exhaustive list, there are possibilities that more dams could be there in the Ken basin upstream of Greater Gangau.

Source: Madhya Pradesh Govt website, the list was downloaded in July 2007, http://www.mp.gov.in/WRD/Dams/SRLD/CE_DK.asp, the link is currently in active.

Comments on TOR for EIA of the Ken Betwa Link

Following comments on the TOR of the EIA of the Ken Betwa Link were sent to NWDA as part of the note sent by Himanshu Thakkar, Member, Expert committee on ILR, as part of his note dated January 25, 2008 on the issues raised by him at the 4th meeting of the Expert Committee.

2.1 The TOR of the Ken Betwa EIA says in the first para that the objective of the EIA is “to get environmental and other mandatory clearances from the Ministry of Environment and Forests and any other authorities”. Should not the objective of EIA be to get a full assessment of the impacts and use that information in the decision making process about the proposal and also planning mitigation measures, rather than just getting clearance? **At the end of an EIA, if it is concluded that the project has unacceptable adverse impacts, or that the adverse impacts are too high and that options exist that provide comparable or better benefits with lower adverse impacts, than an option to conclude that the project should not be taken up should also exist.**

2.2 In the definition of the study area in section 3.1, there is no mention of the downstream riverine area and assessment of impacts therein. There is no mention of downstream areas in “Water Environment” in section 6.2. In section 6.3 (EMP), there is a bullet point about assured lean season flow downstream of dam, but this has to be based on downstream water requirements for various purposes, including protection of riverine biodiversity and protection of groundwater recharge through the riverbed, which is not mentioned.

2.3 The back water impacts should be measured for one in 100 year flood including impacts due to Maximum water level at the dam site and including the rise in backwater level along the tributaries and impact thereof. The impact of sudden release of water downstream from the dams and into the linked basins during the monsoon should also be assessed.

2.4 One of the key justification of the ILR proposal is to reduce the problems of drought and floods by transferring surplus floodwaters in monsoon to water deficit and drought prone areas. The EIA should include an assessment as to what extent the Ken Betwa link proposal will achieve this.

2.5 The limitation of the study area to 1 km on either side of the link canal may not include all the impact areas as far as drainage and floods related impacts are concerned.

2.6 Section 6.3 of National Water Policy 2002 says: “In the planning, implementation and operation of a project, the preservation of the quality of environment and the ecological balance should be a primary consideration. The adverse impact, if any, on the environment should be **minimised** and should be offset by adequate compensatory measures.”

Similarly, the Ministry of Environment and Forest’s EIA manual of 2001 (which is the latest available manual) says in section 1.2.5, “For every project, possible alternatives should be identified and environmental attributes compared. Alternatives should cover both project location and process technologies. Alternatives should consider ‘no project’ option also. Alternatives should then be ranked for selection of the best environmental option for optimum economic benefits to the community at large... An EIA report should provide clear information to the decision-maker on the different environmental scenarios without the project, with the project and with project alternatives. Uncertainties should be clearly reflected in the EIA report.”

Annexure 11 of the manual says, **“The best way of impact mitigation is to prevent the event occurring.** All efforts should be made to locate the developmental activities in an area free of agricultural lands, cyclones earthquakes, ecologically sensitive, erosion, forests, flooding, human settlements, land slides, natural scenic beauty, water logging. In case this is not feasible the next step is to look at the raw materials/technologies/ processes alternatives which produce least impact.” (Emphasis added.)

However, the Ken Betwa EIA TOR in section 6.0 lists “Assessment of alternate sites” and “study of no project option”, but not about other alternatives. This is not correct and the EIA should include an assessment of options in the context of situation in the area and should show which option is the best in given situation and why. The alternative scenarios should also have inputs from the local communities.

2.7 The EIA should also include impact of the proposal on performance of the existing projects like the Rajghat and Matatilla Dams on Betwa river and others and impacts thereof.

2.8 The EIA should also include impact of use of various materials required in the construction the project, including sand, clay, fine aggregates and coarse aggregates and impacts of procuring such materials (e.g. mining).

2.9 The EIA should include impacts due to all the components of the project, including all the various dams, canals, power houses, drainage network, roads required for the project, transmission lines, downstream areas, any protection works (e.g. catchment area treatment, compensatory afforestation, any additional areas declared as protected areas), mining required for procuring materials for the project, any blasting for the project, dumping of any much produced during the project construction, building of colonies, influx of large number of outside labour in the construction area, etc. All these are crucial components of the project and all have significant social and environmental impacts.

2.10. The EIA should include an assessment of the contribution of the project towards global warming/ climate change and also an attempt at assessing the impact of the climate change on the project.

2.11. An EIA must have a credible, participatory, transparent and accountable compliance ensuring mechanism. It could be a legally empowered committee, e.g., whose at least 50% members should come from the affected people (including 25% representation for women) and credible independent persons, the committee should have access to all the official project documents and information and who should have the power to order stoppage of construction of the project when compliance is not in line with the EMP and environment clearance conditions or otherwise in violation of the rights of the affected people. An EIA without such a mechanism is bound to remain an ineffective document.

2.12. The TOR should have included a provision that the EIA-EMP will be reviewed by an independent panel and the conclusions of the panel will be binding on the EIA agency.

2.13. The EIA should include GSI assessment about land slides, stability, etc. Where such assessment does not exist, it should be done.

2.14. The EIA should have proper references for all the facts, figures and quotes, in clearly understandable manner, following international referencing methods. Where figures from survey and investigations by the EIA agency are mentioned, it must include clear and precise information about the time, date, place, etc of the observations.

2.15. EIA must mention the complete dates, places and methods of surveys of various aspects, where the survey observations are cited. It should also note the time of observation where time of day is important in getting correct results, as in case of observations regarding birds or animals, for example. All baseline surveys should be done for at least one full annual cycle, including all seasons. The EIA should note to what extent the observation year is typical or non typical year and impact thereof.

2.16. **Hydrology issues** Correct hydrological assessment: EIA should provide full available data of 10 day cycle for whole year. It should also include hourly project operation tables that will include water levels, water releases for power generation, water releases for irrigation or water supply or for transfer to another basin, water releases downstream, inflows and this should be provided for a typical driest day of the year, for the typical maximum water flow day and typical average day and these should be provided for the 90% dependable year, 75% dependable year and 50% dependable year.

⇒ In areas where adequate cycle of hydrological data are not available and even adequate series of good quality representative rainfall figures are not available, we need convincing methods of hydrological assessments.

⇒ Impact of the water releases from the project on the downstream (in the monsoon, during floods, and also in non monsoon months) and in the recipient basin: Floods, morphological impacts, who will be at risk because of such releases and what will be the warning methods for sudden releases and who will be responsible for the damages that occur when water released suddenly without warning, bringing damages downstream.

⇒ EIA should note the extent of groundwater and other water use in the upstream and likely future trends of the same and impacts thereof, as this is likely to have impact on water availability for the project.

⇒ If the project has bottom sluices for removal of silt, than when it will be operated, how long, what will be the impacts thereof.

2.17. The social impact assessment should include impact due to loss of common property resources like forests, rivers, common land and so on, on the livelihoods of the population around the impact area.

2.18. The EIA should note the anthropogenic use and pressures on different species and how the loss thereof is going to affect the local population. Similarly it should note what ecosystem services the area that will be lost is providing and what will be the impacts thereof and who will suffer the losses. This is particularly important in tribal areas.

Note by Himanshu Thakkar following the 4th meeting of the Committee of Environmentalists, Social Scientists and other Experts on ILR

January 8/ 25, 2008

I am sending this note containing some of the points that I had raised at the meeting on 8th January 2008 and some other related points. On the TOR of the EIA for the Ken Betwa link, I had said that I have some comments and it was suggested by the member secretary that I can send the comments/ suggestions in writing. These are also included in this note. I would request the Chairperson and member secretary to circulate this note among all the members and include it with the minutes of the 4th meeting.

A. VIABILITY OF ILR PROPOSALS

1. Question over scientific basis of ILR The ILR (Interlinking of Rivers) proposal is based on concluding that certain basins are surplus or deficit. However, adequate Scientific Basis for surplus/ deficit basin does not seem to exist as full options assessment has not been done for any river basin in India. Such an assessment would include assessment of local rain water harvesting potential, watershed development, groundwater recharge, optimum utilisation of created infrastructure, demand side management and use of optimum water use technique like the System of Rice Intensification. Such comprehensive assessment is not known to have been done for any river basin or sub basin, leave aside the question of realizing such a potential. NWDA (National Water Development Agency) goes by the state government's master plans, but none of the state governments seem to have done such an assessment. [I would like to see a copy of such an assessment for any basin if it exists.] In such a situation, is it not legitimate to ask if there is adequate basis for declaring any basin as surplus or deficit?

2. Context of Surface Irrigation Performance In this context, in a study we did recently based on official government figures, we found that there is no addition to the net irrigated area from major and medium (M&M) irrigation projects between 1991-92 and 2003-04 (the last year for which such figures are available), even after spending Rs 99610 crores in the period (for more information, see the cover story in Sept-Oct 2007 issue of "Dams, Rivers & People" at: http://www.sandrp.in/drp/Sept_Oct2007.pdf). On the contrary, there is steady decline in the NET area irrigated by M&M projects, the decline across this period being 3.14 million ha. There is also a trend of decline in gross irrigated area by M&M for many of the states for which such figures are available. [Figures of gross irrigated areas by M&M project across the nation are not available for any of these years.] There are many reasons for this trend, including taking up of non viable schemes, lack of proper repair and maintenance of created infrastructure to get optimum benefits, non completion of canal networks, over development in river basins, water intensive cropping patterns among others. As acknowledged by the 11th Five Year Plan working group on water resources, the governments are unable to allocate sufficient resources for proper repair and maintenance of created irrigation infrastructure. In such a situation, what is the justification for a scheme like ILR which is essentially a long distance surface water irrigation scheme? [At the meeting on January 8, 2008, Chairperson said that the ministry of water resources has evidence that conclusively and effectively proves that net irrigated area by M&M project has increased during this period, we are awaiting this data from the ministry, I have written in the meanwhile to the chair person with a request to share this data.]

3. **Groundwater - Surface water interface** In its water balance calculations, NWDA says that the respective states will have no limits on the extent of groundwater use in their areas. NWDA does not include the impact of groundwater use on surface water availability in its water balance calculations. However, experience over the last many years and recent studies in some basins have shown that increased groundwater use in the upstream can have impact on the surface water availability in the rivers in the downstream areas. This can have serious implications the viability of some of the river links. The committee needs to discuss this after NWDA may present its case on this.

4. **Study of the Ken Betwa River Link proposal** In this context, I would like to make a presentation on the study of the Ken Betwa River link proposal that we have done. Is it possible to arrange for such a presentation in the next meeting of this committee?

5. **Comments on TOR for EIA of the Ken Betwa Link** As mentioned during the 4th meeting, here I would like to give some comments, suggestions on the TOR of the Ken Betwa link proposal that attached with the agenda notes of the 4th meeting.

5.1 The TOR of the Ken Betwa EIA says in the first para that the objective of the EIA is “to get environmental and other mandatory clearances from the Ministry of Environment and Forests and any other authorities”. Should not the objective of EIA be to get a full assessment of the impacts and use that information in the decision making process about the proposal and also planning mitigation measures, rather than just getting clearance? **At the end of an EIA, if it is concluded that the project has unacceptable adverse impacts, or that the adverse impacts are too high and that options exist that provide comparable or better benefits with lower adverse impacts, than an option to conclude that the project should not be taken up should also exist.**

5.2 In the definition of the study area in section 3.1, there is no mention of the downstream riverine area and assessment of impacts therein. There is no mention of downstream areas in “Water Environment” in section 6.2. In section 6.3 (EMP), there is a bullet point about assured lean season flow downstream of dam, but this has to be based on downstream water requirements for various purposes, including protection of riverine biodiversity and protection of groundwater recharge through the riverbed, which is not mentioned.

5.3 The back water impacts should be measured for one in 100 year flood including impacts due to Maximum water level at the dam site and including the rise in backwater level along the tributaries and impact thereof. The impact of sudden release of water downstream from the dams and into the linked basins during the monsoon should also be assessed.

5.4 One of the key justification of the ILR proposal is to reduce the problems of drought and floods by transferring surplus floodwaters in monsoon to water deficit and drought prone areas. The EIA should include an assessment as to what extent the Ken Betwa link proposal will achieve this.

5.5 The limitation of the study area to 1 km on either side of the link canal may not include all the impact areas as far as drainage and floods related impacts are concerned.

5.6 Section 6.3 of National Water Policy 2002 says: "In the planning, implementation and operation of a project, the preservation of the quality of environment and the ecological balance should be a primary consideration. The adverse impact, if any, on the environment should be **minimised** and should be offset by adequate compensatory measures."

Similarly, the Ministry of Environment and Forest's EIA manual of 2001 (which is the latest available manual) says in section 1.2.5, "For every project, possible alternatives should be identified and environmental attributes compared. Alternatives should cover both project location and process technologies. Alternatives should consider 'no project' option also. Alternatives should then be ranked for selection of the best environmental option for optimum economic benefits to the community at large... An EIA report should provide clear information to the decision-maker on the different environmental scenarios without the project, with the project and with project alternatives. Uncertainties should be clearly reflected in the EIA report."

Annexure 11 of the manual says, "**The best way of impact mitigation is to prevent the event occurring**. All efforts should be made to locate the developmental activities in an area free of agricultural lands, cyclones earthquakes, ecologically sensitive, erosion, forests, flooding, human settlements, land slides, natural scenic beauty, water logging. In case this is not feasible the next step is to look at the raw materials/technologies/ processes alternatives which produce least impact." (Emphasis added.)

However, the Ken Betwa EIA TOR in section 6.0 lists "Assessment of alternate sites" and "study of no project option", but not about other alternatives. This is not correct and the EIA should include an assessment of options in the context of situation in the area and should show which option is the best in given situation and why. The alternative scenarios should also have inputs from the local communities.

5.7 The EIA should also include impact of the proposal on performance of the existing projects like the Rajghat and Matatilla Dams on Betwa river and others and impacts thereof.

5.8 The EIA should also include impact of use of various materials required in the construction the project, including sand, clay, fine aggregates and coarse aggregates and impacts of procuring such materials (e.g. mining).

5.9 The EIA should include impacts due to all the components of the project, including all the various dams, canals, power houses, drainage network, roads required for the project, transmission lines, downstream areas, any protection works (e.g. catchment area treatment, compensatory afforestation, any additional areas declared as protected areas), mining required for procuring materials for the project, any blasting for the project, dumping of any much produced during the project construction, building of colonies, influx of large number of outside labour in the construction area, etc. All these are crucial components of the project and all have significant social and environmental impacts.

5.10. The EIA should include an assessment of the contribution of the project towards global warming/ climate change and also an attempt at assessing the impact of the climate change on the project.

5.11. An EIA must have a credible, participatory, transparent and accountable compliance ensuring mechanism. It could be a legally empowered committee, e.g., whose at least 50% members should come from the affected people (including 25% representation for women) and credible independent persons, the committee should have access to all the official project documents and information and who should have the power to order stoppage of construction of the project when compliance is not in line with the EMP and environment clearance conditions or otherwise in violation of the rights of the affected people. An EIA without such a mechanism is bound to remain an ineffective document.

5.12. The TOR should have included a provision that the EIA-EMP will be reviewed by an independent panel and the conclusions of the panel will be binding on the EIA agency.

5.13. The EIA should include GSI assessment about land slides, stability, etc. Where such assessment does not exist, it should be done.

5.14. The EIA should have proper references for all the facts, figures and quotes, in clearly understandable manner, following international referencing methods. Where figures from survey and investigations by the EIA agency are mentioned, it must include clear and precise information about the time, date, place, etc of the observations.

5.15. EIA must mention the complete dates, places and methods of surveys of various aspects, where the survey observations are cited. It should also note the time of observation where time of day is important in getting correct results, as in case of observations regarding birds or animals, for example. All baseline surveys should be done for at least one full annual cycle, including all seasons. The EIA should note to what extent the observation year is typical or non typical year and impact thereof.

5.16. **Hydrology issues** Correct hydrological assessment: EIA should provide full available data of 10 day cycle for whole year. It should also include hourly project operation tables that will include water levels, water releases for power generation, water releases for irrigation or water supply or for transfer to another basin, water releases downstream, inflows and this should be provided for a typical driest day of the year, for the typical maximum water flow day and typical average day and these should be provided for the 90% dependable year, 75% dependable year and 50% dependable year.

⇒ In areas where adequate cycle of hydrological data are not available and even adequate series of good quality representative rainfall figures are not available, we need convincing methods of hydrological assessments.

⇒ Impact of the water releases from the project on the downstream (in the monsoon, during floods, and also in non monsoon months) and in the recipient basin: Floods, morphological impacts, who will be at risk because of such releases and what will be the warning methods for sudden releases and who will be responsible for the damages that occur when water released suddenly without warning, bringing damages downstream.

⇒ EIA should note the extent of groundwater and other water use in the upstream and likely future trends of the same and impacts thereof, as this is likely to have impact on water availability for the project.

⇒ If the project has bottom sluices for removal of silt, than when it will be operated, how long, what will be the impacts thereof.

5.17. The social impact assessment should include impact due to loss of common property resources like forests, rivers, common land and so on, on the livelihoods of the population around the impact area.

5.18. The EIA should note the anthropogenic use and pressures on different species and how the loss thereof is going to affect the local population. Similarly it should note what ecosystem services the area that will be lost is providing and what will be the impacts thereof and who will suffer the losses. This is particularly important in tribal areas.

6. Violations in implementation of Polavaram Project, an ILR link The implementation of the Polavaram Project, which is the one of the prioritised Peninsular links under ILR, has already seen many problems. The two upstream states of Orissa and Chhattisgarh have not yet given their consent to the project in present form, there has been no public hearing among the affected people in these states, due to which National Environmental Appellate Authority recently quashed the environmental clearance (the NEAA order has been stayed by the Andhra Pradesh High Court, but that is being challenged in the Supreme Court), there are cases pending before various courts against the project, including by the concerned states, the project is yet to get CWC or forest clearance or the full clearance for R&R plans from Ministry of Tribal Affairs [it was suggested at the 4th meeting that MTA has approved the R&R plan for all the three states, we would like to see this approval letter, if possible], the design of the dam is yet to be finalised (e.g. the design Probable Maximum Flood, the spillway capacity and the resultant backwater levels are yet to be finalised) and yet construction has been going on. Here it is useful to note that minutes of the 3rd meeting of this committee notes (p 11 of agenda notes of 4th meeting), "DG, NWDA... assured that the proposals of inter basin water transfers will be implemented in the most transparent manner and only after consensus is reached between the concerned States". What is happening in case of Polavaram is in violation of this assurance. It would not be right to differentiate the Polavaram dam under implementation and the Godavari-Krishna (Vijaywada) link proposal of NWDA. It would also not be very convincing to say that construction on the dam is not happening, but other components (canals) is going on, because without the dam the canals would remain unviable and canals are integral part of the project.

On forest clearance, for example, the website of the Ministry of Environment and Forests even on January 8, 2008 said (see: http://164.100.194.13/allied_forclr/htmls/displaypendstate.asp) that the application (**File No:**8-APA123/2005-FCD) for clearance of 3267 ha for the proposed Polavaram Project (**Description:** INDIRA SAGAR (POLAVARAM PROJECT) ACROSS GODAVARI RIVER, IN KHAMMAM, RAJAHMUNDRY AND VISAKHAPATNAM FOREST CIRCLES) is pending before the forest department, Andhra Pradesh, as, "The Govt. of Andhra Pradesh has not provided details regarding concurrence from Orissa and Chhattisgarh on the extent of submergence in these two states even in their latest report on the project."

The public hearings in Andhra Pradesh have seen many violations and the EIA by AFCL (Agriculture Finance Corporation Limited, the same agency that is doing the EIA for the Ken Betwa link) had many problems. Will ILR projects be taken up in this way? Will this inspire confidence among various concerned people and agencies? Since Polavaram is part of the ILR, it falls in the mandate of this committee to know and understand what is going on regarding that project and advise the government if necessary. It was suggested in the last meeting that on some of these issues (e.g. if public hearings have happened in the affected lands of Orissa

and Chhattisgarh states) NWDA and the MWR would clarify the situation in the next meeting. We can also try to understand the situation about the clearances from the CWC and MEF representatives on this committee.

7. Intrastate Linkages A number states including Bihar, Maharashtra, Gujarat and Tamil Nadu are planning and some of them implementing river links within the states. What impact this will have on the ILR? May be NWDA would like to respond to this?

B. SOME ISSUES OF PROCESS

8. Need for credibility through independent review process NWDA has been doing various studies for the last 25-26 years. However, there is no independent, credible, peer review of its various work including water balance studies and the Feasibility Reports. Without that the ILR has little credibility outside government circles. It is very important that such an exercise be initiated, to begin with comments on the Feasibility Reports of the specific prioritised links can be invited one by one and the proposals assessed in their light, by an independent committee. This expert committee can be one of the possible forums for such a review.

9. In this regard, it would help if the various water balance studies done for the NWDA should be put up on its website for the sake of transparency and also for any comments, critiques of the same.

10. Frequency of meetings of this committee This is the fourth meeting of this committee. The earlier meetings were held on 18th January 2005, 28th Oct 2005 and 4th Sept 2006. In spite of assurances of the chairs at the second and third meeting for more frequent meetings, the gap between two consecutive meetings has progressively increased from 9 months to 11 months to now 16 months. More frequent meetings of this committee, as requested in the previous meetings, may help make this committee play more useful role. The meetings can be held quarterly to begin with. [We are thankful to the chair for agreeing to this suggestion in the meeting.

10. Participation of people It was heartening to see the assurance of the chair in the 3rd meeting that, "the project will be taken up through consultative process in the most transparent manner". However, there does not seem to be worthwhile informed participation of the local people in the NWDA exercises in the past, or the EIA and DPR work at present. It will not be appropriate to limit the consultation, transparency and participation to only the public hearing process mandated under the EIA notification. This is so for many reasons, including the severe limitations of the public hearing process, non availability of the documents in local languages, and lack of credible and accountable process to ensure that what people say at such public hearings have any reflection on the decisions taken, among others. One way to achieve "consultation process in the most transparent manner" as ensured by the chair would be by NWDA sending the Hindi [or other local language] translation of the Executive Summary and salient features of the specific links for which EIA/ DPR are being taken up along with the TOR of EIA/ DPR being taken up, to all the panchayats in the respective link basins and request their feedback after putting up those documents open to the gram sabhas and holding their discussions. The communications from NWDA should include some questions about what are the priority water needs of their area and what are the least cost options for the various priority

needs. This would be a significant step towards informed participation of the local people. While the publication of the salient features of the Ken Betwa link proposal in Hindi is a welcome step, it would not be the same as what is suggested here.

11. Questions over choice of AFCL for Ken Betwa EIA The Ken Betwa EIA work has been given to Agriculture Finance Corporation Ltd. Firstly, the basic mandate of this corporation is Agriculture Finance, and as we all know agriculture finance is in bad shape in India, one of the major reason for the agrarian crisis. In stead of focusing on its core area, this corporation has been majorly working on preparation of Environment Impact Assessment related work. Why should the government encourage such non core work by AFCL, [AFCL is itself is a quasi government body, it being owned by NABARD and EXIM bank]? Secondly, the track record of AFCL in EIA related work is quite bad. Some of the recent EIAs of AFCL that has invited adverse remarks include the EIA of Polavaram Multipurpose project (also one of the ILR links), Tipaimukh project in Manipur, Kameng Hydropower project in Arunachal Pradesh and Thoubal irrigation project in Manipur. In case of Tipaimukh and Polavaram EIAs, even some of the official agencies have found their EIAs to be wanting.

For example, the minutes of the meeting of the Expert Appraisal Committee of the Ministry of Environment and Forests for River Valley Projects, held on Oct 15, 2007 said that the EIA report for the Tipaimukh (even after several revisions spread over several years) "The revised EIA report incorporating the above mentioned information was considered by the committee in its meeting held on 15th October 2007. After careful examination of the report, the committee was of the opinion that the report has been prepared haphazardly." For detailed extract of these minutes, see Annexure 1(A).

What was the basis on which AFCL was selected for the Ken Betwa EIA? Who were the members of the committee that took the decision about the EIA agency? Is it possible to review that decision? What can be done to ensure better results from AFCL this time? Can NWDA share the inception report written by AFCL after their first visit and also subsequent reports? [NWDA has already agreed at the 4th meeting to circulate the inception report of AFCL, the letter from MEF about clearance to the TOR of the EIA of the Ken Betwa link.]

These questions are important because the first Terms of Reference of this expert committee is to advise the Government on "Environmental and socio-economic issues covers in the TOR for preparation of DPRs". However, this committee can perform that responsibility if it is given an opportunity to apply its mind and answers to these questions are important for the committee to apply its mind on these issues. In the current sequence of events, between the 3rd and 4th meeting of this committee, the TOR of the Ken Betwa EIA was finalised in consultation with the MEF EAC and an agency for the EIA selected without this committee getting a chance to apply its mind on these decisions and advise. It is this committee's moral responsibility to ensure that it gets a chance to apply its mind before such decisions are taken.

12. Greater transparency of working of this committee For greater transparency and people's participation, the agenda notes, minutes, decisions and various annexures thereof of the meetings of this committee should be regularly uploaded to the NWDA website and advance notice of the next meeting of the committee along with the agenda notes should be given on the website. This could invite greater participation of people in the functioning of this committee.

13. **Visits to the specific link areas** I think this is indeed very welcome move. I would like to know if the proposal is to visit includes only Ken Betwa link areas or other link areas as well, if so which link/ areas? I would certainly like to visit some of the proposed areas if possible.

Himanshu Thakkar (ht.sandrp@gmail.com)

South Asia Network on Dams, Rivers & People (www.sandrp.in)

Annexure-III

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From: Himanshu Thakkar <ht.sandrp@gmail.com> | [Add to Address book](#) | **This is spam**

To: secy-mowr@nic.in

Subject:Re: 7th meeting of the Committee of Environmentalists, Social Scientists & other Experts on ILR

Date: Thu, 30 Jul 2009 15:02:37 IST

Cc: se1nwda@rediffmail.com, secywel@sb.nic.in, vijai.sharma@nic.in, cwcchairman@netscape.net, zafarul_h@hotmail.com, ackamaraj@hotmail.com, djsen@iitkgp.ernet.in, jalpurushtbs@gmail.com, mkshank2001@yahoo.co.in, vol_org@yahoo.co.in, akhosla@hotmail.com, madhyasthamn@hotmail.com, paranjpye@yahoo.co.uk, aswrs-mowr@nic.in, commpr-mowr@nic.in, kranjit13@hotmail.com, ckagrawal@gmail.com, nwdaald@rediffmail.com, cfsnwda@rediffmail.com, dgnwda@vsnl.net, cehqnwda@rediffmail.com, diretech@rediffmail.com, se3nwda@rediffmail.com

July 30, 2009

To
Chairman,
**Committee of Environmentalists, Social Scientists and other Experts on
Interlinking of Rivers**
And
Secretary, Union Ministry of Water Resources
Dear Sir,

Kindly include this note under the Agenda item 7.2 and also include this in the record of the minutes of the 7th meeting.

My experience of being a member of this committee so far has been most frustrating. The NWDA director General has shown no inclination to allow the committee to function

according to the mandate given to it, and have been on the contrary bypassing the committee even with regard to the crucial decisions that are under the mandate of the committee, have refused to hold regular meetings, have refused to provide necessary data to the committee members so that the members can discharge their mandated duties and have refused suggestions on making a participatory process under the pretext that water is a state subject. Some specific points of disappointing experience have been:

1. In the very first meeting I had attended in January 2008, I had raised the issue of infrequent meetings of the committee. The chairman then agreed that the committee should meet every three months. The minutes of Jan 2008 noted this decision, "The members, in general, wanted that the frequency of the meetings of the Committee should be increased. The Secretary (WR) appreciated their concern and it was decided that henceforth the meetings of the Committee will be held quarterly." It has been eighteen months since then and the committee has so far met three times since then.

2. I have been making various submissions to the committee on issues of relevance under the mandate of the committee, and requesting that these submissions be included in the minutes of the meetings, but the NWDA has refused to do that. In fact, in the last meeting held in January 2009, when I again raised this issue, the chairman said that all these submissions will be included in the minutes of the 6th meeting. Shockingly, even this decision of the chairman, not contested by anyone at the meeting, was not implemented. As you can see from the agenda of the next meeting, on receiving the minutes of the Jan 2009 meeting, I had written to the chairman, objecting to this, but there has been no response from the chair so far.

3. NWDA has been bypassing the committee, not giving it even a chance to apply its mind on crucial matters under its mandate. In the January 2008 meeting, I had raised this issue in the context of inappropriate selection of the agency to take up the EIA of the Ken Betwa Link proposal. The agency selected has had pretty poor track record and even the Ministry of Env and Forests' Expert App Com has passed very critical remarks about its EIA in the past. What was interesting was that the MWR expert com was given no chance in having a say in the selection of the EIA agency or in the criteria/ process of selection of the EIA agency. This issue was raised in the Jan 2008 meeting by me, and need for a mid course correction was suggested, but the NWDA officials explained away the decision, giving a picture of fait accompli.

4. In the MWR Expert com meeting in Jan 2008 I had also raised the issue of seriously inadequate TOR of the EIA of the Ken Betwa link proposal. Then it was said (minutes of the Jan 2008 meeting) that since the TOR is already awarded, "However, the suggestions made by the members will be considered while awarding the work of EIA studies for DPR of other links to be taken up in future by NWDA." That need not have been the case, and NWDA could have suggested additional TOR to the Ken Betwa EIA agency, but it did not do that.

5. In Sept 2008, the NWDA went with its draft TOR of the EIA for the Par Tapi Narmada and Damanganga Pinjal link proposal to the MEF for clearance. NWDA did not consider it fit to

consult the MWR expert committee before going with draft TOR to the MEF expert com for clearance. Worse, the expert committee had a meeting in January 2009, but NWDA did not think it fit to even inform the committee that it has applied for the approval of the EIA TOR four months before that and that it has been told that the Damanganga Pinjal link does not need a clearance (based on wrong and misleading presentation of NWDA to the MEF) under EIA notification of Sept 2006. Contrary to the earlier promise of NWDA as noted in point 4 above, NWDA did not include the suggestions made earlier in the TOR for the EIA of the Par Tapi Narmada or Damanganga Pinjal proposals.

6. While making an application for the TOR for EIA of the Damanganga Pinjal link before the EAC of MEF, NWDA claimed that it is only a drinking water project and based on that wrong claim, EAC said that in that case it does not require the environment clearance or the EIA! The Damanganga Pinjal link involves construction of 68.63 m high Bhugad dam with live storage capacity of 400 million cubic meters, submergence area of 1903 ha, submerging at least 14 tribal villages; 75.62 m high Khargihill dam with live storage capacity of 420.5 million cubic meters, submergence area of 1558 ha, submerging at least 10 tribal villages, in addition to link tunnel and another massive dam Pinjal in Maharashtra, with live storage capacity of 401.55 million cubic meters. And for a project that includes massive dams and massive impacts, it was decided by EAC in Nov 2008 that it does not require EIA or Env Clearance, that too on wrong claim of NWDA.

7. In a letter by my colleague to EAC, this issue was raised in January 2009, where it was stated:

- As per the letter of June 10, 2008 from AN Mistry, Chief Engineer (South Gujarat) and Additional Secretary, Narmada Water Resources, Govt of Gujarat to the Secretary, Ministry of Water Resources, Govt of India, "Regarding Draft MoU for DPR for Damanganga-Pinjal Link Canal, it is to state that consent for preparation of DPR given by Govt of Gujarat was conveyed to Govt of India subject to development of hydropower generation at Bhugad and Khargill reservoirs to make available at Madhuban dam after monsoon also." It is clear from this letter (this was attached as one of the annexures to the affidavit filed by NWDA in the ongoing Supreme Court case on the interlinking of rivers case in July 2008) from Govt of Gujarat itself that hydropower generation is a precondition for the consent to the project and also that the additional water available at these dams is to be made available in the downstream Madhuban dam.
- Similarly, para 3 of the draft MOU for the Damanganga Pinjal and Par Tapi Narmada Link (there is a common MOU for the two links) between the states of Gujarat, Maharashtra and Union of India says, "The Maharashtra State Govt will get the benefits through the Damanganga Pinjal Link Project by way of augmentation of water supply to meet the domestic water requirement of Mumbai city, while Government of Gujarat will be free to utilise remaining water spilled from Bhugad & Khargihill dams.....The issue of water sharing, quantum of diversion in link canal, exploring the possibilities of hydropower generation in Damanganga basin...." This again shows that even as per NWDA, which has made this draft of the MOU, the hydropower generation at Bhugad and Kharhill dams is envisaged. This again shows that the proposed Damanganga Pinjal is not just a drinking water scheme.

- The introductory chapter of the feasibility study of the Damanganga Pinjal river link proposal on the NWDA website clearly states in para 1.1.2 page 2, "scheme provides water supply to the metropolitan areas of Greater Mumbai and also provides irrigation to coastal areas of Maharashtra." It is clear that this is not just a drinking water scheme, but also involves irrigation.
- Similarly, para 1.2.1 of the same document, "The proposal of Damanganga-Pinjal link envisages diversion of surplus waters of Damanganga and Vaitarna basins to Greater Mumbai city for augmentation of its future domestic and industrial water requirements." This again shows that this is not just a drinking water project.
- The live storage capacity of the proposed Bhugad reservoir on the Damanganga River is 400 Million Cubic Meters (MCM), whereas the amount of water proposed to be transferred from Bhugad reservoir to the proposed Khargihill reservoir is 287 MCM, the rest of the water is to be used for other purposes. Similarly out of live storage capacity of 420.5 MCM at the proposed Khargihill reservoir, 290 MCM is proposed to be diverted to Pinjal reservoir. The rest of the water is to be used for other purposes. Moreover, "The divertable water yield to Mumbai city at Pinjal dam site at 75% dependability (as fixed by Government of Maharashtra) is 332 MCM" out of the live storage capacity of 401.55 MCM at Pinjal reservoir itself. This shows that the rest of the water will be used for other purposes.

Thus it is clear that the proposed Damanganga Pinjal link is not just for drinking water and decision of the EAC on this score is wrong, possibly NWDA has misled the EAC. Unfortunately, NWDA in its response to EAC on the issues raised in that letter, again misled the EAC and reiterated that this is a drinking water project and if there is a change in scope of the project at future date, they will get back to EAC!!

8. Similarly, the NWDA proposal to EAC for TOR of the EIA of the Par Tapi Narmada Link proposal is incomplete in fundamental ways, as was highlighted in a letter to EAC, where it was stated, " The application of the NWDA is incomplete in many crucial respects, including, not stating as to change in the size of the canal from the Ukai dam to Narmada canal and also what will be impacts thereof. The proposal also does not clearly state that the area proposed to be irrigated in the Narmada command area is already being commanded by the ongoing Sardar Sarovar Project and hence the what will happen to the additional water thus freed at SP and what will the impacts of the alternative use of that water". NWDA agreed to these, but said these issues can be dealt with at a latter date!!

9. NWDA has refused to provide basic figures of flow in Ken and Betwarivers to the members of the Expert committee, saying that this information is classified as per the govt of India policies. Such an attitude is not only against the basic norms of transparency, it also stops the expert committee members from fulfilling its mandate, since without the information about hydrology, it cannot be ascertained if the Ken Betwa link proposal is optimum, if the river has the water required as claimed, if the river will continue to have water required for it to fulfill the social and environmental needs of the region post project and in future. Moreover, in a recent order, the Central Information Commission in a case against the Ministry of Water Resources, has said, "any study about water-flow in the river systems of the country must be made available to the general public for its information and education. It is not open to the public authority to hold secret critical information with which lives of

millions may be related. Publication of this data informs the people about how the public authority is discharging its appointed functions and whether it was acting accountably about a matter so critical as the nations water resources in general and the river systems in particular.

Thus MWR will have to review its policy on this issue in any case, but for the moment, its attitude is not allowing the expert committee members to fulfill its mandate.

10. In the interest of making the planning and decision making in such projects transparent, I had suggested that NWDA should write to each village Panchayat in the Ken and Betwa basin, giving information about the costs, benefits and impacts of the Ken Betwa link proposal and asking the panchayats to hold discussions in the Gramsabha and get back as to what are the priority water problems of their area, what are the priority solutions for those water problems and if Ken Betwa link proposal would fit into those priorities. NWDA has refused to do that, saying that water is a state subject!

11. Following an official visit to the impact area of the proposed Greater Gangau Dam under the Ken Betwa link proposal, we had received a number of memorandums and letters from the people of the affected areas. I had forwarded (with translations) these to NWDA, MWR and members of the expert committee and requested NWDA to respond to those letters to the people who had raised them, again NWDA refused to do that and in stead passed them to the state governments!

I would be happy to know how this state of affairs can be improved.

Best wishes

Himanshu Thakkar
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From: Himanshu Thakkar <ht.sandrp@gmail.com> | [Add to Address book](#) | **This is spam**

To: secy-mowr@nic.in

Subject: Suggestions for additional studies at the: 7th meeting of the Committee of Environmentalists, Social Scientists & other Experts on ILR

Date: Mon, 03 Aug 2009 18:13:41 IST

Cc: se1nwd@rediffmail.com, secywel@sb.nic.in, vijai.sharma@nic.in, cwcchairman@netscape.net, zafarul_h@hotmail.com, ackamaraj@hotmail.com, djsen@iitkgp.ernet.in, jalpurushtbs@gmail.com, mkshank2001@yahoo.co.in, vol_org@yahoo.co.in, akhosla@hotmail.com, madhyasthamn@hotmail.com, paranjpye@yahoo.co.uk, aswrs-mowr@nic.in, commpr-mowr@nic.in, kranjit13@hotmail.com, ckagrawal@gmail.com, nwdald@rediffmail.com, cfsnwd@rediffmail.com, dgnwd@vsnl.net, cehqnwd@rediffmail.com, diretech@rediffmail.com, se3nwd@rediffmail.com

Aug 3, 2009

To
Chairman,
Committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers
And
Secretary, Union Ministry of Water Resources
Dear Sir,

I am sending below in writing the two suggestions for additional studies I made during the 7th meeting on July 31, where it was concluded that I will send this in writing and they will be responded there after. So here they are in writing, these can also be used for preparing minutes of the meeting.

One of the Terms of Reference of this Expert Committee includes: "Additional Studies needed to be carried out, to address any other concerns in the ILR programme". In the context of above TOR, I made two suggestions during the 7th meeting by way of

additional study that NWDA/MWR should do:

1. Assessment of potential of rain water harvesting, groundwater use and recharge, watershed development and protection and rejuvenation of existing local water systems (e.g. tanks, lakes, talabs, wetlands, etc) for Ken basin (to begin with), and impact thereof on the water flow across the year in the Ken river. Such an assessment does not exist for any basin in India. Such an assessment is necessary as it can provide a scientific basis for arriving at the decision that Ken is indeed a surplus basin. More importantly, it will ensure that the relatively backwater area of Ken basin upstream of the proposed Greater Gangau dam gets its due share in the water of the Ken basin. This study could be a precedent for such studies in other basins. The study can be broken up into components (e.g. sub basins or area upstream/downstream of Greater Gangau or area in UP and MP).

2. Rivers (by definition, they are supposed to be entities with freshwater flow) are the key component of water resources, which is a mandate of the Ministry of Water Resources. For ILR, Rivers are the key resource that is sought to be utilised. In that context, a status note on what is being done by MWR and related organisations through policies, laws, practices (e.g. EIAs, Cost benefit analysis, project approvals, monitoring, regulation, operation) to ensure that rivers in India have freshwater flow all round the year. Here we should note that while others like the states and the ministries like the Environment and Forests have a role in this, it cannot be denied that MWR also has a very important role, and we need to see what role MWR performs through its various functions and arms, how it has changed and how it has affected the perennial nature of the rivers. For example, when a dam is constructed and when there is no provision of release of any water downstream from the dam all round the year, it essentially means the river is destroyed in the process. However, in the cost benefit analysis there is no value put for this loss. Some of the losses would be tangible and others would be intangible. Also, while water diverted elsewhere (e.g. command area) may increase groundwater recharge there, the groundwater recharge function of the dried up river will get destroyed. There will be many other such impacts and many of these could be quantified and some may not be. However, we need a status paper as to how the MWR (and related bodies) system is treating the rivers.

Thanking you,

Sincerely,

Himanshu Thakkar

**7th Meeting of Committee of Environmentalists, Social Scientists & other Experts on ILR
31st July, 2009, New Delhi**

I. After our visit to Ken-Betwa link in March 18th, 2008, we asked for the working table for the proposed Daudhan dam.

We got the working table as per the letter No. NWDA(SCILR)/Tech-I/200/3/2005 (Vol.VIII)/302 dated 09.06.09. The working table is for a particular year taking the flow for that year alone. But design of any dam is based on the flow for atleast 10 years. The working table should be satisfactory for atleast for 7 or 8 years. Hence the working table for atleast 10 years flow may please be furnished at the earliest.

We feel that the size of the dam can be modified as required taking into consideration for 10 years working table.

II. I thank this Committee for accepting the suggestion of our Hon'ble Member Shri Z. Hasan and Former Secretary, Ministry of Water Resources to consider NWP as it takes flood water at the same level and transfer water to other basins and suggested for taking up Feasibility Study for the link based on NWP.

Our NAWAD Council is willing to take up study for one link based on NWP. NAWAD Council has over 100 experts spread all over the country and abroad.

III. The Committee has also suggested to send updated proposal of NWP with 'more technical details' to CWC.

My earlier communication as per Annexure-IV listed our interactions and exchanges with CWC on NWP proposal since 2004. The discussions addressed both technical and non-technical aspects of NWP proposal that then Secretary, Ministry of Water Resources Mr. Duggal advised NWDA to include a link (31st Link) and investigate on the basis of NWP.

NWP proposes 'contour canals' to link the rivers without compromising the prevailing riparian rights. The canals due to its use of flood run-off, fund its construction and maintenance. NWP proposal has been reviewed with interest and approval by PWD and Irrigation departments of various State Governments. I am also happy to note that NWP is in advance stage of being recommended for feasibility study to implement intra-state linking of rivers.

Keeping in mind the past interactions with CWC, we propose to take one segment for feasibility study using NWP proposal as advised by the then Secretary, Ministry of Water Resources Mr. Duggal as a response to Agenda Item 7.2. The same view was shared by Hon'ble member Mr. Z. Hasan during the 6th meeting and mentioned vide Item 7.1.3 of Agenda.

We propose that committee set out the Terms of Reference with clear mandate and governance criteria to get the best out of the proposed feasibility study.

It is also proposed that the feasibility study be state funded with access to geological, hydrological and other data as appropriate for the successful conclusion. NWP would be happy to work with CWC or any other organisation to prepare such framework document and work out the modalities for the commencement and conclusion of feasibility study.

It is our request that committee would unanimously recommend the steps leading to defining the Terms of Reference and successful conclusion of the Feasibility study.

Most important is that the States are willing to accept NWP. Bihar State has gone ahead to include in their Election Manifesto that they will utilize the expert of NAWAD Council.

The NWP can be implemented like National highways as per the constitution-article 246 – 7th schedule list 1/24. Since the project brings more benefit at lesser cost, it can be implemented under B.O.O.T (Build, Own, Operate and Transfer) with least financial strain to Government.

We can send NWP with more details after taking Feasibility Study for atleast one link based on NWP.

I hope that this august body will support for Feasibility study for one link early.

IV. The NWDA has been doing the Detailed Project Report (DPR) for Ken-Betwa link for nearly 3 years. Please inform when the DPR for this link would be completed?

- a. The total estimated cost for DPR for Ken-Betwa link and the expenditure so far incurred on the same may also be informed.
- b. In Ken-Betwa link, lands have to be acquired from Panna Tiger Reserve Forest for the proposed dam and link canal. The committee may please be informed whether necessary permission has been got to acquire these lands or the stage at which the matter stands.

V. Netherlands are world leaders in waterways, water concerned problems and solutions. Hence the expert team of NAWAD Council decided to visit Netherlands and we had the opportunity to visit Netherlands last month and discuss our NWP with experts, industries and Netherlands Government. I am happy to inform that the Netherlands Government and industries are willing to involve and support NWP.

VI. The Expert committee is a very important committee concerned with Interlinking of Rivers (ILR). Our neighbour, China has done ILR in a big way – Three Gorges dam. I wish that we plan a visit to China to see that project. Atleast a few members who are interested can visit. This is the second time I am putting this suggestion and hope this will be accepted.

Er. A.C. KAMARAJ,
Chairman, NAWAD Council