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The Chairperson and all Members,

Expert Appraisal Committee,

River Valley and Hydroelectric Projects,

Ministry of Environment and Forests,

Government of India,

New Delhi.

**Subject**: Lohit Basin Study by WAPCOS: Response by WAPCOS to our (Manthan Adhyayan Kendra) Comments

**Reference**: Agenda Item regarding Lohit Basin Study on Meeting of EAC on River Valley and HEP scheduled for 11-12 Dec 2014

Dear Chairperson and Members,

We offer here some quick observations on the responses by WAPCOS to our comments (comment of Manthan Adhyayan Kendra) on the WAPCOS Lohit Basin Study. Please note that the WAPCOS response seems to have been put up on the MoEF website very late, and it was very difficult to locate, and hence we have been able to see it only couple of days before the meeting. So we are able to offer only limited responses at this point.

1. The responses of WAPCOS to our comments confirm what we have said earlier that the WAPCOS Lohit Basin Study is flawed, unscientific and unprofessional. Indeed, WAPCOS responses have evaded or bypassed most of our comments, and in a few cases have acknowledged that what we have said is correct.

If the WAPCOS original report, our comments and WAPCOS responses are submitted to a credible and knowledgeable independent peer review, it will certainly confirm the poor quality of the WAPCOS report and validity of our comments.

In fact, based on the quality of the original report and WAPCOS responses to our and others’ comments, we submit that WAPCOS is not fit to carry out the basin study. A different suitable independent and credible agency should be identified to take it further. At the least, any study done by WAPCOS should be first submitted for a proper peer review.

We now highlight the problems with some of WAPCOS responses to Manthan’s comments.

1. First of all, WAPCOS asserts that the environmental flows developed by them for the basin “have been recommended based on the flow variations in different seasons by mimicking the inflows”; at the same time WAPCOS also acknowledges that “… hydroelectric projects are basically peaking station. Diurnal variation due to project operation is a usual aspect associated with all hydro electric projects under operation.” To say that the environmental flows recommended by them “mimic natural flows” and in the same breath admit that there will be huge diurnal variations in the flows is a glaring contradiction. Nowhere do natural flows showing such daily large variations like the peaking flows, and that too day after day. To admit to huge diurnal variations and yet insist that flows suggested by it “mimic natural flows” betrays either a complete lack of understanding of the concept of e-flows on part of WAPCOS, of a deliberate ignorance of the basic principles of e-flows.
2. WAPCOS also asserts that “The variation associated with Hydro Electric Projects is in no way higher than the non-monsoon floods witnessed by the Lohit ecosystem. During winter season, Lohit River has witnessed the flow more than design discharge of the projects.” This statement is at best half-truth and is a mis-representation of the facts. In fact, the 10 day flows given by WAPCOS in its original report show that in none of the lean season months of Nov, Dec, Jan and Feb do the flows ever reach the design discharge of 1739 cumecs.

It is interesting that this Basin report does not give the daily discharges. However, another report by WAPCOS (*Effect of Peaking Power Generation By Siang Lower Hep, Demwe Lower Hep and Dibang Multipurpose Hep on Dibru‐Saikhowa National Park, 2011*) gives the highest ever floods recorded every month at Demwe Lower site during the period 1987-1993 & 1996-2004 (16 years). The data for the four lean months is extracted below.

|  |  |  |
| --- | --- | --- |
| **Month** | **Average Year Discharge****based on Water****Availability series at****Demwe Lower dam site (Cumecs)** | **Flood peak at Demwe Lower Dam****Site (In cumecs)****Maximum Flood** |
| November | 801.70 | 2074.87 |
| December | 677.27 | 1373.68 |
| January | 302.87 | 866.66 |
| February | 311.46 | 943.82 |

As can be seen, in three of the lean months, the even the highest flood has never exceeded the design discharge for these months of 1739 cumecs. Only for November, the highest flood has crossed it to reach 2074.87 cumecs. However, it is not given how many times this discharge is reached, but we can safely assume that it would be limited occurrence for by definition November is a lean month. Based on this, WAPCOS makes a sweeping generalisation “variation associated with Hydro Electric Projects is in no way higher than the non-monsoon floods witnessed by the Lohit ecosystem” which as can be seen is a gross misrepresentation. This is especially so when it is seen that the natural variation, even with the highest flood, may occur for a few days in many years, whereas the variation that will take place with peaking operation will take place every day, month after month, year after year, and that too in most cases a variation far more than the natural flows.

1. In response to our comment that the e-flows derivation method used by the WAPCOS basin study report is “not in any manner the Building Block Method as no specific blocks are identified relating to specific ecological or social needs” and other comments that no link is established between what objectives the e-flows are to or will meet, WAPCOS responds by saying, at several places that “Environmental Flows have been suggested considering various downstream water requirements”. However, since the downstream areas are not even covered in the WAPCOS basin study, it is not clear how they have assessed the downstream needs and linked the e-flows to these. Further, a reading of the original basin report also reveals that no such downstream needs have been identified and linked to the suggested e-flows.
2. WAPCOS also says that “The projects on the tributaries of Lohit River were not envisaged at that time, hence, were not incorporated in the Lohit basin study.” This reveals a shocking lack of knowledge about the basin on part of WAPCOS and raises once again the question about their competence to do a basin study. Most of these projects on the tributaries (now listed by WAPCOS in the revised TOR) were already conceived and proposed well before the basin study was commissioned to WAPCOS, and were reported in research papers, government documents and dossiers. In fact, even MoUs for Tidding-I and Raigam were signed on 12-12-2007 and 27-12-2007 respectively, well before the basin study was commissioned.

However, what is equally important is that the tributaries exist and are a part of the basin even if they did not have any hydropower project. Thus, their inclusion in the basin study does not and should not depend on whether there is any HEP planned. This again highlights the very narrow and dam-centric understanding of a basin study that WAPCOS has.

1. In response to the criticism that the basin study omits a large and significant part of the basin (downstream of Demwe Lower), WAPCOS states that it is carrying out a separate downstream impact study of Demwe Lower from Parsuram Kund along the river course up to Dibrugarh town including Dibru-Saikhowa National Park. However, the said downstream impact study cannot substitute for a proper basin study for several reasons. (a) The downstream impact study would look essentially only at the impact of the specific project, in this case Demwe Lower. Whereas the basin study would need to look at the impact of all projects in the basin. (b) As mentioned earlier, a basin study would need to look beyond projects, and hence its ambit would be necessarily larger than that of a downstream impact study. In particular, it would also have to include the tributaries and not look just “along the river course”.(c) The two studies at the least need to be integrated if the downstream study is to be considered a part of (not a replacement for, it be noted) a larger basin study. However, there is no evidence that there is any such integration between the two studies.
2. Given all these, we reiterate that the quality of the basin study by WAPCOS remains very poor, that WAPCOS has not addressed in any meaningful way the comments made by us, and that it is necessary that another, independent and credible agency take over the basin study.
3. Last, but not the least, considering that the Basin study is - by definition - the foundation for the development of the entire basin, we would request that considerations of all other projects in the basin (e.g. Anjaw and Demwe upper listed for this meeting), be deferred till the completion of the basin study.

We look forward to the EAC taking a considered decision on all these issues and point raised by us.

Sincerely,



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