Comments on EIA of Bansujara Multipurpose project (by WAPCOS) in Dhasan basin in MP

ANOTHER SHODDY EIA BY WAPCOS
EIA MUST BE REJECTED & THIS MASSIVE PROJECT CANNOT BE CLEARED BASED ON SUCH EIA

The EIA of the Bansujara Multipurpose Project (BMP) dated May 2013 by WAPCOS has been submitted for Environment Clearance of the project before the Expert Appraisal Committee on River Valley Projects, in Nov 2013. WAPCOS is known to do very shoddy job of Environment Impact Assessments, this one is no different. In what follows I have given a few instances of wrong facts, contradictory facts, wrong calculations or assumptions, incomplete assessments, instances that shows it is cut and paste job and lack of options assessment by the 564 page EIA document. The conclusion is inescapable that the EAC and MoEF must reject this EIA and recommend black listing and other measures against WAPCOS. The project should be asked to get a fresh EIA done by a credible agency.

WRONG FACTS The EIA provides several completely wrong facts, here are a few instances:

1. **River description** On p 1-1 the EIA says: "The Bansujara Dam Project lies in Dhasan sub-basin of Betwa basin, River Betwa is a tributary of Yamuna river, rises in district Bhopal district at an elevation of 472 m. After traversing a length of 365 km, it joins Yamuna river in Uttar Pradesh. The river runs for nearly 240 km in Madhya Pradesh, 54 km along common border of Madhya Pradesh and Uttar Pradesh and 71 Km in Uttar Pradesh state before its confluence with Yamuna river near Hamirpur town in Hamirpur district of Uttar Pradesh." This is actually the description of River Dhasan and not Betwa! It is exactly same as the description of river Dhasan given on the next page and several other places subsequently.

2. **Land required for Canals** In Table 2.3 it is stated that canals will require 44 ha land, this is clearly gross under-estimate considering even 49.9 km of main canal.

3. **Private land under required for project** The SIA says on page 1-2, "About 935.11 ha of culturable area, 57.49 ha of forest land and 4209.118 ha of other land including road, nallah, river, etc. will be affected." This is blatantly wrong figure. On page 1-3/4 of SIA it is stated: "About 2935.11 ha of revenue/government land and 2894.37 ha of private land is to be acquired." This again is wrong.

As the MoEF factsheet for the Forest clearance for the project says, "Apart from the 57.495 hectares of forest land proposed to be diverted, the project involves submergence of 287.951 hectares of government land and 4,856.276 hectares of private land." Thus the suggestion by the SIA that only 935.11 ha of culturable land is going under submergence is clearly wrong since most of the private land is under cultivation in these villages.

4. **How many families will be affected** The MoEF Factsheet for the project says: "The project involves submergence of 21 villages. 2628 houses, 773 wells, 5082 trees, and 2628

families with population of 13,142 are getting affected due to submergence." These figures are at variance with the figures mentioned in the EIA. For example, the SIA (p 1-4, repeated on page 4-1) says: "Over all 748 families of 9 Abadi Villages will be affected". This when the project will be taking away 2628 houses as per the Fact sheet, is clearly gross wrong reporting of figures. Because of use of wrong figures, their R&R plan and R&R costs are also all wrong and gross under estimates. Moreover, now the R&R plan and costs should be as per the new Land Acquisition Act Passed by the Parliament, which has not been done in the EIA-SIA. As per the new Act, land has to be provided to each losing farmer, and this must be followed.

5. **Completely impossible figures of crop yields** A look at table 4.3 of SIA (repeated in table 7.1 of CADP) shows that the consultants have given crop yields before project (e.g. paddy 7 t/ha, wheat 18 t/ha, groundnut 10 t/ha and gram 10 t/ha) which are much higher than the average of even Punjab crop yields and they are expecting to double that post project! These are clearly impossible figures. This shows that the consultants are plain bluffing and seem to have no clue about possible crop yields and in any case do not seem to have done any surveys, but are only cooking up data. Amazingly, they are claiming that with 211% increase in crop yield, the profits from crops will go up by 318%! All this simply shows the manipulations they are indulging in to show the project is economically viable.

CONTRADICTORY FACTS

1. **Main canal length** Page 2-2 says main canal length is 90 km, the salient features on next page says Main canal length is 49.9 km.

2. **Command area Tehsils and villages** Section 10.2 of EIA (and again section 2.7 of the CADP) says: "The Command area of the proposed Bansujara Major Irrigation project lies within the district Tikamgarh in jatur and Baldeogarh tehsil" and than goes on to give details of these tehsils, but the rest of the document (e.g. section 6.1) says: "A total of 124 villages are likely to be benefitted by the project. 80 villages are located in Tehsil Khargapur of district Tikamgarh. About 13 villages are located in tehsil Jatara of district Tikamgarh. The remaining (31) villages are located in tehsil Palera of Chattarpur district." Chapter 6 in fact provides full list of 124 villages in the command area. The subsequent details of the command area given in chapter 10 thus does not match with what is given say in chapter 6.

Contradicting this, page 1-4 of SIA says: "The Bansujara Multipurpose Project will benefit almost 132 villages in districts Tikamgarh and Chattarpur." Amazingly, the SIA says Palera tehsil is in Tikamgarh district and not in Chattarpur district and that additional ten villages of Badamalhera tehsil of Chattarpur district will also be in command area!

Number of beneficiary villages in Palera tehsil are given as 31 in page 44 (chapter 6) and 30 on page 141 (chapter 11), with even names differing, e.g. Banne Khurd and Bastaguwan mentioned in chapter 6 are missing in chapter 11, village Bargram mentioned in chapter 11 is missing from the list in chapter 6.

All this is most callous and shocking. This fact alone should be sufficient to REJECT this callous EIA and recommend blacklisting and other punitive measures for WAPCOS as consultant.

3. **Command area population** Section 10.2.1 of EIA says: "As per 2001 Census the total population of the command area is about 38,000. The male and female population is 20,181 and 17,828". However a look at the 10.2 that follows this sentence shows that these figures are for Jatara tehsil and not command area. Another sign of callousness.

4. **Submergence villages** Table 11.3 of EIA gives list of Project affected families, which is at variance with the list given in tables 10.8-10.14. Firstly, chapter 10 tables say that 14 villages of Tikamgarh Tehsil are affected, but table 11.3 lists only 13 villages. More shockingly, tables in chapter 10 say 6 villages of Bada Malhera tehsil of Chhatarpur district are affected, whereas the name of this tehsil given in chapter 11 is Bijawar. All this shows shocking callousness of WAPCOS.

5. **Storage Capacity** Page 11-10 says: "The storage capacity of Bansujara Reservoir is 539.42 Mm3." This is clearly wrong, the figures for gross and live storage capacity given in salient features and elsewhere are: 313.1 MCM and 272.789 MCM respectively.

6. **Water Availability** As per Table 5.8, water availability at the project site from MP catchment (2788 sq km) alone is 843 MCM. Strangely, this reduces to 588.68 MCM in table 11.6 for whole of catchment (3331.776 sq km) at dam site. No explanation is given for these figures.

7. **Submergence area** While most of the document gives submergence area as 5201.71 ha. However, in section 2.7 of EMP, it says, "The submergence area of Bansujara Irrigation Project is 7476 ha." This is amazing kind of contradiction.

WRONG CALCULATIONS/ ASSUMPTIONS

1. **Field channel length grossly underestimated** The p 6-6 of EIA says: "The Bansujara Dam Project envisages irrigation over a CCA of 54000 ha. In the areas where irrigation is proposed no field drainage, land shaping of field channels exist and used to be constructed. From general experience and existing practice, it is assessed that a length of 1600 m of field channels will be required to serve a chak of 40 ha of CCA. On this basis, an approximate network of total length of 180 km of field channels will be required for 50% of CCA proposed for irrigation." Simple calculation suggests that the field channel length for 50% of CCA would be 1080 km (54000 ha / 40 ha per 1.6 km divided by 2 for 50% CCA).

2. **Drainage requirement under estimated** Section 6.9 (p 6-7) of EIA says, "The command area is being traversed by a large number of nallahs and drains, therefore field drainage should not pose any problem." This is clearly wrong assumption since additional irrigation will certainly require additional drainage and cost calculations based on such flawed assumptions are bound to be wrong.

3. **Baseless assumption about waterlogging** Similarly about the assumption in section 6.13 (p 6-8): "Even after construction of Bansujara Dam Project the area will not face any waterlogging problem."

4. **Wrong claims about no floods** The conclusion about flood and back water impacts is completely unfounded in section 6.14 (p 6-8): "As per information gathered from the Collectorate Tikamgarh there is no village affected due to back-water of Dhasan and Ur rivers. The existing drainage system in the command is adequate. The statistics gathered from collectorate Tikamgarh show that there is no flood affected area. The command has fairly good flood disposal capacity and not special measures are called for." This when the Maximum water level of the dam is full 1.4 m above the FRL, the back water level is found to be high. This is also particularly relevant in flood prone basin like Betwa-Dhasan.

5. **Drainage characteristics of clayey soils ignored** The assumption in section 7.1 (p 7-1) shows complete lack of understanding on the part of EIA consultants: "The area is sloping gently and near its outfall into Betwa river, the slope is of the order of 0% to 3%. It is traversed by small drainage channels at short distances and they help in draining excess water efficiently. Hence, no provision for drainage has been made. The soil is generally clayey." It is well known that clayey soils are inefficiently draining soils and to make such assumption for clayey soils is clearly wrong.

6. **Unrealistic assumption of irrigation efficiency** System irrigation efficiency of 54% assumed in Table 11.10 is clearly wrong, no project in India has achieved such high efficiency. The water loss will surely be much higher than the assumption of 105 MCM on page 11-14. The conclusion on that page that: "The quantum of water not being utilized is quite small and is not expected to cause any significant problem of waterlogging" is clearly wrong and baseless, since water logging also depends on many other factors including drainage, soil structure, underground geology, among other factors.

7. **No industries, but 19.4 MCM for industries!** The CADP (page 5-7) clearly states: "At present there is no industrial requirement in the area." And yet the project allocates 19.4 MCM water for industries. This again shows that the project is being pushed even though there is no need for it.

INCOMPLETE ASSESSMENT

1. **Dependence on fisheries incomplete** It is not clear what is the area from which fisheries assessment done as reported in section 9.11.6. How many people depend on fish, what is the production market and economy of the same is also not reported.

2. **Hydrology figures without basis** Chapter 11 (Table 11.6) assumes that "For use on u/s of Bansujara dam for environmental and ecological balance and Misc. uses by surface water" is 10 MCM and "Quantity of water reserve for d/s release for environmental and ecological balance" is 15.18 MCM and that groundwater available upstream of dam site will be 58.86 MCM (10% of surface water). No basis is given for any of these and all these (and many

other) figures given in the water balance are clearly ad hoc, unfounded assumptions. The groundwater availability is typically 40% of total water availability, so around 67% of surface water availability. Why should it be 10% in case of the Dhasan basin is not explained and in any case does not seem plausible.

However, in Table 2.2 of EMP, the environment flow suggested in monsoon months is 12.8 cumecs. This would mean that the project would need to release 132 MCM of water in four monsoon months as environment flows, when they have assumed in hydrology that only 15.18 MCM water is required for this!

3. **Incomplete SIA** SIA says (SIA page 1-7) that it has selected certain of the 21 villages facing submergence due to the project. Actually the SIA should have done full survey of all the villages not a sample of villages.

4. **Impact of loss of river not assessed** It is expected that the SIA will assess the impact of loss of river for the people in submergence and downstream zone, but no such assessment has been done. Even in section 4.4 of SIA on "Impacts of Socio-Cultural Environment", there is no mention of impact of river (or forest or other natural resources) on the people.

5. **Full Canal details not given** The EIA or CADP report does not provide the full lengths of main canals, distributaries, minors, field channels and field drains, including their width, land requirements, protection measures like canal like plantations etc. Without these basic details, the EIA or the CADP cannot be considered complete.

6. **Command area coinciding with command area of Ken Betwa Link canal and other such projects?** A perusal of the Command area of the Ken Betwa River Link Project (TOR approved by EAC in its 45th meeting in Dec 2010) shows that all the three Tehsils (namely Baldeogarh or Khargapur in Tikamgarh district, Jatara Tehsil in Tikamgarh district and Palera Tehsil in Chhattapur district) are also benefiting from Ken Betwa Link Canal. A look at the map of the command area of Ken Betwa link canal and that of the Bansujara shows that some area are certainly common. The EIA of Bansujara should have pointed this out and also if the proposed command area is to benefit from any other such projects, but it has not done that.

CUT AND PASTE JOB? Several parts of EIA raises the suspicion that they are cut and paste from other documents. This suspicion is proved correct when we see this sentence in Table 12.2 in Disaster Management Plan (Chapter 12 of EMP): "All staff from dam site, power house & TRC outlets alerted to move to safer places", since the Bansujara project has no power house or TRC (Tail Race Channel). The consultants forgot to remove these irrelevant aspects while doing the cut and past job[1], it seems. This is just by way of illustration.

Similarly, the title of the section 2.6 of the Command Area Development Plan says it all: "**2.6 FOREST TYPES IN THE MOHANPURA PROJECT AREA**". Here again it is clear that

[1] Seems like this has been cut and paste from the EMP for the Kangtangshri HEP in Arunchal Pradesh also done by WAPCOS, see: http://apspcb.org.in/pdf/23072013/EMP%20Report-Kangtangshiri.pdf

while doing cut and paste from another EIA, the consultants forgot to change the details! There is also the sentence "Tehsil Shajapur has maximum population density of 238 persons per sq.km. (2001 Census data)" on page 2-6 of CADP, but there is no mention of any such Tehsil in the area!

NO OPTIONS ASSESSMENT The EIA does not contain any options assessment. In fact section 10.2.4 shows that 19174 ha of the 48157 ha of cropped area in the command is already irrigated. This means a substantial 40% of the command area is already irrigated.

On page 3-5 of SIA it is mentioned that out of 318 land holding respondents in the SIA survey (in submergence villages), only 4 had unirrigated land. This shows that land of over 99% of respondents is already irrigated.

Very shockingly, the report does not mention what are the levels and trends of groundwater in the catchment and command of the project. When Groundwater is India's mainstay for all water requirements, not give this full picture of groundwater makes the report fundamentally incomplete.

The area has average rainfall of around 1100 mm and thus more area can get irrigated with better use of this rainfall and such a huge dam with such huge submergence (5202 ha) and land requirement (5887 ha, gross underestimate considering that land for canals are not properly assessed), over 25000 people displacement (at least and that too only from submergence area) and other impacts is not the best option.

CONCLUSION What is listed above is not an exhaustive list. Nor are these some typographical errors, but these show serious incompetence, callousness and worse. The conclusion is inescapable that the EAC and MoEF must reject this EIA and recommend black listing and other measures against WAPCOS. The project should be asked to get a fresh EIA done by a credible agency. The EAC in the past have failed to apply its mind about such shoddy EIAs even when this was shown to EAC through such submissions. Most recent such case is that of the Mohanpura Irrigation Project in MP, in which case too the EIA was done by WAPCOS. It is hoped that EAC will apply its mind to this issue and make appropriate recommendations.

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