

## Detailed Project Report of Ken-Betwa Link Project

### Section-1 CHECK LIST

<b>Name of the project</b>	<b>Ken- Betwa Link Project</b>
<b>Location:</b>	
(a) State(s)	<b>Madhya Pradesh, Uttar Pradesh</b>
(b) District(s)	<b>Panna, Chhatarpur,</b>
(c) Taluka	<b>Bijawar</b>
<b>Category of the project:</b>	
(a) Irrigation or Multipurpose	<b>Multipurpose project</b>
(b) Storage or diversion	<b>Storage-cum-diversion</b>

S. No.	Item	Reference
<b>1</b>	<b>2</b>	<b>3</b>
	<b>Planning</b>	
1.	Has the Master plan for overall development of the river basin been prepared and stages of basin development discussed briefly?	No
2.	Have the alternative proposals been studied and their merits and demerits discussed?	No
3.	Does the scheme fit in the overall development of the river basin and its priority in the overall development of the basin discussed?	Yes
4.	Are there any features which are not likely to fit in the overall development of the basin?	Nil
	Have the other Departments concerned with the development been informed.	Yes.
5.	Is the present scheme proposed to be executed in stages? If so, are its various stages of execution and development discussed in the report?	No. Project will be executed simultaneously.
6.	Are the effects of the scheme on the riparian rights existing upstream and downstream projects, etc. discussed?	All the requirements of u/s and d/s projects have been accounted before proposing diversion under this project.

	<b>Interstate and International Aspects</b>	
7.	Are there any International/Interstate issues involved? If so, have these issues been identified and present	Interstate issues between M.P. & U.P. involved.

	status of agreement indicated specially in respect of	
	(a) Sharing of water	Yes. MoU among the concerned states and GOI have been signed. Refer Annexure:1.3 Page no:300 of Report volume:I.
	(b) Sharing of cost	Specific MoU for sharing of cost & benefits including arrangements for management and control of water will be signed by the states based on the DPR.
	(c) Sharing of benefits	
	(d)Acceptance of the submergence by the upstream state(s)	Submergence is within one of the beneficiary states viz. Madhya Pradesh.
	(e)Compensation of land coming under submergence	Provisions kept as per R & R policy of Govt. of India. Refer page no.570 of Report volume-I.
	(f) Settlement of oustees	Suitable R&R plan has been proposed for PAP. Refer Annexure:9.1, page no.645 of Report volume-II.
	(g) Any other	Nil
	<b>Surveys</b>	
8.	Have the detailed topographical surveys been carried out for the following items and maps prepared as per prescribed scales?	Yes.
	(a) River surveys	Yes. Refer page nos.33, 55,79 & 69
	(b) Reservoir surveys	Yes. Refer page nos.34,55, 69,79
	(c) Head-works surveys (dam, dykes, barrages, weirs, etc., and auxiliary components)	Yes. Refer page nos.34,56, 70,80
	(d) Plant site and Colonies	Yes. Refer page nos.35, 56,70, 80
	(e) Canals, Branch canals and water conductor system	Yes. Refer page nos. 35,56,70,80
	(f) Major canal structures	Yes. Refer page nos.36,56, 70,80
	(g) Power house, switch-yard, surge shafts, tailrace	Yes. Refer page nos.36,37
	(h) Tunnel(s), adits, penstocks, etc.	Yes. Refer Page no:38
	(i) Surveys(Detailed and sample) of areas of the command for OFD and drainage works	Yes. Pl. refer 39,58, 71,81 of Report volume-I
	(j) soil surveys	Pl. refer 42,61,73,83
	(k) Surveys for soil conservation	Pl. refer 40,58,71,81
	(m) Any other surveys i.e. Archaeological, Right of way, communication, etc.	Yes. Communication survey only. Other details have been collected from concerned

		department. Pl. refer 41,61,72,82.
	<b>Geology</b>	
9.	Have the geological surveys for the following items been carried out and report on geology appended?	Yes. Refer Appendix volume_I & II.
	(a) Regional Geology	Yes.Refer page nos.42-44,61-62,73-74 & 83-84 of Report volume-I.
	(b) Reservoir	
	(c) Head works and energy dissipation area	
	(d) Power house and appurtenances	
	(e) Intake and regulators	
	(f) Major canal structures	
	(g) Tunnel(s), Penstock hill, etc.	
	(h) Communication routes	
	(i) Any other	
10.	(a) Has the Seismicity of the region been studied and co-efficient of vertical/horizontal acceleration for the various structures discussed?	Yes. Earthquake and Seismicity study of Daudhan dam area and Makodia dam area have been carried by IIT, Roorkee. Please refer Appendix:2.3 &2.19 of volume-I & II respectively.
	(b) Has the approval of the Standing Committee for recommending design of seismic co-efficient for River Valley Project been obtained?	Approval of National Standing Committee on earthquake and Seismicity is yet to be obtained.
	<b>Foundation Investigations</b>	
11.	Have the detailed foundation investigations (including insitu tests and laboratory tests) for the following structures been carried out and detailed report(s) appended?	Yes. Refer Appendix Volume-I & II.
	(a)Earth and rock fill dam/barrage/weir.etc	Yes. Refer Appendices: 2.1, 2.4, 2.5,2.6,2.7
	(b) Masonry/concrete dam/weir,etc.	Yes. Refer Appendices: 2.8, 2.9,2.10,2.11
	(c) Canal	Yes. Refer Appendices : 2.15,2.18,2.20
	(d) Power house, tunnel(s), canal structures,etc.	Yes. Refer Appendices: 2.21,2.22,2.23
	(e) Any other	Nil
12.	Are there any special features affecting the designs?	No.
	<b>Material Surveys</b>	
13.	Have the surveys and laboratory tests for the following construction materials been carried out and report(s) appended?	
	(a) Soils for impervious, semi-pervious and pervious zones of earth dam.	Yes. Refer Appendix:2.12 of Vol.I.

	(b) Sand	Yes. Refer Appendix:2.14 & 2.18 of Vol.II.
	(c) Rock and aggregate	- do -
	(d) Bricks and tiles	N.A.
	(e) Pozzolona	N.A.
	(f)Cement and lime stone	No
	(g) Steel	No
	(h) Other scarce materials:	No
	(i) Any other	Nil
14.	Have the sources for each of the above material been identified and need etc. indicated?	Yes.Refer page nos.51,66,76,87
15.	Have the proposals for procurement of scarce materials been indicated?	Not applicable
	<b>Hydrological and Meteorological Investigations</b>	
16.	Have the hydrological and meteorological investigations been carried out and status of data discussed in report?	Following pages of Appendix volume-III may be referred.
(a)	Rainfall	Refer Page nos.:27-58, 185-207
(b)	Gauge	Yes.
(c)	Discharge	Refer Page nos:27-58, 185-207
(d)	Sediment	Refer Page nos:296-302,144-150
(e)	Water quality	No.
(f)	Evaporation and whether the above data has been appended?	Yes. Refer Page nos:160,309
	<b>Hydrology</b>	
17.	Is the hydrology dealt with in details in a separate volume?	Yes. Refer Appendix volume-III.
(a)	Have the brief details been included in this report?	Yes. Refer chapter-III page nos.89-134
(b)	Is an index map and bar chart showing location of various hydrometric, climatic and rainfall stations and the data availability at those stations been attached?	Yes. Refer page.95,99,100,101,102 of Report volume-I.
(c)	Are brief notes about quality, consistency, processing and gap filling of the data included?	Yes. Refer page:105 of Report volume-I.
18.	Have hydrological studies been carried out for the following:	
(a)	to establish the availability of water for the benefits envisaged.	Yes. Refer page:129 and Annexures: 5.1.1(page no.379) & 5.2.1 (page no.396)
(b)	to determine design flood for the various structures (Spillway, weir, barrage, etc.)	Yes. Refer page:117 of Report volume-I.
19.	Have the analysis for the water flows, evaporation and command area rainfall been discussed?	Yes.

20.	Have the studies regarding reservoir sedimentation been carried out and revised Elevation-Area Capacity curves been used in the simulation studies?	Yes. Refer para no.3.4.6 in page nos.113-115 of Report volume-I.
21.	Have the other requirements such as low flow augmentation, water quality control, etc. been included in the project report and incorporated in the simulation studies?	Yes.
22(a)	Design of major Civil Engineering Components have been finalized taking Seismicity of the region into consideration	Yes
(b)	Have the details of the simulation studies and conclusions arrived from the various alternatives explaining the factors and assumptions been included and discussed?	Yes. Refer page no:128.
(c)	Have the number of failures for difference aspects been indicated?	Yes. Refer page no:129
23.	Have the likely desirable and undesirable changes in the hydrologic regime due to the project been brought out in the report?	Yes.Refer page no:131
24.	Is the criteria adopted for selection of the construction in the hydrologic regime due to the project been brought out in the report?	Yes.
25.	Is the basis for fixing up the storages discussed?	Yes. Refer page.216-221 of Report volume-I.
26.	Have the flood routing studies been carried out?	Yes. Refer page.383 (Annexure:5.1.4) and page.400 (Annexure:5.2.4)
27.	Have the back water studies been carried out?	Yes. Refer page no. 343 of Appendix volume-III.
	<b>Land acquisition and resettlement of oustees</b>	
28.	Have the type and quantum of land proposed to be acquired in the submergence area project area, area coming under canal and distribution system, area required for rehabilitation of the oustees been detailed?	Yes. Refer page nos.570 -574 of Report volume-II.
29.	Is the basis for provision for land acquisition indicated?	Yes. Refer page no:569 & 570.
30.	Have the rehabilitation measures, amenities and facilities to be provided to the oustees been discussed specially for the oustees from the upstream state?	Yes. Refer Chapter:IX (page nos: 562-574) of Report volume-II.
31.	Are the basis of land acquisition of the submerged area upon FRL/MWL etc. discussed?	- do -

	<b>Design</b>	
32.	Has the final location of the head works and appurtenances, in preference to the other sites investigated, been discussed?	Yes.
33.	Has the layout of the project area viz., location of head works, workshop, sheds, offices, colonies, etc. been finalized and discussed?	Yes.
34.	Has the layout of the various major components of the headworks been discussed in the light of site feature, geology, and foundation characteristics, etc.	Yes.
35.	Have the designs been prepared for the following components and appended?	Yes.
(a)	Earth or rock fill dam, masonry or concrete dam, spillway, barrage, weir, etc. and appurtenances.	Yes.
(b)	Energy dissipation arrangements, training wells, etc.	Yes.
(c)	Opening through dam-galleries, head regulators, penstocks, other outlets, sluices, etc.	Yes.
(d)	Regulators	Yes.Refer Annexure:4.6 page no :354
(e)	Canal and water conductor system	Yes. Refer page nos.349-352, 371-375)
(f)	Canal structures	Yes. Refer Annexure:4.9 page no.358
(g)	Power House, tunnels, surge shaft	Yes.
(h)	Instrumentation	Yes.
36.	Have the assumptions made in the design of above components of the project been indicated and basis of assumption discussed?	Yes.
37.	Have any model studies been carried out for location of the dam, spillway and other appurtenances checking the design profile of the spillway, energy dissipation arrangements, location of outlets/ regulators, etc?	To be conducted at construction stage.
38.	Has the final alignment of canal(s) and branch canal(s) been discussed in the light of various alignments studied?	
(a)	Does the canal design provide for meeting requirements of rush irrigation?	Yes.10% extra has been provided for rush irrigation
(b)	Have any intermediate storages and tail tanks been considered to reduce the canal capacities?	No intermediate storages considered along the link canal. The canal will outfall into existing Barwasagar

		reservoir.
39.	Is the canal and distribution system being lined and if so what is the minimum capacity of the channel proposed to be lined?	Only main canals are to be lined.
40.	Is the location of canal structures on main and branch canals fixed after detailed surveys of the final alignments?	Yes.
41.	Are the regulation arrangements of the off-taking channel both near and away from the cross regulators discussed?	Yes.
42.	Are sufficient escapes including terminal escapes provided on the main/branch canal distributaries/minors?	Yes.
43.	Have the basis for adopting water way for the cross drainage works been discussed?	Yes.
44.	Have the proposals for rating the canal section by providing standing wave flumes, rating of the falls, broad crested weirs. V-notches etc. been discussed for the canal and distribution system?	No.
45.	Has any model studies for major canal structure(s) been carried out and if so, are the results discussed and incorporated in the design?	No.
	<b>Irrigation and Command Area Development</b>	
46.	Have the conveyance and field irrigation efficiencies for paddy and upland crops during Kharif, rabi, etc. been indicated, discussed and justified?	Yes. Refer page no:448 of Report volume-I.
47.	Have the weekly/fortnightly Crop water requirements at the canal head been worked out?	Yes. Fortnightly crop water requirement furnished in Annexure:6.2 (page nos.621&622)
48.	Are there any proposals for introducing Warabundi and if so have these proposals been discussed in the report and sample calculations for a typical distributary /minor/ sub-minor furnished?	No.
49.	Has the present position of irrigation in the command through existing canals, tanks, lift schemes, wells, etc. been brought out in the report?	Yes. Refer chapter:VI (page nos.436-438)
50.	Are the particulars for minor irrigation projects existing/proposed in command been indicated?	Yes.
51.	Are there potential areas, indicating the potential where ground water is available? If so, has the quality of the ground water been indicated?	Yes. Refer Annexures:6.3 to 6.5 (page nos.623-628) of Report volume-II.

52.	Has the quantum of available ground water been assessed indicating the basis for conjunctive use with surface water discussed?	-do-
53.	Have the semi-detailed soil surveys been carried out for the entire command and soil and land irrigability classifications brought out in the report?	Yes. Refer page nos.611-620.
54.	Is the method used for determining the crop water requirements discussed?	Yes. Refer page no:446
55.	Has the pre-project cropping pattern and justification for the proposed cropping pattern been furnished?	Yes. Refer page no:438-440
56.	Are the areas and percentages of the CCA that will be irrigated during kharif, rabi, two seasonal, summer and perennial been indicated?	Yes. Refer page no:442 & 443
57.	Is justification furnished for irrigating perennials and summer crops from the reservoir?	Yes.
58.	Have the monthly reservoir operation studies carried out at least for 20 years and summary on annual basis attached?	Yes. Refer page nos:450 -452.
59.	Have the number of blocks selected for detailed surveys for On Farm Development (OFD) works including drainage and total area covered by such blocks been indicated?	Sample command area surveys have been carried out in enroute command area including OFD work.
60.	Have the existing locations of the (Trial cum Demonstration Farm) inputs centres, (seeds, fertilizers and insecticides) in the command been indicated and proposal to strengthen the same discussed?	Nil.
61.	Have the arrangements for financing the OFD works and proposals for strengthening the same been discussed?	Nil.
62.	Have the agencies responsible for execution of the OFD works been identified and simultaneous planning of execution of OFD works along with engineering works discussed?	Nil.
63.	Has the yearwise phasing of irrigation development as a result of the project been discussed?	Nil.
64.	Is the existing communication system within command area sufficient to meet the requirement after full development of irrigation? If not, have the new proposals been planned and discussed?	Yes. However, suitable provisions have been kept in the estimate for future demand also.
65.	Is the adequacy of the marketing centres in the Command Area and new proposals to meet the requirements after full development of irrigation been discussed?	Yes.



	<b>Flood Control and Drainage</b>	
66.	Have the various flood control components of the multipurpose project been indicated?	N.A.
67.	Have the damage areas been identified and flood intensities worked out at each of the damage centre(s) which gets affected?	N.A.
68.	Have the following aspects been discussed?	
	(a) Flood cushion in the reservoir	N.A.
	(b) Maximum moderated flood out flows over the spillway etc. and its frequency	Yes
	(c) Safe carrying capacities of the channel below in the dam existing and after construction of flood embankment, channel improvement, river diversion, etc.	Yes
	(d) Synchronized moderated peak floods due to release (s) from the Dam upstream and un intercepted catchment upto the damage centres	Yes
	(e) Average annual expenditure incurred on flood relief works	N.A.
	(f) Area and population affected/likely to be affected before/after the project	N.A.
	(g) Estimated saving in annual loss of life, property, cattle, crops, etc. (evaluated in terms of money) due to flood control.	N.A.
69.	Have the following aspects drainage been discussed?	
	(a) Surface and sub-surface drainage problems of the command area with details of studies on sub soil water table.	Yes
	(b) Maximum intensity of 1,2 & 3 day rainfall	N.A.
	(c) Deficiencies in farm drains	N.A.
	(d) Deficiencies in existing natural drains	Yes
	(e) Proposal for improvement of drainage / water logging of the area with criteria	N.A.
	(f) Identification of the area in Command which will get benefited due to execution of drainage network and benefits thereof in terms of relief from crop damage, increased yields, etc.	N.A.

	<b>Navigation</b>	
70.	Is the present scheme for remodeling of the existing facilities and /or extension of the Navigable reach or New proposals?	N.A.
71.	Is the existing inland transport system being fully utilized? If not, have the bottlenecks in its full utilization been identified and discussed?	N.A.
72.	Have the traffic surveys been carried out and discussed in respect of present and projected:	
	(a) Goods traffic	N.A.
	(b) Passenger traffic	N.A.
	(c) Existing traffic in the area and its comparison with the other modes of transportation	N.A.
	Is the extent of modification required in the existing system discussed and justified?	N.A.
73	Have the main goods that are being carried and / or proposed to be carried been indicated?	N.A.
74.	Are the canal sections and canal structures designed from Navigation considerations or irrigation considerations?	Canal sections have been designed for irrigation considerations only.
75.	Have the proposals to develop the new scheme and phases of development in the different reaches been discussed?	N.A.
76.	If the area is being served by inland water transport, have the following been discussed:	
	(a) The existing toll rates and registration fees, for the crafts(size wise)	N.A.
	(b) Proposals for revision of tollage rates and fees, if any	N.A.
	(c) Concurrence of the competent authorities for revision of rates and fees.	N.A.
	(d) Proposal to subsidize the tariff, tollage, craft registration fee, passenger fare, etc. to attract traffic.	N.A.
77.	Has the State Inland Water Authority been consulted while finalizing the scheme and its view point discussed?	N.A.
78.	Has economic justification and viability of the Navigation component of the multipurpose project been	N.A.

	discussed?	
	<b>Power</b>	
79.	Have the following points been discussed?	
	(a) Availability of the power generating capacity in the region from different sources	Yes.Refer page no.543 of Report volume-I.
	(b) Total energy available and peak capacity of the system	Yes. Refer page no.544 of Report volume-I.
	(c) Integrated operation of the system and present status of utilization	Yes
	(d) Surpluses and shortfalls in the system	Yes
	(e) Future plans of power development from different sources in the State/region.	Yes
	(f) Fitment of the scheme in planning of power development of the State/region	Yes
	(g) Energy generated from the project, firm power; seasonal power and total power	Yes
	(h) Proposal for transmission connecting to the existing system/grid	Yes
	(i) Cost of generation per kwh installed and per kwh generated as compared to the different hydro-electric projects and difference sources in the State/region to justify the power component of the project.	Yes.
	<b>Construction Programme and Plant and Manpower Planning</b>	
80.	Are the major components of work proposed to be done departmentally or through contractor	Through contractor
81.	Have the various alternative for construction programme been studied and proper justification furnished for the final programme adopted?	Yes.
82.	Has the proposed construction programme been prepared and synchronized for timely completion of each of the major component of work including Command Area Development?	Yes
83.	Have the year wise quantities of the following materials of construction been worked out for various components of the project:	
	(a) Excavation – soft and hard strata	Yes

	(b) Earthwork in filling-impervious, semi-pervious and pervious	Yes
	(c) Rockfill- dam, toe, rip rap, etc.	Yes
	(d) Stone for masonry	Yes
	(e) Coarse aggregate for concrete	Yes
	(f) Sand – filter, masonry, concrete	Yes
	(g) Gravel – filter	Yes
	(h) Steel of various sizes and type –reinforcement	Yes
	(i) Cement normal, quick/slow setting with or without pozzolana	Yes
	(j) Lime –surkhi-pozzolana	Yes
	(k) Scarce material – special steel	No
	(m) Other material – fuel, electricity, explosive, etc.	Yes
84.	Have the year wise quantities to be executed by machine/labour for each of the major component been worked out for each of the above material	Yes
85.	Have the labour intensive items of the various major components of the project been identified and the quantities of such items worked out?	Yes
	<b>Foreign Exchange</b>	
86.	Have the details of the plant and machinery, spares, instruments, scarce materials to be imported worked out and item wise justified?	Yes
87.	Has the phasing of imports and source(s) of imports been discussed item wise?	N.A.
88.	Are the imports to be affected under foreign grants/credits or internal resources of the country?	N.A.
	<b>Financial Resources</b>	
89.	(a) Has the concurrence of the Finance Department been obtained?	No. Yet to be obtained.
	(b) Whether the scheme has already been started? If so, is the present stage of construction indicated?	Yet to be started.
90.	Is the scheme included in the plan? If not, what is the present position regarding its inclusion in the plan?	To be included by G.O.I.
91.	Have the year wise requirement of funds been indicated?	Yes. Refer Annexure:12.1 of page no:679 of Report volume-II.

92.	Is the scheme covered under State sector or Central sector?	Joint sector with 90% funding by Central Govt. and the rest by M.P. & U.P. states.
93.	Is the scheme covered under any foreign assistance/aid agreement?	No.
	<b>Estimate</b>	
94.	Is the separate volume of estimate attached as appendix?	Yes. Refer Appendix volume-IV Cost estimate.
95.	Is the year to which the rates adopted in the estimate indicated?	Yes. Refer Page no:575 of Report volume-II.
96.	Have the analysis of rates for various major items of work for the major components of the project been furnished, with basis for analysis?	Yes. References to analysis of rates furnished in each annexure in Appendix volume-IV.
97.	Are the provisions for the following items made on the basis of sample survey and sub-estimates:	
	(a) Distributaries, minor and sub-minors	Yes. Refer page nos.243,346, 389.
	(b) Water courses	Yes. Refer page nos.244, 354, 390
	(c) Drainage	Yes. Refer page nos.245, 355, 391
	<b>Revenues</b>	
98.	Are the basis for the following sources of revenues furnished?	
	(a) Betterment levy and proposal for its recovery	No revenue from Betterment levy considered.
	(b) Irrigation cess	Yes. Refer page no.593 of Report volume-II.
	(c) Flood protection cess	No
	(d) Cropwise water rates	No revenue from cropwise water rates considered.
	(e) Sale of water for village water supply	A rate of Rs.0.26/cum considered as prevailing in M.P. state.
	(f) Miscellaneous	Nil
99.	Have these rates been compared with the existing rates at the other projects in the State region?	Yes. Existing rates of the state government have been adopted.

100.	In case the rates are being enhanced, has the concurrence of the concerned departmentally been obtained?	As per prevailing adopted system.
101.	Have the organizational set up for the collection of revenue been indicated?	No. Existing system needs to be strengthened by M.P. & U.P. governments.
	<b>B.C. Ratio</b>	
102.	Are the allocated costs for the following components of the multipurpose project worked out and basis furnished?	
	(a) Irrigation	Yes. Refer Annexure:10.10 (page no:669) of Report volume-II.
	(b) Power	- do -
	(c) Flood Control	N.A.
	(d) Navigation	N.A.
	(e) Water supply	Yes
	(f) Any other	N.A.
103.	Have the various departments/State agreed to the sharing of the above allocated cost?	90% of the cost will be borne by Central government being declared as National Project and the rest will be decided by M.P. & U.P states after acceptance of this DPR.
104.	Have the crop wise benefits been worked out for irrigated and un irrigated crops being grown before project in consultation with the agriculture department and statement furnished?	Yes. Refer page no:661of Report Volume-II.
105.	Have the crop wise benefits been worked out for the proposed cropping pattern after the introduction of irrigation in consultation with the agriculture department and statement furnished?	Yes. Refer page no:661 of Report volume-II.
106.	Is the B.C. ratio of Irrigation Projects acceptable or otherwise justified?	Yes. Refer page no:670 of Report volume-II.
107.	Is the B.C. ratio for Flood Control Projects acceptable or otherwise justified?	N.A.
108.	Have the following financial return statements been furnished keeping in view the phasing of development:	
	(a) Irrigation	Yes
	(b) Power	Yes

	Are the benefits other than considered in the B.C. ratio and financial return statement been identified?	Yes
	<b>Ecological aspect</b>	
109.	(a) Is the area likely to have any of the following environmental and ecological problems due to the altered surface water pattern and preventive measures discussed?	
	(i) Excessive sedimentation of the reservoir	Yes.
	(ii) Water logging	No
	(iii) Increase in salinity of the ground water	No
	(iv) Groundwater recharge	No. However, groundwater table will improve.
	(v) Health hazard-water borne diseases, industrial pollution, etc.	No
	(vi) Submergence of important minerals	Nil
	(vii) Submergence of monuments	Nil
	(viii) Fish culture and aquatic life	Yes. The same will be improved considerably due to the creation of two reservoirs.
	(ix) Plant life – forests	Yes
	(x) Life of migratory birds	No. Same will be improved.
	(xi) National Park and sanctuaries	Some area of Panna tiger reserve will be affected due to submergence of Daudhan reservoir. However, major part of the affected area lies in the Ken river course only.
	(xii) Seismicity due to filling of reservoir	Nil
	(xiii) Any other	Nil
	(b) Has the concurrence of the Environmental Appraisal Committee been obtained?	Concurrence of the environmental appraisal committee of MOEF has been obtained for carrying out detailed surveys & investigations of this project. Final permission is yet to be obtained.
	<b>Colonies and Buildings</b>	

110.	Has the planning of the colony/building been done keeping in view the ultimate use for optimum utilization of the investment?	Yes.
111.	Has the estimate of the extent of higher cost involved been made and details discussed?	Yes.
112.	Are the permanent buildings being constructed required for maintenance for the project only?	Yes.
113.	Can the buildings other than required for maintenance of the project being constructed to put to some other use after the completion of the project by the department or any other agencies?	Yes. Refer page no: 607 of Report volume-II.
114.	Have the interested agencies been consulted in planning of the buildings to suit their requirements later on?	Not yet.
115.	Have the proposals for disposal of temporary buildings been discussed?	Yes.
	<b>Public participation and Cooperation</b>	
116.	Are the possibilities of these been discussed in:	
	(a) Planning	Yes.
	(b) Construction	No
	(c) Improved agricultural practices	N.A.
	(d) Any other	N.A.
	<b>Soil Conservation</b>	
117.	Is the need for soil conservation measures in the catchment of the project discussed?	Yes.