

CENTRAL EMPOWERED COMMITTEE
(CONSTITUTED BY THE HONBLE SUPREME COURT OF INDIA
IN WRIT PETITION NO. 202/85 AND 171/96)

Sh. Prathibha Raj, IPS, AIG (EAP) & NE CEII

Gate No. 3, Mawahar Lal Nehru Stadium, Lodhi Road, New Delhi - 110003 Tel: 30944904-5

F. No. 1-19/CEC/SC/2006-Pl. XII

Dated : 15.11.2006

ORDER

Sub : Application Nos. 839, 875 and 944 filed before the CEC regarding construction of Indira Sagar Project (Polavaram Project),

The Application No. 839 filed by Sh. Jayaramachandra Rao, Advocate and Sh. T. Srikanth Rao, Advocate, Application No. 875 filed by Sh. R.Vidyasagar Rao, Chief Engineer, Central Water Commission and Application No. 944 filed by Dr. P. Sri vara ma Krishna, Director, SAKTI stand disposed of in terms of the CEC's Report dated 9.11.2006 in I.A. No. 1572 & 1578 regarding construction of Indira Sagar Project (Polavaram Project).


(M.K. Jivrajka)

Member Secretary

Distribution:

1. Sh. Siddhartha Chowdhury, Supreme Court Advocate and Amicus Curiae.
2. Sh. A.D.N. Rao, Advocate on Record for MoEF.
3. Standing Counsel for the State of Andhra Pradesh, Orissa and Chattisgarh
4. Sh. Ramachandra Rao, Advocate, Applicant in Application No. 839 (Copy of Report Dated 9.11.2006 in I.A. No. 1572 & 1578 is enclosed)
5. Sh. R. Vidyasagar Rao, Chief Engineer, Central Water Commission (Copy of Report Dated 9.11.2006 in I

For the State of Andhra Pradesh : Sh. Mohan Reddy, Advocate General
Sh. K.S. Rao, IPS, PCCF (WL)
Sh. Satish Chandra, Secretary (Irrigation)
Sh. M. Venkateshwara Rao, Chief Engineer, Indira Sagar Project
Sh. M. Vishnu Vardhan Reddy, G.P. for Irrigation
Sri K D R Jayakumar,
Special Secretary (Forests)
Sh. E.V.Raghavulu, I & CAD Deptt.
Sh. N. Jaganmohan, Executive Engineer
Sh. B. Sata Ramavi, SE/DPM
Sh. M. Nagi Reddy, Dy. Ex. Engineer
Sh. S.K. Azam Ali, AEE
Sh. A. Umesh Kumar, AEE
Sh. S. Nageshwara Rao, Dy. Executive Engineer
Sh. P.V.S. Bhaskar, Dy. Executive Engineer
Sh.V. K.Yadav, Forester

For the State of Orissa : Sh. P.M. Padhi, CCF (Nodal)
Sh. J. P. Agarwal, Addl. Secretary, Water Resources
Sh. H. Ch. Behera, EIC, Water Resources
Sh. S.K. Parida, Liason Officer, Water Resources
Sh. S.K. Sehwat, Addl. Resident Commissioner

For the State of Chattisgarh : Ms. Suparana Srivastava, Advocate
Ms. Pooja Mathari, Advocate

For the applicant in Application No. 839, 875 and 944 filed before : Sh. J. Ramachandra Rao, Advocate
Sh. T.Srikanth Rao, Advocate
Sh. J.P.Rao, Professor

commonly known as Polavaram Project.

2. In the IA the following prayers have been made:

- grant permission for diversion of the forest land which includes the Reserved Forest Area to an extent of 187.29 ha. situated in Papikonda Wild Life Sanctuary;
- grant permission to carry out the Project works that result in submergence of marginal and fringe areas of Papikonda Wildlife Sanctuary after impoundment of water;
- to pass appropriate order directing the Forest Advisory Committee (FAC) to consider the project to accord approval for diversion of 3267 hectare reserve forest land for the proposal.

And

- to pass such further order or orders as this Hon'ble Court may deem just and proper in the circumstances of the case."

3. This matter was heard by this Hon'ble Court on 5.5.2006 when the following order was passed:

Issue notice.

Mr. A.D.N. Rao, learned counsel, accepts notice on behalf of Ministry of Environment and Forests.

The Central Empowered Committee may look into the proposal for diversion of forest land and file its report within eight weeks."

4. This report is being filed by the CEC pursuant to the above order of the Hon'ble Court after examining the matter during the hearings held on 15.5.2006, 26.6.2006, 12.7.2006 and 8.8.2006 and site visit by Mr. P.V. Jayakrishnan, Chairman, Mr. N.K. Joshi, Member, and Mr. Mahendra Vyas, Member alongwith Mr. Siddharth

requested to give their views in the matter. These have also been considered in this report. The views of the various elected representatives and members of the public who appeared before the CEC and filed written representations on different aspects of the Polavaram Project have also been duly considered.

THE PROJECT

5. The Indra Sagar Major Irrigation Project, commonly known as the Polavaram Project envisages:

- creating irrigation facilities to the extent of 2.91 lakh ha. in the four districts of Andhra Pradesh, namely, West Godavari, East Godavari, Krishna and Visakhapatnam Districts;
- Generating 960 MW of hydro power;
- Diversion of 80 TMC of water to Krishna River;
- Providing 23.44 TMC of drinking water supply to Vizag city, industries and enroute 540 villages covering a population of 25 lakh persons;
- Develop pisciculture and tourism.

6. The main component of the project consists of 2310 mtrs. long earth rock filled dam, 897 mtr. long spillway, 12 power houses of 80 MW each, right main canal of 174 km. length having 1.29 lakh ha. ayacut and left main canal of 181.50 km. length having 1.62 lakh ha. ayacut. The hydraulic details of the project are as follows:

- Full reservoir level (FRL) 45.72 mtr. (150 ft.)
- Lower water level (MDDL) 41.15 mtr. (135ft.)
- Gross storage at FRL 194.6 TMC
- Live storage 75.2 TMC

7. The project involves the use of 52623.91 ha. of area in the State of Andhra Pradesh, Chhattisgarh and Orissa as detailed below:

State	Forest area (ha.)	Forest area (ha.)	Total (ha.)
Andhra Pradesh	47,449.200	3731.07*	51,180.27
Chhattisgarh	795.43	0.16	795.59
Orissa	545.89	102.16	648.05
Total	48,790.520	3,833.39	52,623.91

* Includes 464.07Ha.. of additional forest land identified pursuant to the CEC's visit.

	Chhattisgarh	0.16	795.43
Total	3,500.32	134.11	43,534.32
Head Works	Andhra Pradesh	87.18	1,193.87
Right Main Canal	Andhra Pradesh	111.78	3,754.68
Left Main Canal	Andhra Pradesh	3,833.39	48,790.520
Grand Total			52,623.91 ha.

9. Out of the above 3833.39 ha. forest land, 187.29 ha. area falls in the Papikonda Wildlife Sanctuary.

The said sanctuary has been notified under Section 26 of the Wild Life.

(Protection) Act, 1972 on 17.7.1998 and covers an area of 590.68 sq. km. in East Godavari, West Godavari and Khannam Districts. The flora and fauna are rich and diverse. The important flora in the sanctuary are Pterocarpus, marsupium, Terminalia tomentosa, Adina cardifolia, Sterculia urens, Mangifera indica, Bauhinia

vahlia, Butea superba etc. The important fauna found in the sanctuary are Tiger, Panther, Gaur, Wild dog,

Sloth bear, Barking deer, Mouse deer, Cheetal, Sambar and wild boar.

10. It is proposed to carry out compensatory afforestation over 3280 ha. area at an estimated cost of

Rs.2,329.323 lakhs. The details of the area identified for compensatory afforestation are as under:

District	CA Area in ha.	Financial Projections for the scheme Rs. in lakhs
East Godavari	900	686
West Godavari	1750	1070.323
Visakhapatnam	630	573
Total	3280	2329.323

11. The project will affect a large number of persons. The details of the families affected by the project

are as under:

12. Out of the above, 14.94% are scheduled castes, 48.67% scheduled tribes, 17.45% backward classes and the balance 18.94% fall in other categories.

13. The estimated cost of the project is Rs. 12,591 crores. The item-wise break-up is as under :

Sl. No.	Particulars	Cost (Rs. in crores)
1.	Project cost excluding EIA, EMP and R&R	8229.00
2.	Catchment Area Treatment including drainage and sedimentation treatment	20.10
3.	Command Area Treatment	402.7
4.	Development of flora and fauna	302.66
5.	Public Health	94
6.	Archaeology, Mines and Geology	6339.00
7.	Resettlement and Rehabilitation	250.74
Total project cost :		16500.74

iv. Any other condition in this regard suggested by the Chief Wildlife Warden, has to be complied by the project proponents.

14. The site clearance has been accorded by the MoEF on 19.9.2005. After holding the public hearing on 10.10.2005, the environmental clearance has been accorded by the MoEF on 25.10.2005. The proposal for seeking approval under the F.C. Act for the use of the forest land has been filed on 12.12.2005 by the State of Andhra Pradesh. As regards the forest land falling in the State of Chhattisgarh and Orissa, the formal proposal seeking approval under the F.C. Act have not been filed by these two States. These States have also objected to their lack of involvement in the public hearing.

15. The Chief Wildlife Warden, Andhra Pradesh Forest Department has recommended the use of the forest land falling within the Wildlife Sanctuary on the condition that the labourers working in the project area should not depend on the forest for their housing material and fire wood needs and that an equivalent reserve forest area will be included in the sanctuary.

16. The State Board for Wildlife (SBWL) in its meeting held on 9th January, 2006 under the Chairmanship of Chief Minister, Andhra Pradesh has recommended the project for clearance. The Standing Committee of the National Board of Wildlife in its meeting held on 6.7.2006 examined the use of the forest land falling within the sanctuary and has recommended the project for approval. Earlier, there was a site visit by Mr. Darshan Shankar of FRLHT and Dr. Anmol Kumar, DIGF (Wildlife), MoEF who recommended that the use of the forest land falling within the sanctuary may be approved subject to the following conditions:

b) In addition to the Net Present Value of the forest land, 5% of the total cost of the project has to be paid by the irrigation department/project proponents as envisaged in the decision taken by the National Board for Wildlife at its meeting. The NPV and 5% of the project cost is to be deposited under CAMPAA fund.

c) It is also necessary that before the recommendations come into effect, proper strengthening of the wildlife wing in Khammam and Rajamundry forest circles are taken up on priority because the sanctuary will be managed effectively only when the necessary infrastructure and manpower is provided to the Wildlife Wing. In this context a small action plan has been developed in consultation with the wildlife wing of the Andhra Pradesh State Government. The funds for this component shall be made available from the 5% of the project cost to be deposited with the Compensatory Afforestation Monitoring and Planning Agency (CAMPAA).

d) The State Government would declare Udatpalli Reserve Forest (5103 ha.) of Eluru Forest Division as part of the Papikonda Wildlife Sanctuary. The management of the river after the completion of the project would continue to remain with the State Forest Department.

A copy of the recommendations of the Standing Committee of the NBWL alongwith the Site Inspection Report is enclosed at **ANNEXURE B** to this report.

17. The R&R Plan has been filed by the Applicant State on 8.12.2005 for seeking the approval of the Ministry of Tribal Affairs (MOTA). These plans were discussed by the Tribal Advisory Council on 27.2.2006. They are yet to be approved by the Ministry of Tribal Affairs.

18. A detailed Project Report (DPR) has been filed in September, 2005 seeking techno-economic clearance from the Central Water Commission (CWC). As per the Applicant State, out of the 17 Directorates of the CWC, clearances have so far been received from 10 Directorates. The DPR is under scrutiny in the remaining seven Directorates. Similarly, Investment Clearance from the Planning Commission is awaited.

TOTAL FOREST LAND REQUIRED FOR THE PROJECT

18. During the site inspection carried out by the CEC it was observed that the total forest land required for the project is more than what has been projected because the deemed forest land has not been included. Subsequently, the following additional forest area required for the project has been identified:

Deemed forest in East Godavari:	63.00 ha.
Deemed forest in West Godavari:	109.56 ha.
Deemed forest in Khammam	85.42 ha.
Kolleru Extension reserve forest:	<u>206.09 ha.</u>

EXTENT OF SUBMERGENCE IN THE SANCTUARY AREA:

20. As per the project authorities, the project involves submergence of 187.29 ha of forest area falling within the Papikonda Sanctuary. During the site visit, it was observed by the CEC that 1,553 ha. Non-forest area, which is part of the river portion falling within the sanctuary will also be required for the project. The State has taken a view that most of this area is under water even now, the physical status of such land will not vary except that the water level in that portion will rise and therefore it is not necessary to seek the diversion of this portion of the sanctuary area. The CEC is of the view that there will be material change in the land use of this area also. The total area being affected in the sanctuary is 1,740.4 ha. out of which 187.29 ha is forest land and the balance 1,553 ha. is non-forest land. While taking a decision for compensating the use of the land falling within the sanctuary area the above figure of 1,553 ha. of non-forest land also needs to be considered and not just 187.4 ha. of forest land.

ADDITION OF AREA TO PAPIKONDA SANCTUARY AND UPGRADING TO A NATIONAL PARK

21. During the site visit it was observed that the forest area remaining under submergence is virgin mixed deciduous forest of Eastern Ghats which is critical from the ecological point of view. In case the use of forest land falling within the sanctuary is unavoidable it is imperative to have good quality adjoining forest area in the sanctuary, relocate the isolated villages in the sanctuary and upgrade the status of the sanctuary to that of a National Park. It has been informed by the Applicant State that the Andhra Pradesh Forest Department has initiated the process of identification of suitable area which can be added to the Papikonda Wildlife Sanctuary. In fact 4,539 ha. of reserve forest area in East Godavari District has already been identified for this purpose. The State has also agreed in principle for the relocation of the isolated villages falling within the sanctuary and notifying the Sanctuary as a National Park. This notification would be a pre-condition to any clearance to use/divert sanctuary land.

BACHAWAT AWARD

22. After the reorganization of the States, the Government of India constituted the Godavari Water Dispute Tribunal (GWDT) on 10th April, 1969 for adjudication of the water disputes relating to inter-State River Godavari.

Orissa regarding the submergence aspects of Polavaram Project. The agreement provides for the construction and maintenance of the protective embankments with adequate drainage sluices at the cost of the State of Andhra Pradesh to protect the land and property above

RL + 150 ft. in the State of Orissa and Chhattisgarh. It also provides that alternatively these States may exercise an option for compensation for land and property likely to be affected above RL + 150ft. The said agreement was filed before the Tribunal on 3rd April, 1980 and has been made a part of the final order of the Tribunal commonly known as 'Bachawat Award'. A copy of the relevant portion of the Award along with the above said agreement is enclosed at

ANNEXURE R-II

23. Clause VI of the Award which deals with the construction of the Polavaram Project is reproduced below:
"Clause VI

- 1) In accordance with the statement dated the 3rd April, 1980 submitted on behalf of the Government of India, annexed hereto and marked Annexure "H", we direct that
- 2) The Polavaram Project shall be cleared by the Central Water Commission as expeditiously as possible for F.R.L./M.W.L.+150feet
- 3) The matter of design of the dam and its operation schedule is left to the Central Water Commission which it shall decide keeping in view all the Agreements between the parties, including the Agreement dated the 2nd April, 1980 as far as practicable; and
- 4) if there is to be any change in the operation schedule as indicated in the Agreement dated the 2nd April, 1980 it shall be made only after consultation with the States of Andhra Pradesh, Madhya Pradesh and Orissa. The design aspects shall, however, be left entirely to the Central Water Commission.

(2) The State of Andhra Pradesh shall observe all safeguards, including the safeguards mentioned in sub-clause (1) above, regarding the Polavaram Project, as directed by the Central Water Commission."

VIEWS OF THE STATE OF ORISSA

diversion of 102.16 ha. of forest land falling in Orissa whereas the project may actually involve submergence of more than 1000 ha. of forest land in Malkangiri District of Orissa involving a large chunk of dense and rich forest cover;

iii) bona fide residents, environmental groups and others located at the project site and sites of displacement should be given an opportunity to participate in the public hearing held for the purpose of seeking environmental clearance. To enable such participation, the public hearing should have been conducted in Malkangiri District of Orissa through Orissa Pollution Control Board. No such public hearing has taken place. The issue of environmental clearance by the MoEF in the absence of such public hearing in Orissa is a latent violation of their own Notification. The environmental clearance needs to be revoked;

iv) the proposal filed by the Andhra Pradesh for seeking approval under the F.C. Act is faulty because;

- a) R&R plan for the 1002 Project Affected Families in Orissa has not been filed as per Government of Orissa R&R Policy, 2006 which is a statutory requirement under the F.C. Rules;
- b) the proposal is silent about submergence of other government non-forest land, deemed forest and tenanted land;
- c) copy of the resolution passed by the gram panchayat/local body and public hearing has not been furnished; and
- d) compensatory afforestation land has been provided in Andhra Pradesh instead of Orissa.

In view of above, the diversion proposal received by the Orissa Forest Department has been returned for compliance to the Government of Andhra Pradesh on 23.6.2006;

v) the Godavari Water Dispute Tribunal Report (Bachawat Award) deals with agreement between the Government of Andhra Pradesh and Orissa signed during 1978 and 1980. As per the above, maximum submergence in Orissa territory was not to exceed RL+150 ft. due to all effects including back water effects. With a change of the project design due to a change in reservoir level, the present project is factually a different project and does not correlate with the original agreement. Therefore the Polavaram project is required to be reformulated without any submergence in Orissa's territory;

vi) as per the F.C. Act Guidelines, projects involving forest land are deemed to have been cleared only after the approvals are accorded under the F.C. Act as well as the environmental clearance though separate communication of sanctions may be issued. In the present case, the F.C. clearance has not been accorded and therefore the environmental clearance is not presently effective. The Honble High court of Andhra Pradesh has also directed the project proponents to stop the construction work. The Honble High Court of Orissa by order dated 22.3.2006 in miscellaneous case No. 3117 of 2006 has also directed that the project should be stopped after compliance with the requirement of all applicable laws in such a manner that no

ix) as per the GWDT Award the project is to be cleared by the Central Water Commission expeditiously for FRL/MWL+150. In the award, GWDT directed the CWC to decide the design of the dam and its agreements between the parties. The proposal sent by the State of Andhra Pradesh is still under examination of the CWC. Till it is finalized by the CWC, joint verification cannot be undertaken because any change in design may result in back water effect and area submergence; and

x) no such consultation with the concerned gram sabhas in Orissa has taken place which is against the provisions contained in Panchayats (Extension to the Scheduled Areas) (PESA) Act, 1996

VIEWS OF THE STATE OF CHHATTISGARH

25. The main submissions made by the State of Chhattisgarh are summarized as under:

- i) the participation of the State of Chhattisgarh in the Polavaram River Valley Project and the rights and obligations ensuing thereunder emanates from the agreements entered into by the State of Andhra Pradesh, Orissa and the Godavari Water Dispute Tribunal Award. In terms of the said agreement the State has agreed to the construction of Polavaram project so that maximum submergence in Chhattisgarh did not exceed +RL 150 ft. due to all effects including back water effect. The project was to be designed for the maximum probable flood in consultation with the Central Water Commission. However, the reports show that the construction of the dam in its present design, backwater level in Chhattisgarh will go beyond the agreed +RL 150 ft. which is a breach of the agreed terms between the two States. In view of the above it is necessary and essential that the project should be re-examined in the light of the changes made and work out an alternative plan mutually agreed by all the affected States;
- ii) as per the final order of the Tribunal, the design of the dam and its operation schedule is to be decided by the Central Water Commission. Any change in the operation schedule is to be made only after consultation with all the three concerned States. However, neither the Central Water Commission has accorded the approval nor any consultation with the State of Chhattisgarh has taken place. The State of Chhattisgarh reserves its rights to agitate its grievance relating to the violation of the agreement and the award in appropriate forums;
- iii) the States of Chhattisgarh and Andhra Pradesh have mutually agreed on 12.6.2006 to carry out a joint survey regarding submergence and environmental impact assessment of the project and related studies on wildlife. The said survey is yet to be carried out. As such no construction work in the project can take place till the report of the joint survey is received;
- iv) the proposed submergence area in Chhattisgarh is notified in Schedule 5 of the Constitution of India and therefore any decision in respect of these areas require permission of gram sabhas;

have been made by the State of Andhra Pradesh :

- (i) the back water studies have been carried out and the full details have been provided to the concerned authorities of the State of Chhattisgarh and Orissa;
- (ii) actual survey of areas getting submerged under FRL condition and back water condition have been assessed correctly and data furnished to them. The EIA and BMP reports as well as the R&R Plans have been prepared on the basis of information compiled after actual surveys;
- (iii) if the State of Orissa and Chhattisgarh have any apprehension about the accuracy of the data, the studies can be got done through a reputed third party agency like CWC at the cost of the project. The State is willing to abide by the outcome of the studies;
- (iv) as per the EIA Notification, public hearing should be held at one place in the region by duly giving wide publicity;
- (v) the dam break analysis and disaster management plan have been appended to the EIA and BMP reports including the areas likely to be affected;
- (vi) if the government of Orissa prefers to have protective embankments to safeguard their villages from the submergence as provided in the Bachawat Award, then necessary flood banks for a length of 30 kms along the River Sabri and River Sileru in the territory of Orissa will be formed at an approximate cost of Rs.393 crores chargeable to the project. This has already been informed to the Government of Orissa on 16.6.2006. The Government of Orissa has not yet responded;
- (vii) if the Government of Orissa prefers to identify land for compensatory afforestation in their territory to avoid any adverse impact the same will be taken into consideration;
- (viii) being a party to inter-State Agreement dated 2.4.1980, the State of Orissa and Chhattisgarh should take pro active steps in conducting joint survey and processing the F.C. Act proposal as well as R&R Plans;
- (ix) the process of dialogue with the authorities of the States of Orissa and Chhattisgarh will continue and every effort will be made for joint survey to identify the actual extent of submergence; and

agency and the State of Orissa and Chhattisgarh respectively will become the concerned State Governments. In any case this issue is also required to be resolved in terms of Bachawat Award. The response of the State of Orissa regarding clearance of the CWC, R&R Plan, PESA, environmental clearance, and F.C. Act clearance have been dealt with separately in the report

PROJECT AFFECTED PERSONS REHABILITATION AND RELATED ISSUES :

27. As per the applicant State, the project involves displacement of 47911 families spread over 288 settlements. The total number of project affected persons comes to 1,95,357. About 50% are Scheduled Tribes, 15% Scheduled Castes, 17.5% backward classes and the balance fall in other categories.

28. The opponents of the project who have filed Application before the CEC have taken a stand that in the absence of the correct back water level data, which is yet to be taken up through model studies in consultation with the Central Water Commission, the number of project affected persons (PAP) cannot be arrived at. As per the reply filed by the State of Orissa and Chhattisgarh, with backwater effect the water level would reach 182 feet. In Andhra Pradesh itself the number of villages coming under submergence could increase from 276 to 400 and the number of project affected families could increase from 44574 to 70,000. Similarly, the project affected persons could increase from 1.77 lakh to 3.0 lakh in Andhra Pradesh. Similarly in Chhattisgarh and Orissa, the PAP will also increase. The agricultural land coming under submergence which is presently reported at 1.1 lakh acre will also increase to 1.6 lakh acre because of revised back water levels. Except for two villages in East Godavari district, all the other villages that would get submerged are in the scheduled areas of the three States of Andhra Pradesh, Chhattisgarh and Orissa. The forest area going under submergence in Chhattisgarh and Orissa may also be more than what has been projected. Because of the project the Coringa Sanctuary downstream will also be adversely affected as it would reduce fresh water flow in the river.

29. It has also been stated that the land for settlement of uprooted villages has not been identified, the R&R Action Plan has not been prepared and the number of families dependent on agriculture is yet to be identified. The Ministry of Tribal Affairs has not approved the R&R package prepared by the State Government. In fact, it has raised several objections with regard to the implementation of the Panchayat Extension in Scheduled Area Act (PESA) and has also

of cost, financial assistance of Rs.40,000 for construction of the house, allotment of land in lieu of the land acquired, grant for cattle shed, transportation of material, income generating scheme, payment of wages, subsistence allowance, basic amenities at the resettlement centres, preference to scheduled tribe category in the allotment of land, dispute redressal mechanism, grievance redressal mechanism, monitoring mechanism and concurrent auditing.

31. It has also been stated by the State of Andhra Pradesh that separate organizational structure at the State, district and project level is proposed to be created. The State has appointed the Commissioner for Resettlement and Rehabilitation at the State level and who will be responsible for the supervision of the formulation of the rehabilitation and resettlement plans, their proper implementation and redressal of the grievances. A State level Monitoring Committee comprising of Secretaries of various Departments along with the State level NGOs and the concerned Chief Engineer has been formed vide Government order dated 9.5.2005. The project level Monitoring Committee has been formed under the Chairmanship of the senior most District Collector. A Grievance Redressal Cell has also been constituted under the Chairmanship of the Commissioner for the R&R. The implementation of the R&R plan is programmed in such a way that it is completed atleast one year before the completion of the project and all the project displaced persons will be accommodated in the new sites. Substantial progress in the verification, identification of sites for model colonies and other R&R work has already taken place. The State will abide by the provisions of the R&R as approved by the Ministry of Tribal Affairs.

RELATED ONGOING LIFT IRRIGATION AND OTHER PROJECTS

32. As per the Applicants opposing the project, out of 7.20 lakh acre of ayacut of the project, 4.27 lakh acre is already covered by Pushkaram and Tadipudi Lift Irrigation Project. There are many existing minor irrigation projects such as Yeluru, Thoringedda LIS, Chogalnadu LIS, Nagarjunasagar Left Canal, etc., covering the same ayacut effectively. Hardly any new ayacut will result because of the project. The expenditure incurred on Pushkaram Lift Irrigation Project and Tadipudi Lift Irrigation Project will become infructuous. The project provides for generation of 960 MW of peak power which can be generated only during the rainy season. For balance period, no water would be available for power generation. It is a misconception that lift irrigation is costlier. The power required for Tadipudi and

been done properly. The whole ayacut of the project can be irrigated by a pumping scheme at a cost of about Rs. 200 crores. Since the cost of Tadipudi and Pushkaram project is only Rs.685 crores the entire Polavaram ayacut can be irrigated without construction of the dam, within a cost of Rs. 1000 crores.

33. The State of Andhra Pradesh has stated that Pushkaram Lift Irrigation Scheme, which envisages pumping of 42.82 cumecs of water from River Godavari in single stage to the main canal and by three more lifts from the main canal to, irrigate the upland area is being implemented on Akhanda Godavari Left bank at 41.10 kms from Dowlaiswaram in East Godavari. The above scheme is to provide irrigation benefits to 75,235 ha. of area during the kharif season in the 14 Mandals of District East Godavari. In addition Tadipudi lift irrigation scheme being implemented on Akhanda Godavari Right Bank at 20 kms. from Kovvur District in West Godavari envisages pumping of 39.56 cumecs of water in single stage to the main canal and by four more lifts from the canal to irrigate the upland areas. This scheme is to provide irrigation over an area of 83,599 ha. during kharif season in the 15 mandals in West Godavari District. The ayacut of the above two schemes are covered in the proposed left and right main canals of Polavaram project.

34. As per the State Government of Andhra Pradesh, the above schemes as well as Chagalnadu Lift Irrigation Scheme have been sanctioned specifically mentioning that ultimately these schemes will be fed from the Polavaram Project by gravity. The CWC has in its meeting held on 2.6.2006 accorded techno-economic clearance to these Lift Irrigation Schemes. The above two lift irrigation schemes are proposed to be completed within a period of two years to provide early irrigation facilities. After completion of the Polavaram Project, the main canals of the above two lift irrigation schemes together with their distributory system will be tagged on to the main canals of Polavaram project. The above arrangement will facilitate assured water supply. It will also ensure supply of water by gravity instead of by lift thus saving huge recurring power charges. No separate distributory system under Polavaram Project is proposed to be created in the command areas of lift irrigation schemes since the distributory system created for lift irrigation schemes will meet the requirement of Polavaram Project also.

35. It has also been stated that these Lift Irrigation Schemes cannot meet the demand in the long run without tagging on to the Polavaram Project as a minimum storage of 75 TMC is required to balance the deficiencies in the river flow

hearing was conducted in the State of Chattisgarh and Orissa.

37. The stand taken by the State of Andhra Pradesh in this regard is summarized as under:

- i) the public hearing proposed to be held on 10.10.2005 at Bhadrachalam was widely publicized on 10.9.2005 including through leading dailies. The Collectors of Dantewala District in Chattisgarh and Malkangiri District in Orissa were requested to arrange for the participation of all PAPs, public representatives and NGOs etc. in the public hearing at Bhadrachalam which is nearby to submergence area. The public hearings were duly conducted on 10.10.2005 and thereafter the consent order was granted by the Andhra Pradesh Pollution Control Board on 18.10.2005;
- ii) the application in the prescribed format for seeking environmental clearance from the MoEF was submitted on 7.8.2004. Thereafter a fresh application with EIA and BMP reports and other documents was filed on 16.9.2005. The project was examined by the Expert Committee constituted by the MoEF on 19.10.2005 and the query raised by the Members of the Expert Committee were filed by the State on 20.10.2005. The environmental clearance was later accorded on 25.10.2005. Thus it took more than a year after the filing of the first proposal to obtain environmental clearance from the MoEF. The EIA and BMP reports were prepared in six spheres namely; land environment, water environment, geo-environment, socio-economic environment, bio-environment and air environment. The study area extended upto 10 kms from the project boundary and not from the dam site. The back water studies were also carried out. The EIA and BMP reports of the R&R plans have been prepared on the basis of actual survey;
- iii) as regards the apprehension expressed by the State of Orissa and Chhattisgarh, the studies may be got conducted through reputed third party agency like the CWC at the cost of the project and that it will abide by the outcome of any such studies;
- iv) the EIA Notification 1994 provides for holding of public hearing at one place only and accordingly it has been held at Bhadrachalam which is nearer to most of the submergence area including that of Orissa and Chhattisgarh;

ALLEGED VIOLATION OF THE BACHAWAT AWARD

38. The Applicants opposing the project, who have also been supported by the State of Orissa, have taken a stand that as per the Bachawat Award dated 7.7.1980, the project has to be designed by the Central Water Commission and Operation Schedule has to be given by it alone keeping in view the back water affects and the area of submergence in the State of Andhra Pradesh, Chhattisgarh and Orissa. The Central Water and Power Research Station, Pune, an organization of the Central Water Commission is the competent authority to conduct model studies to arrive at the correct back water levels of + 150 feet with FRL upto + 150 feet or less at the dam site. This exercise has not been done so far and therefore the correct assessment of submergence of forest land, private land, displacement of village population and adverse environmental impact assessment cannot be made in any of the three affected States. The commencement of the work on the project without obtaining the clearance from the CWC is in violation of the Hon'ble Supreme Court's judgement in the case of the State of Karnataka vs. the State of Andhra Pradesh reported in (2000) 9 SCC 572 at para 52 page 641 (f).

39. The State of Andhra Pradesh has taken the view that as per the Agreement dated 2.4.1980 and the final orders of the Godavari Water Disputes Tribunal, the Polavaram Project is to be cleared for FRL/MWL of + 150 feet at dam site. As per the State Government, the fresh detailed project report (DPR) of the project was submitted during September, 2005, several sets of comments from the various Directorates of the Central Water Commission were replied from time to time, the project report was updated periodically and the fresh DPR was again submitted on 28.2.2006. Out of the 17 Directorates of the CWC, clearance from 10 Directorates have been received so far and the DPR is under scrutiny in the remaining seven Directorates. The State of Andhra Pradesh has submitted all the designs of spill way and earth-cum-rock fill dam to the CWC. The construction of the dam including spill way will be carried out as per the approved drawings of the CWC only. The techno-economic viability is examined by the Technical Advisory Committee of the Ministry of Water Resources after the environmental clearance, F.C. Act clearance, approval of the R&R Plan by the Ministry of Tribal Affairs and clearance from wildlife aspects are obtained. The CWC clearance cannot be obtained before obtaining these clearances. The detailed designs are to be prepared by the State Government and submitted to the CWC along with the DPR for their scrutiny and approval. These designs are not prepared by the CWC. The detailed construction drawings will also be submitted separately for the approval of the CWC before commencement of the work.

the F.C. Act necessarily has to be filed in the prescribed proforma by the concerned States and not by the State of Andhra Pradesh. In the absence of model studies, the exact extent of forest area required for the project cannot be assessed.

41. On the other hand, the State of Andhra Pradesh has taken the view that all the issues pertaining to the construction of the Polavaram Project have been settled by the Agreement dated 2.4.1980 entered into by the State of Andhra Pradesh with the States of Orissa and Chhattisgarh and by the Bachawat Award dated 7.7.1980. As per the Award, the States of Orissa and Chhattisgarh have the option of either seeking compensation for land affected above + 150 feet level or for the construction of embankment at the project cost. In case the latter option is exercised, no land above + 150 feet level will be affected in either of these two States. This will also prevent requirement of forest land coming under submergence in these States. In any case it will be ensured that use of forest land for the project is undertaken only after obtaining the requisite approval under the F.C. Act.

42. It has been confirmed by the State of Andhra Pradesh that it commenced the project work on the non-forest land. During the course of the hearing, the Applicant State was advised by the CEC to stop the work on the ground that the guidelines issued by the MoEF for implementation of the F.C. Act prohibit undertaking of project work on the non-forest land pending approval under the F.C. Act. The project work is reported to have since been stopped.

IMPORTANCE OF THE AREA FROM WILDLIFE POINT OF VIEW

43. As per the applicants, the detailed survey of the wildlife and the adverse impact on the same because of part submergence of the sanctuary area has not been carried out. The project proponents have shown different figures before different authorities. Since the actual submergence after the construction of the dam may go up by another 80 to 110 feet, the adverse impact of the project on the flora and fauna can be assessed only if studies are done by an independent body like the Wildlife Institute of India, Dehradun. The forest area going under submergence is very rich from the point of view of biodiversity and contains a number of red listed species. It has wrongly been given in the EIA report that there are no endangered species of flora found in the submergence area. A unique dwarf breed of goat commonly known locally as the "Kanchu Mekha" originates in the region coming under submergence. In support of

a situation adequate compensation for the loss of the forest area is required to be made by adding adjoining virgin forest area to the sanctuary and by a series of special protection measures for the area.

APPLICABILITY OF PESA

45. As per the applicant, the Panchayat (Extension to the Scheduled Area) Act, 1996, popularly known as PESA, makes it mandatory to consult the Gram Sabha in scheduled area for acquisition of land, rehabilitation and resettlement. Clause 4(2) of the V Schedule of the Constitution of India makes it mandatory for the State Governments to consult the Tribal Advisory Councils on all matters pertaining to the welfare and advance of the Scheduled Tribes in the State as may be referred to them by the Governor. The present project will affect the life of the Scheduled Tribes in all the three States. It is therefore the Constitutional obligation on the part of the States of Chhattisgarh and Orissa to seek the advise of the Tribal Advisory Council before giving their comments for the project. The project is being implemented without obtaining permission from the National Commission for Scheduled Tribes and Scheduled Castes. The rehabilitation and resettlement package has not been approved by the Ministry of Tribal Affairs.

46. The State of Andhra Pradesh has taken a view that it will abide by the provisions of the R&R package as approved by the Ministry of Tribal Affairs. The land belonging to the tribals could be acquired for undertaking developmental activities and such acquisition does not result in diminution of scheduled areas or cessation of that part of land in the scheduled area. It also does not result in alteration of scheduled areas. Such acquisition of land cannot be termed as contrary to Para (6) of Schedule V of the Constitution of India. The meeting of the Tribal Advisory Council (TAG) which was convened on 1.7.2005 discussed the A.P. R&R Policy, 2005 and resolved that (a) Scheduled Tribes shall be given land in the ayacut and (b) it shall ensure prohibition of transfer of land in ayacut and other irrigation project. The R&R Policy is being suitably modified accordingly to provide land for land compensation to tribals in the command area or in other areas. During the 97th TAG meeting conducted on 27.2.2006 more than 80 per cent of the members agreed for the construction of the project with better implementation of R&R Policy. A report on the project was furnished to the Chairman, National Commission for Scheduled Tribes on 29.10.2005. The members of the Commission, after visiting the State, expressed satisfaction on the R&R policy. Gram Sabhas have been conducted in all the Village Panchayats and most of the villages have favoured the project. The project affected scheduled tribes persons are being resettled in the Schedule V area only. They are being provided with land

practices. The design of the spill way and the location of the spill way will definitely lead to the breaking up of the dam instantaneously since the earth dam is located in the centre of the river course. The dam will collapse instantaneously when maximum flood occurs. The foundation of the spill way consists of fractured and weathered rocks, and will not be able to withstand the water pressure during heavy floods. The Government has to undertake a proper study in respect of dam break analysis.

48. As per the applicant, many experts including the erstwhile Water Resources Minister, Mr. K.L. Rao, have expressed their concern about the suitability of the site for the construction of the dam. The spill way capacity is inadequate. The normal rule of thumb is to design spillway 1.5-2 times of the probable maximum flood which is not being followed. Because of diversion of water to the right in a width of 900 mtrs. and blocking the main course of the river by earth-cum-rockfill the dam will not be able to withstand the high force of the river. No rock for foundation is available until great depths. The local black soil is not suitable for the construction of earth-cum-rockfill dam. The soil from the other areas will only lead to additional costs.

49. The above has been firmly contested by the Applicant State stating that the present proposal with FRL/MWL + 45.72 M (+150 ft.) with gross storage capacity of 194.70 TMC and live storage capacity of 72.20 TMC has been firm up after considering several alternative proposals since 1941. In 1941 the then Chief Engineer (Irrigation) made a proposal for storage reservoir with FRL + 150 ft. The proposal was revised in 1942 with FRL + 170 ft. with effective storage of 300 TMC. The proposal was further revised and enlarged. The preliminary investigations were completed during 1942-44. Thereafter the FRL was raised to + 192 ft. with storage of 588 TMC. Thirteen possible sites were investigated thoroughly and finally the Rampada Sagar alignment was selected. The detailed investigations and detailed designs were carried out during 1946-47. The services of Consulting Board of Engineers consisting of top ranking engineers of world repute were engaged. The members, after detailed examination, unanimously concluded that the construction of the dam is feasible and the selected site is the best available one. At that time the estimated cost of the project was Rs.129 crores. However, because of financial constraints the project could not be undertaken.

50. It has been stated that in 1976, two alternative proposals namely (a) barrage/diversion gated structure on permeable foundations (b) spill way on rocky foundation in the flank saddle were considered. It was decided to go for the latter. In 1978, a detailed project report was filed with the CWC for the construction of earth cum rock fill dam in the present form and approval in this respect.

alternative proposal in this regard submitted by Shri Dharma Rao, former Chief Engineer and Shri T. Hanumantha Rao, Engineer-in-Chief (Retired). All the above three proposals were examined in detail by the Expert Committee who found the proposals to be not feasible both technically and financially.

52. As per the Applicant State earth-cum-rock fill dams built all over the world are functioning well without causing any problem. The dam engineers over the years have developed to a great extent suitable technology to design and construct dam. The Polavaram project has been conceived after discussions in the various technical committees. The report on dam break analysis of Polavaram Project was got prepared from the National Institute of Hydrology, Roorkee. A flood inundation map that corresponds to the dam break flood hydrograph and its movement down stream has also been prepared. An emergency contingency strategy for meeting unforeseen disaster eventualities of heavy flooding and inundation has been prepared which include establishment of dam surveillance unit, monitoring of maximum water levels, warning, danger levels of river, special attention to areas prone to inundation, diversion of transportation goods, provision of flood lines, use of generators etc.

53. The Applicant State has also stated that in any case the design of spill way and earth cum rock fill dam will be got approved by Central Water Commission which is the premier institution in the country. The construction of the dam will be taken up as per the approved drawings of the CWC only.

OBSERVATIONS AND RECOMMENDATIONS

54. The Polavaram Multipurpose Project being constructed at an estimated cost of Rs. 12,590.70 crores involves the use of 3833.39 ha. of forest area out of which 3,731.07 ha. forest area falls in Andhra Pradesh, 102.16 ha. in the State of Orissa and the balance 0.16 ha. in Chhattisgarh. The project involves use of 187.29 ha. of forest area falling in Papikonda Wildlife Sanctuary in Andhra Pradesh. It also involves use of 1,553 ha. of non-forest area within the said sanctuary. The forest area required for the project in the State of Andhra Pradesh is virgin mixed deciduous forest of Eastern Ghat which is most important from the ecological point of view. The area contains endangered species such as Tiger, Panther, Gaur, Wild Dog, Sloth Bear, Barking Deer and other fauna. Many important species of flora are found in the area. It is a unique and rich wilderness of this country.

55. The project is designed to provide irrigation facility to the extent of 2.91 lakh ha., generation of 960 MW of hydro power, diversion of 80 TMC of water to Krishna River, providing 23.44 TMC of drinking water supply to Vizag city and enroute 540 villages and development of pisciculture and tourism. 1,95,357 persons will be affected by the project. The R&R Plan is to be prepared by the Ministry of Tribal Affairs. Environmental clearance to the project has

been filed before the CEC on various grounds such as validity of environmental clearance, pendency of F.C. Act clearance, importance of area from wildlife point of view, large number of Project Affected Persons, non-approval of the R&R Plan by the Ministry of Tribal Affairs, safety of dam, alternatives available, lack of study on back water, effect, alleged violation of the provisions of PESA, requirement of joint survey, dam design and operation schedule not approved by CWC, displaced persons being in Schedule V area, improper cost benefit analysis etc. These issues have been dealt with in the preceding paragraphs under appropriate headings. Many of these issues are beyond the technical competence of the CEC and therefore no observation has been made by the CEC.

58. The proposal for seeking approval under the F.C. Act for the use of forest land falling in the State of Andhra Pradesh has been forwarded by the Andhra Pradesh Forest Department to the MoEF. The proposals in respect of use of forest land falling in Orissa and Chhattisgarh have not been filed by the respective States. As stated earlier, they are opposed to the implementation of the project in the present form.

59. In addition to the permission of this Hon'ble Court, the following approvals are pending :

- approval under the F.C. Act;
- techno-economic clearance from the CWC;
- approval of the designs of the dam and operation schedule by the CWC as per the Bachawat Award;
- approval of the R&R Plan by the Ministry of Tribal Affairs; and
- Investment Clearance from the Planning Commission.

RECOMMENDATION

60. As far as the specific issue of using 187.29 ha. of forest land and 1,553 ha. of non forest land falling within the Papikonda Wildlife Sanctuary, the CEC is of the view that this Hon'ble Court may consider the same subject to compliance of the following essential pre-conditions :

- approval for the use of forest land will be obtained under the F.C. Act;
- The NPV at the present rate shall be deposited in the Compensatory Afforestation Fund along with an undertaking to deposit the additional amount, if any, as per this Hon'ble Court's directions;
- The isolated villages falling within the sanctuary will be shifted and the sanctuary will be notified as a National Park;
- As agreed to by the State of Andhra Pradesh during the site visit of the CEC, about 500 sq. kms. of the reserved forest area with minimum habitat facilities to be created in the East Godavari District

site inspection report of the team deputed by it. The Conditions on which the project has been recommended by the site inspection team will be fully complied with. The conditions include depositing 5% of the project cost in the Compensatory Afforestation Fund for conservation and protection of the National Parks and Sanctuaries in the State of Andhra Pradesh; and

- A detailed study at the project cost will be got done by the Wildlife Institute of India, (WII) Dehra Dun to assess the effect of the project on the flora and fauna and the mitigative measures required to be taken including in respect of fragmentation of the habitat because of construction of canals. The mitigative measures recommended by the Institute shall be implemented at the cost of the project in a time bound manner.

61. It is also recommended that an independent Monitoring Committee consisting of the representatives of the MoEF, Wildlife Institute of India, A.P. Forest Department and reputed NGOs/experts may be constituted to monitor and supervise the implementation of the above conditions.

62. Though it does not strictly fall within the purview of the CEC to examine the effectiveness of the R&R Plan, we are of the view that the present project is comparable with Sardar Sarovar Project in terms of the magnitude of the displacement of persons and that a proper rehabilitation plan, adherence to the time schedule for its implementation, a strong mechanism for monitoring its implementation including involvement of independent agencies and linkage of the implementation schedule with the progress made in the rehabilitation of the project affected persons is a pre-requisite. The lessons learnt from the earlier projects such as Sardar Sarovar Project and the other major projects should be taken into consideration while finalizing the R&R Plan. The following specific suggestions are therefore made:

- the precise details of the land identified for the rehabilitation of the project displaced persons including the site for the construction of house and agriculture land should be made public. This would also imply that the particulars of the land proposed to be allotted to each of the displaced person should be decided in advance;

carried out under the directions and supervision of the Monitoring Committee. If the R&R is found to be lagging with reference to the fixed bench marks, the construction should accordingly be deferred/stopped;

(M.K. Jivrajka) Member Secretary

Dated: 9.11.2006

Case for Second Thought

Although the project has a great significance for economic development of the State it is fraught with two serious issues that have so far defied satisfactory resolution.

Firstly, the Polavaram project involves displacement of a large population of poor living in 178 villages and 9 mandate consisting of 44574 families which fall in the submergence area. They include 3875 families of the Scheduled Castes and 21109 families of the Scheduled Tribes. The Kondareddy tribals inhabiting the Eppur village near Pochavaram assert that they have been living there since ages and depend for their livelihood on collection of bamboo and minor forest products from the adjoining forest areas. They are very vehemently opposed to any displacement since they believe that their village deity resides in the area. They say if compelled by circumstances they will move up hills but not leave the forest area. The villagers of Ravigudam, Jidiguppa and Visumuru also oppose the Polavaram project and assert their desire to stay in and around the forest area. The general sentiment in the area is against any displacement from their ancestral villages which besides attendant difficulties threatens to disrupt their cultural moorings.

Some of the NGOs working in the area during the interaction with them have indicated that the people inhabiting the submergence area are mobilizing protests against the implementation of the project since they do not want to be displaced from their place and secondly, because they are not quite confident about the relief and rehabilitation package being offered to them.

The other important issue relates to sacrifice of extensive areas of natural forests including a large part of the Papikonda Wildlife Sanctuary. The area is rich in flora and fauna and its submergence would lead to an irreparable loss of biodiversity besides destruction of a vibrant ecosystem. These forests are also home to a host of rare animals including those protected under Schedule-I of the Wildlife (Protection) Act 1972 besides multitude of other creatures and microorganisms whose existence would be adversely affected by the project.

63. We are also making the following observations in respect of some of the other issues which may be considered by this Hon'ble Court :

- a) While approving the project designs, the CWC should take into consideration the operating in the ayacut, various alternatives proposed in lieu of the present proposal, technical and financial feasibility of the project, dam safety aspect and the other relevant technical issues, the actual additional ayacut area which gets added on account of this projects;
- b) The project implementation shall be strictly in accordance with the dam design and the operation schedule finalized by the CWC;
- c) While examining the R&R plan the Ministry of Tribal Affairs should also examine the connected relevant issues such as the Constitutional provisions, applicability of PESA and the other legal provisions;
- d) The Ministry of Water Resources should examine the various issues raised by the States of Orissa and Chhattisgarh in the context of Bachawat Award; and
- e) Forest land shall be used for the project only after obtaining the requisite approvals under the F.C. Act.

64. It is submitted that the above observations are illustrative only and do not necessarily cover all the issues raised

adequately compensated by Compensatory Afforestation or other measures that may be taken with the funds created with the Net Present Value of forest land payable by the User agency, there is, therefore, a strong case for a second thought and explore alternative location and design of the dam to avoid the colossal loss in terms of apprehended sufferings and disruption of life style of the local inhabitants.