GODAVARI WATER DISPUTES TRIBUNAL

THE REPORT OF THE GODAVARI WATER DISPUTES TRIBUNAL

(WITH THE DECISION)

VOLUME I

NEW DELHI
1979

COMPOSITION

OF

THE GODAVARI WATER DISPUTES TRIBUNAL

(*Constituted on the 10th April, 1969*)

CHAIRMAN :

SHRI R. S. BACHAWAT . .	Appointed on 10th April, 1969.

MEMBERS :

SHRI N. L. UNTWALIA . .	Appointed on 10th April, 1969. Resigned before 3rd May, 1969.
SHRI D. S. MATHUR . .	Appointed on 10th April, 1969. Resigned before 4th December, 1969.
SHRI SHAMSHER BAHADUR .	Appointed on 3rd May, 1969 (*vice* Shri N. L. Untwalia). Died on 21st July, 1975.
SHRI D. M. BHANDARI . .	Appointed on 4th December, 1969 (*vice* Shri D. S. Mathur).
SHRI D. M. SEN . . .	Appointed on 16th September, 1975 (*vice* Shri Shamsher Bahadur).

REPRESENTATIVES OF THE STATE GOVERNMENTS BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

I. For the State of Maharashtra

Advocates :

1. Shri M. N. Phadke, Senior Advocate.
2. Shri P. C. Bhartari, Advocate.

The following also appeared in the earlier stages :

1. Shri H. M. Seervai, Advocate-General.
2. Shri T. R. Andhyarujina, Advocate.
3. Shri K. J. Choksi, Solicitor (Representative of M/s. Little & Co.).

Other Representatives :

1. Shri V. R. Deuskar, Secretary, Irrigation Department.
2. Shri M. A. Chitale, Chief Engineer & Joint Secretary.
3. Shri K. S. Shankar Rao, Superintending Engineer & Deputy Secretary.
4. Shri S. G. Joshi, Under Secretary.

The following also appeared in the earlier stages :

1. Shri N. S. Pardasani, Secretary, Irrigation & Power Department.
2. Shri B. A. Kulkarni, Secretary, Irrigation & Power Department.
3. Shri E. C. Saldanha, Chief Engineer & Joint Secretary.
4. Shri M. G. Padhye, Chief Engineer & Joint Secretary.
5. Shri B. S. Kapre, Chief Engineer & Joint Secretary.
6. Shri K. K. Framji, Technical Consultant.
7. Shri N. M. Jog, Under Secretary.
8. Shri V. B. Mulye, Under Secretary.
9. Shri V. N. Chandratreya, Under Secretary.

Local Representatives :

1. Shri D. T. Ghatpande, Special Commissioner. (until February 1974).
2. Shri B. K. Halve, Special Commissioner.
3. Shri D. M. Sukhtankar, Special Commissioner. (until June, 1976).
4. Shri S. K. Guha, Special Commissioner.

II. For the State of Karnataka

Advocates :

1. Shri Sachindra Chaudhuri, Senior Advocate, Supreme Court.
2. Shri S. S. Javali, Advocate, Supreme Court.

The following also appeared in the earlier stages :

1. Shri V. S. Malimath, Advocate General.
2. Shri M. K. Nambyar, Senior Advocate, Supreme Court.
3. Shri T. Krishna Rao, Ex-Advocate General.
4. Shri M. P. Chandrakantha Raj Urs, Government Advocate.
5. Shri B. R. L. Iyengar, Senior Advocate, Supreme Court.
6. Shri A. G. Holla, Advocate.
7. Shri N. A. Subramanyam, Advocate.

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GODAVARI WATER DISPUTES TRIBUNAL
D-27, NEW DELHI, SOUTH EXTENSION, PART II

No. 19(1)/79-*GWDT* *Dated the 27th November,* 1979.

To

The Secretary to the Government of India,
Ministry of Agriculture and Irrigation,
Department of Irrigation,
New Delhi.

Sir,

On the 10*th April,* 1969, *the Government of India constituted the Godavari Water Disputes Tribunal* vide *Notification No. S.O.* 1421, *dated the* 10*th April,* 1969 *issued by the Government of India, Ministry of Irrigation and Power. Vacancies in the offices of Members of the Tribunal were filled by fresh appointments made by the Government of India* vide *Notifications Nos. S.O.* 1739, *dated the* 3*rd May,* 1969 *and S.O.* 4859, *dated the* 4*th December,* 1969 *issued by the Government of India, Ministry of Irrigation and Power, and S.O.* 519(*E*), *dated the* 16*th September,* 1975 *issued by the Ministry of Agriculture and Irrigation*

On the 10*th April,* 1969 *the Government of India, Ministry of Irrigation and Power, referred to the Tribunal for adjudication the water dispute regarding the inter-State river Godavari and the river valley thereof* vide *Reference No. DW.II.*32(19)/68, *dated the* 10*th April,* 1969. *On the* 18*th July,* 1970 *the Ministry of Irrigation and Power referred to the Tribunal certain matters connected with and relevant to the said water dispute* vide *Reference No.* 4/2/70-*WD.*

The Tribunal has investigated the matters referred to it and has prepared its report setting out the facts as found by it and giving its decision on the matters referred to it.

The unanimous report of the Tribunal is forwarded herewith.

Yours faithfully,

(R. S. BACHAWAT)
Chairman

(D. M. BHANDARI)
Member

(D. M. SEN)
Member

Enclosure: Report (Volumes I—II)

Other Representatives :

1. Shri B. Subramanyam, Chief Engineer.
2. Shri H. N. Ramaswamy, Superintending Engineer.
3. Shri T. C. Ramachandra Rao, Executive Engineer.

The following also appeared in earlier stages :

1. Shri H. C. Kalra, Technical Consultant.
2. Shri M. V. Aswathanarayana Setty, Adviser.
3. Shri B. C. Angadi, Chief Engineer.
4. Shri S. G. Balekundry, Chief Engineer.
5. Shri S. P. Bhat, Chief Engineer.
6. Shri A. V. Shankara Rao, Chief Engineer.
7. Shri S. R. S. Sastry, Chief Engineer.
8. Shri P. R. Ballubbi, Chief Engineer.
9. Shri G. H. Shivashankar, Superintending Engineer.
10. Shri H. S. S. Iyengar, Executive Engineer.
11. Shri B. Narayana Gowda, Executive Engineer.
12. Shri H. D. Aswathanarayanan, Executive Engineer.
13. Shri S. K. Mohan, Under Secretary (Technical).

III. For the State of Andhra Pradesh

Advocates :

1. Shri P. Ramachandra Reddy, Advocate General.
2. Shri Anwarulla Pasha, Advocate.
3. Shri D. V. Sastri, Advocate.

The following also appeared in the earlier stages :

1. Late Shri D. Narasa Raju, Senior Advocate.
2. Shri P. Rami Reddy, Standing Counsel for the Government of Andhra Pradesh in Delhi.
3. Shri A. K. Sen, Senior Advocate, Supreme Court.
4. Shri A. V. Velayudhan Nair, Advocate on Record, Supreme Court.

Other Representatives :

1. Shri Satnarayan Singh, Additional Secretary to Government.
2. Shri Mohd. Ikramuddin Wahaj, Superintending Engineer.
3. Shri Md. Viquaruddin Ahmed, Deputy Director.

The following also appeared in the earlier stages :

1. Shri B. C. Gangopadhyay, Secretary to Government, P.W.D.
2. Shri M. Sitarama Sastri, Special Officer, Water Resources.
3. Shri B. Gopalakrishna Murthy, Special Officer, Water Resources & Chief Engineer, Investigation.
4. Shri K. R. Chudamani, Special Officer, Water Resources & Chief Engineer, Investigation.
5. Shri G. K. S. Iyengar, Superintending Engineer.
6. Shri K. Gundu Rao, Superintending Engineer.
7. Shri Y. Suryaprakasa Rao, Superintending Engineer.
8. Shri P. Rajeswara Rao, Deputy Director.
9. Shri P. Radhakrishna, Deputy Director.

Advisers :

1. Shri A. R. Venkatraman.
2. Shri Moti Ram
3. Shri Mir Jaffer Ali, Chief Engineer (Retired).
4. Shri M. Sitarama Sastry, Special Officer, Water Resources (Retired).

5. Shri B. Gopalakrishna Murthy, Special Officer, Water Resources & Chief Engineer (Retired).
6. Shri K. R. Chudamani, Special Officer, Water Resources & Chief Engineer (Retired).

IV. For the State of Madhya Pradesh

Advocates:

1. Shri Y. S. Chitale, Senior Advocate.
2. Shri M. K. Ramamurthy, Senior Advocate.
3. Shri C. R. Somasekheran, Advocate.
4. Shri Shekhar Bhargava, Advocate.

The following also appeared in the earlier stages:

1. Shri K. A. Chitale, Advocate General.
2. Shri U. N. Bhachawat, Advocate.
3. Shri Ram Panjwani, Advocate.

Other Representatives:

1. Shri Ishwar Das, Secretary, Irrigation Department.
2. Shri K. L. Handa, Irrigation Adviser & Chief Engineer (Major Irrigation).
3. Shri H. V. Mahajani, Superintending Engineer.
4. Shri A. S. Dhagat, Superintending Engineer.

The following also appeared in the earlier stages:

1. Shri S. B. Lal, Secretary, Irrigation Department.
2. Shri K. C. S. Acharya, Secretary, Irrigation Department.
3. Shri Manohar Keshav, Secretary, Irrigation Department.
3. Shri Manish Bahl, Secretary, Irrigation Department.
5. Shri R. K. Tikku, Secretary, Irrigation Department.
6. Shri V. M. Chitale, Deputy Secretary, Irrigation Department.
7. Shri Matin Ahmed, Under Secretary.

V. For the State of Orissa

Advocates:

1. Shri B. M. Patnaik, Advocate General.
2. Shri Govinda Das, Senior Advocate.
3. Smt. Sunanda Bhandare, Advocate.
4. Shri Ananga Patnaik, Advocate.

The following also appeared in the earlier stages:

1. Shri G. Rath, Advocate General.
2. Shri Ashok Das, Advocate General.
3. Dr. L. M. Singhvi, Senior Advocate, Supreme Court.
4. Shri S. C. Chatterjee, Advocate, Supreme Court.
5. Shri M. N. Das, Advocate.
6. Shri B. K. Pal, Advocate.
7. Shri B. B. Mohanty, Advocate.
8. Shri Somareswar Mohanty, Advocate.
9. Shri S. Kar, Advocate.
10. Shri G. Patnaik, Standing Counsel.

Other Representatives:

1. Shri B. Ramadorai, Secretary, Irrigation & Power Department.
2. Shri S. C. Tripathy, Chief Engineer (Irrigation) & Additional Secretary, Irrigation & Power Department.
3. Shri B. Mishra, Chief Engineer (Electricity) & Additional Secretary, Irrigation & Power Department.

4. Shri B. Nayak, Superintending Engineer.
5. Shri M. L. Lath, Executive Engineer.

The following also appeared in the earlier stages:

1. Shri U. C. Agarwal, Secretary, Irrigation & Power Department.
2. Shri N. R. Hota, Secretary, Irrigation & Power Department.
3. Shri P. Tripathy, Secretary, Irrigation & Power Department.
4. Shri Janardhan Tripathy, Chief Engineer (Irrigation).
5. Shri P. R. C. Patra, Chief Engineer (Irrigation).
6. Shri J. M. Patnaik, Chief Engineer, Electricity.
7. Shri D. C. Padhi, Additional Chief Engineer (Irrigation).
8. Shri B. N. Tripathy, Additional Chief Engineer (Irrigation).
9. Shri K. C. Gantayat, Additional Chief Engineer (Electrical Projects).
10. Shri N. Sahoo, Deputy Secretary, Irrigation & Power Department.
11. Shri S. N. Patnaik, Deputy Secretary, Irrigation & Power Department
12. Shri L. Tanga, Deputy Secretary, Irrigation & Power Department.
13. Shri V. R. Rao, Deputy Secretary, Irrigation & Power Department.
14. Shri G. Das, Superintending Engineer.
15. Shri N. K. Mishra, Superintending Engineer.
16. Shri B. C. Patnaik, Superintending Engineer.
17. Shri J. B. Swain, Superintending Engineer.
18. Shri A. K. Mohapatra, Superintending Engineer.
19. Shri T. K. Bose, Superintending Engineer.
20. Shri S. K. Mohanty, Executive Engineer.
21. Shri R. K. Das, Executive Engineer.
22. Shri A. C. Roy, Executive Engineer.
23. Shri B. B. Mohanty, Assistant Engineer.
24. Shri A. Bhattacharjee, Assistant Engineer.
25. Shri P. Rath, Assistant Engineer.

CHAPTER I

GENESIS OF THE DISPUTE

The competitive claims of the riparian States for the utilisation of the waters of Godavari river system have given rise to disputes between them for sharing the water of that system. Before the middle of the nineteenth century, there were tanks and small diversion works in operation, but no major irrigation work had been constructed in the Godavari river basin. The first major irrigation work namely, the Godavari Delta Canal system in the then Province of Madras, was completed in 1877. In the Province of Bombay, the Godavari Canals Ex-Nandur-Madhmeshwar and the Pravaru canals came into operation in 1915-1916 and 1926 respectively. The Wainganga canals of the Central Provinces and the Nizamsagar Project of the State of Hyderabad came into operation in 1923 and 1931 respectively. But the irrigation works were still few in number and the water supply was ample in relation to the demand upon it.

British India was subject to the unitary control of the Government of India and even the princely States were under its paramountcy control. Under the Government of India Act, 1935 water became an exclusive provincial subject and specific provision was made for the settlement of water disputes. Before independence, the Provinces of Madras, Bombay and Orissa, the Central Provinces, the State of Hyderabad and other princely States such as Bastar and Kalahandi had riparian interests in the Godavari basin. In 1950, when the new Constitution came into force, the entire Godavari river basin fell within the territories of the States of Madras, Bombay, Madhya Pradesh, Hyderabad and Orissa. For more intensive development of water resources of the river basin, important schemes such as the Ramapadasagar Dam, Upper Godavari Dam at Kushtapuram, Penganga Dam, Penganga at Amti, Sabari at Guma, Wainganga Reservoir and other projects were proposed by the States of Madras, Hyderabad and Madhya Pradesh.

A conference was held in the Planning Commission, New Delhi, on the 27th and 28th July, 1951 with the representatives of Bombay, Madras, Hyderabad, Madhya Pradesh and Mysore Governments to discuss the utilisation of supplies in the Krishna and Godavari river basins so that an assessment could be made of the relative merits of the projects proposed for inclusion in the second part of the First Five Year Plan. The Governments of Bombay, Madras, Hyderabad, Mysore and Madhya Pradesh who were interested in the supplies of the Godavari river basin were invited to the conference which was attended by their representatives. The State of Orissa which was a co-riparian State and was interested in the sharing of the Godavari water was not invited to the Conference and did not participate therein.

The Central Water & Power Commission prepared a technical note on the utilisation of supplies in the Godavari valley on the basis of the information supplied by the State Governments. The Planning Commission kept a summary record of the discussions at the conference. A memorandum of agreement allocating the flows of the river basin amongst the concerned States was drawn up and annexed to the summary record of discussions.

The memorandum of agreement was divided into three parts. Part I related to the Krishna. Part II related to the Godavari. The dependable annual flow in the Godavari basin based on the recorded gaugings at Dowleshwaram was taken as 2500 T.M.C. The balance flow of 1900 T.M.C. after meeting the requirements of the existing utilisations and the requirements of projects under construction, was allocated as follows : —

	Percent	T.M.C.
Bombay . . .	3	57
Hyderabad . . .	26	494
Madhya Pradesh . .	24	456
Madras	47	893
		1900

It was provided that these percentages would apply whether the supplies were in excess of or short of the dependable flow assumed above. Part III contained general provisions. It was provided that the allocation should be reviewed after 25 years.

On the 31st July, 1951 Planning Commission wrote to the Governments of Bombay, Madhya Pradesh, Madras and Hyderabad enclosing copies of summary record of discussions and memorandum of agreement and asking them to ratify the agreement. Letters of ratifications were sent to the Planning Commission by the Madras Government on the 17th August, 1951, by the Hyderabad Government on the 23rd August, 1951, by the Bombay Government on the 30th August, 1951 and by the Madhya Pradesh Government on the 8th September, 1951.

Apparently the memorandum of agreement drawn up at the inter-State conference in July, 1951, had settled the conflicting claims of the riparian States with regard to the supplies of the Godavari river system for a period of 25 years. But the settlement was more apparent than real. As the State of Orissa, a riparian State, was not a party to the agreement, it was

inevitable that a dispute regarding the validity of the agreement would arise sooner or later. In the meantime, projects were cleared on the assumption that the memorandum of agreement of 1951 was binding upon the States.

Extensive territorial changes were made in the Godavari basin by the Andhra State Act 1953 as from the 1st October, 1953 and the States Reorganisation Act 1956 as from the 1st November, 1956. The new States of Bombay, Mysore, Madhya Pradesh and Andhra Pradesh became the riparian States in place of the old States of Bombay, Hyderabad, Mysore and Madras. The State of Orissa continued to be a riparian State as before. In view of the territorial changes, the Central Water & Power Commission drew up a scheme for re-allocation of the Godavari waters but the scheme was not accepted by the States. An inter-State conference was held on the 24th, 26th and 27th September, 1960 but no settlement could be reached. The State Governments began to raise objections to the clearance of new projects on the basis of the 1951 allocations. In 1960 the State of Bombay bifurcated into the States of Maharashtra and Gujarat and all the Godavari basin areas of the old Bombay State fell within the new State of Maharashtra.

Since independence, many major irrigation works were constructed in the river basin. The construction of the North Godavari Canal (Kaddam) Project of the State of Hyderabad was started in 1949 and it started operation in July 1955 but the dam breached in 1958 and a revised project was restored thereafter. The Gangapur Project Stage I of Maharashtra was constructed during 1948—1957 and Stage II of the project was constructed during 1955—1962. Manar Project was sanctioned in 1959 and Bor Project Stage I was sanctioned in 1960.

By 1960, the five riparian States proposed important schemes for the development of water resources and there were disputes between them relating to the utilisation of the waters of the Godavari river system. In January 1962, the Mysore Government applied to the Central Government for reference of the water dispute to the Tribunal.

On the 1st May, 1961 the Central Government appointed the Krishna Godavari Commission. The Commission found that without further data it was not possible to determine the dependable flow accurately.

They recommended that regular discharge observations should be made at key discharge sites and that river flow data be observed for a number of years.

Furthermore they added that the supplies available in the upper part of the Godavari basin (G1 to G5 sub-basins) are inadequate to meet the demands of the projects put forward by the State Governments. However, the supplies available in the lower part of the Godavari basin (G7 to G12 sub-basins) are in excess of the demands.

They also found that there had not been much development in G7, G8, G9, G11 and G12 sub-basins and there was likely to be surplus waters in G8, G9, G11 and G12 sub-basins and suggested the diversion of surplus waters of the river Godavari into the river Krishna.

On the 23rd March, 1963, the Union Minister for Irrigation and Power stated in the Lok Sabha : "As grave doubts were expressed at the conference about the validity or otherwise of the 1951 Agreement, my Ministry had the whole matter examined by the Ministry of Law at the highest level. Briefly the advice of the Ministry of Law was that the Agreement was legally wholly ineffective and unenforceable. This view was generally supported by the Attorney General of India, who stated that the Agreement must be treated as having become void; if it was not void at least partially *ab initio*". He also stated that projects should not be held up pending final investigations regarding river flow data and diversion of supplies from the Godavari into the Krishna basin.

In the Godavari river system, Maharashtra could go ahead with all their irrigation projects above Pochampad and there should be no difficulty about projects in the Pranhita basin also, but such schemes would normally have to be dove-tailed into a comprehensive Master Plan for the entire Godavari basin and the total estimated withdrawal of these projects would not exceed 400 T.M.C. during the next fifteen years. It was considered that there should be no difficulty in meeting the full requirements of the medium and minor projects contemplated by Mysore during the next fifteen years. Andhra Pradesh could go ahead with the Pochampad project modified as a storage project to utilise 66 T.M.C. with a provision for raising the storage later if necessary and there would be adequate supplies available in Andhra Pradesh below the confluence of the Indravati to enable them to meet requirements of their projects likely to be taken up during the next fifteen years. So far, Madhya Pradesh was utilising 23 T.M.C., their Third Plan schemes contemplated utilisation of only 8 T.M.C., having regard to their topography, there were great possibilities of generating hydropower and there should be no difficulty in meeting their requirements during the next fifteen years. In Orissa, the Machkund Hydro-electric Project was in operation, work on the Balimela Project had been started, their development of irrigation was confined so far to small tanks, diversions and pumping, investigations for a few major irrigation and power projects were in progress and there should be no difficulty in meeting their requirements during the next fifteen years.

Action was also taken on the recommendations of the Krishna Godavari Commission. Investigations concerning suitable Godavari diversion links were made at the technical level but no agreed formula was arrived at.

The Central Government tried their best to settle the dispute by negotiations. Several inter-State conferences were held but the dispute could

not be settled. Fresh applications for reference of the dispute to a Tribunal to be constituted under the Inter-State Water Disputes Act, 1956 were made by the State Governments of Maharashtra, Mysore, Orissa and Madhya Pradesh in 1968. Eventually in April, 1969 the Central Government constituted this Tribunal.

It may be mentioned here that from October, 1960 up to December 1975, the Planning Commission sanctioned the construction of Jayakwadi (Paithan), Upper Godavari, Mula, Purna Irrigation and Hydel Schemes, Manar II, Upper Pus, Aran and Itiadoh Projects in Maharashtra, Bagh Project and Pench Hydro-electric Projects of Maharashtra and Madhya Pradesh, Pochampad Project of Andhra Pradesh, Balimela Hydroelectric Project of Andhra Pradesh and Orissa Potteru (Balimela) Irrigation, Upper Kolab Hydro-electric and Malkingiri (Sathegude) Projects of Orissa.

On the 19th December, 1975 all the five riparian States of Maharashtra, Madhya Pradesh, Orissa, Karnataka and Andhra Pradesh agreed to the sanction and clearances of projects for the utilisation of the waters of the river Godavari and its tributaries in accordance with certain bilateral agreements between them and referred to in Chapter IV of this Report. After the said Agreement, Jayakwadi Stage II, Bor Projects Stage II, Upper Pravara (Mahaldivi), Manjra, Upper Penganga, Upper Wardha and Pench Projects of Maharashtra, Taliperu Projects of Andhra Pradesh, Upper Wainganga Projects of Madhya Pradesh and Upper Indravati and Upper Kolab Projects of Orissa were sanctioned by the Planning Commission.

From time to time numerous other medium projects and minor projects, tanks and small diversions were sanctioned by the Planning Commission and/or by the States concerned for the utilisation of the waters of the Godavari river system.

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From time to time numerous other medium projects and minor projects, tanks and small diversions were sanctioned by the Planning Commission and/or by the States concerned for the utilisation of the waters of the Godavari river system.

CHAPTER II

REFERENCE AND SUBSEQUENT PROCEEDINGS

Reference of the dispute:

On the 10th April, 1969 the Government of India constituted the Godavari Water Disputes Tribunal. On the same day, the Government of India referred to the Tribunal for adjudication the water dispute regarding the inter-State river Godavari and the river valley thereof emerging from the letters of the Mysore Government dated the 29th January, 1962 and 8th July, 1968, the letters of the Maharashtra Government dated the 11h June, 1963 and 26h August, 1968, the letter of the Orissa Government dated the 8th July, 1968 and the letter of the Madhya Pradesh Government dated the 16th October, 1968. In their complaints set forth in the aforesaid letters, all the four State Governments alleged that the Agreement of 1951 was not valid and binding and claimed equitable distribution of the Godavari waters. Madhya Pradesh also objected to the submergence of its territories by the proposed Inchampalli and Ippur Projects of Andhra Pradesh. In their reference, the Government of India requested the Tribunal to consider the representations of some of the States concerning the possibility of diversion of the Godavari waters to the Krishna river and the objections to the diversion by some of the other States.

Subsequent reference:

On the 18th July, 1970 the Government of India, at the request of the Government of Maharashtra, referred to the Godavari Water Disputes Tribunal the dispute concerning the submergence of its territories by the Pochampad, Inchampalli, Swarna and Suddavagu Projects of Andhra Pradesh.

Pleadings:

The parties filed their statements of case which were amended from time to time and rejoinders to them (APG Volumes I to XIII, MRG Volumes I to X, KRG Volumes I to X, MPG Volumes I to X, ORG Volumes I to XI) and also additional statements of case (S. P. Volume I). The pleadings clarify the disputes raised in the complaints made by the States concerned and specify the reliefs claimed by them.

Maharashtra[1] prayed for (a) a declaration that the Agreement of 1951 was void *ab initio* and/or had ceased to be operative, (b) allocation of the equitable shares of the States in the dependable flow of the Godavari basin; (c) suitable provision for the sharing of the excess or deficiency of supplies when they would be more or less than the dependable flow, (d) directions for diversion of the waters of the river Godavari into the Krishna if the waters of the Godavari system were sufficient for the States, and (e) suitable machinery for implementing the orders of the Tribunal.

Mysore[2] prayed for (a) allocation to Mysore, Maharashtra and Andhra Pradesh of their equitable shares in the available waters of the tributary Manjra of the Godavari river determined at 75 per cent dependability ignoring the alleged Agreement of 1951, (b) sharing of waters in years when the available supply would be more or less than the yield determined on the basis of 75% dependability, (c) directions for diversion of surplus waters of the Godavari into the Krishna basin, (d) injunction restraining Andhra Pradesh from abstracting from the Manjra for its Devnur and Pochampad projects and any future projects waters in excess of its equitable share, (e) direction to Maharashtra not to execute on the Manjra any scheme injurious to Mysore and to ensure that the waters from its territory in the Manjra and its tributaries should be free from pollution and (f) suitable machinery for the effective implementation of the decision of the Tribunal.

Madhya Pradesh[3] prayed for (a) a declaration that the Agreement of 1951 was void and unconstitutional and had no effect, (b) a declaration that Madhya Pradesh had the right to appropriate the flowing waters in the Godavari basin to the extent of its contribution within its territory, (c) a declaration that Andhra Pradesh was not entitled to propose Inchampalli or any other scheme likely to submerge Bhopalpatnam and Konta projects proposed by Madhya Pradesh or which had the effect of inundating lands within the territory of Madhya Pradesh, (d) a declaration that the State of Orissa was not entitled to seek diversion of the Godavari water outside the basin from the Upper Indravati Project and (e) a declaration that the Godavari waters could not be diverted outside the basin.

The States of Maharashtra,[4] Mysore,[5] Madhya Pradesh[6] and Orissa[7] denied and disputed the validity of the Agreement of 1951.

Orissa prayed for (a) a declaration that Orissa was entitled to use and control to the best interests of its own people the entire run-off from its own catchments, (b) alternatively a declaration that Orissa had the right to use and control 478.276 T.M.C. for its purposes and that the remainder flowing into the lower riparian States

[1]MRG I pp. 87—90

[2]KRG I pp. 9—10.

[3]MPG I pp. 27—28.

[4]MRG III pp. 1—5, MRG VII pp. 1—3.

[5]KRG II pp. 2—4, KRG III p. 6, KRG VIII pp. 1-2.

[6]MPG I pp. 24—26, MPG III pp. 13—15, MPG IV pp. 1—6.

[7]ORG I pp. 2—4,-

might be utilised by them subject to agreement with Orissa regarding the sharing of benefits from their projects, (c) a declaration regarding the Lower Kolab Project that Orissa and Madhya Pradesh might in accordance with their mutual agreement use, control and distribute water and act in all matters appertaining thereto and (d) alternatively a direction regarding the basis of use, control and distribution of water at the point of the Project.

Andhra Pradesh[*] prayed for a declaration that the Agreement of 1951 was valid and binding upon the party States and for suitable directions for implementation of the agreement. In case the Agreement of 1951 was held to be not valid and binding, Andhra Pradesh prayed for (a) a declaration that in the absence of current meter gauging for a period of at least 10 years, the dependable yield of the river Godavari be taken as 2500 TMC of water for the purpose of clearance of schemes, (b) a direction for ensuring full and timely supplies for projects committed before 1951 on a daily basis as a first priority and for projects committed between 1951 and 1960 on a weekly basis, (c) allocation of its equitable share in the balance dependable yield on a weekly basis, (d) sharing of the excess flows over and above the dependable yield, (e) a direction that in years of low supply, committed utilisation up to 1951 be fully met and the balance be regulated on a pro-rata basis first for utilisation committed up to 1960 with a second priority for new schemes, (f) a direction that the full Godavari (Pochampad) Project as envisaged by the erstwhile Hyderabad Government be allowed to be proceeded with without any restraint and an injunction restraining Maharashtra from utilising Godavari waters at Jayakwadi or any other place above Pochampad in a manner detrimental to the full scope of the aforesaid project, (g) injunction restraining Maharashtra and Mysore from undertaking any new schemes on Manjra above Nizamsagar, (h) a direction for provision of adequate sluices in all dams and anicuts in upper States to ensure timely supplies to Andhra Pradesh, (i) suitable machinery to ensure proper regulation and distribution of the legitimate share of the States, (j) allocation of the Godavari water ignoring any proposed diversion of its waters, and (k) costs and other reliefs.

Issues :

Issues were raised on the 8th January, 1970 and were amended from to time. The issues as finally settled on the 21st October, 1970 are as follows :—

"I. Was the agreement of 1951 between the States other than Orissa regarding allocation of the waters of the river Godavari valid and enforceable? Is it still subsisting and operative and binding upon the States concerned in the present reference? If so, with what effect? Is there any breach of agreement as alleged?

Sub-issues :

(1) Was the agreement invalid inasmuch as Orissa was not a party to it?

(2) Was the agreement in conformity with Article 299 of the Constitution? Was it within the purview of the Article?

(3) Was the agreement inequitable or arbitrary or based on inadequate data? If so, with what effect?

(4) Did the agreement on its true construction allocate waters for specific projects? Have some of the projects been abandoned? If so, has the agreement become void?

(5) Has the agreement ceased to be operative on the re-organisation of the States?

(6) If the agreement is binding what reallocation of waters, if any, should be made in view of the reorganisation of States?

(7) Is there any breach of the agreement as alleged by Andhra?

(8) Is the validity of the agreement dependent upon the validity of the Krishna agreement?

II. Do the waters flowing through any State belong exclusively to that State? If so, with what effect?

III. What directions, if any, should be given for the equitable apportionment of the beneficial uses of the waters of the Godavari and the river valley?

Sub-issues :

(1) On what basis should the available waters be determined?

(2) How and on what basis should the equitable apportionment be made?

(3) What projects and works in operation or under construction, if any, should be protected and/or permitted ? If so, to what extent?

(4) Should diversion or further diversion of the waters outside the Godavari drainage basin be protected and/or permitted? If so, to what extent and with what safeguards? How is the drainage basin to be defined?

(5) Should any preference or priority be given to Irrigation over production of power? Should any preference or priority be given to any other use?

(6) Has any State alternative means of satisfying its needs? If so, with what effect?

(7) Is the legitimate interest of any State affected or likely to be affected prejudicially by the aggregate utilisation and requirements of any other State?

(8) What machinery, if any, should be set up to make available and regulate the allocations of waters, if any, to the

[*]APGI pp. 76—79. AIC III pp. 42—49.

States concerned or otherwise to implement the decision of the Tribunal.

IV. (a) Are (i) Inchampalli and (ii) Ippur (Polavaram) Projects likely to submerge the territories of Madhya Pradesh? If so, to what extent and with what effect?

(b) Are (i) Pochampad, (ii) Swarna, (iii) Suddavbagu and (iv) Inchampalli projects, as proposed by Andhra Pradesh, likely to submerge the territories of Maharashtra? If so, to what extent and with what effect?

(c) Is it lawful for Andhra Pradesh to execute projects likely to submerge the territories of other States without their prior consent?

V. Is it possible to divert waters from the river Godavari to the river Krishna? Should such diversion be made, and if so, when, by whom, in what manner and at whose cost? Is the Tribunal competent to adjudicate on these questions?

VI. To what relief are the parties entitled?"

Alteration of name of the State of Mysore:

The Mysore State (Alteration of name) Act, 1973 provides for alteration of name of the State of Mysore. Under Section 2 of the Act, with effect from the 1st November, 1973, the State of Mysore shall be known as the State of Karnataka. Section 8 of the Act provides that, in pending legal proceedings, the State of Karnataka shall be deemed to be substituted for the State of Mysore.

Units of Measurement:

The old records used the British system of units, the new records have mostly used the metric system of units and the data supplied by the parties have used both systems of units. As we have to refer to the old as also the new records and the data supplied by the parties, both the systems have to be necessarily used in this judgment. A conversion table is given in Appendix 'A' in Volume II of this Report.

Exhibits and Documents:

The Tribunal directed that—

(i) the volumes containing the pleadings, statements of case and rejoinders of the parties will be marked as "G" such as "APG".

(ii) The supplementary pleading volumes will be marked as "SP(G)".

(iii) The volumes containing documents relied on by the parties will be marked as "DG" such as "APDG".

(iv) The Project Reports and notes filed by the parties will be marked as "PG" such as "APPG".

(v) The documents called by the Tribunal from the Central Water and Power Commission will be marked as "CWPC(G)".

The parties filed numerous exhibits.

Directions were given by the Tribunal for filing by each party-State lists of documents relied on by it and the parties from time to time filed several lists of documents mentioning in each list serially the documents relied on by it and praying that the documents be admitted in evidence. Each item in the list was placed for directions before the Tribunal. From time to time the Tribunal gave directions either receiving or refusing to receive the documents in evidence. The documents received in evidence were marked as exhibits. Some of the items in the lists were not pressed by the parties and were disposed of accordingly.

The exhibits filed by the parties are in APDG, MRDG, KRDG, MPDG and ORDG volumes.

The parties filed project reports and notes which were exhibited and which are in APPG, MRPG, KRPG, MPPG and ORPG volumes.

Some documents called for by the Tribunal will be found in CWPC(G).

The parties filed numerous civil miscellaneous petitions (CMPs). The Tribunal passed miscellaneous orders on civil miscellaneous petitions and lists of documents.

None of the parties adduced any oral evidence. In April, 1971, Counsel for all the party-States agreed that Krishna case would be decided separately from the Godavari case. Parties to both Krishna and Godavari water disputes had also agreed subsequently that the Krishna case should be heard first and the Tribunal proceeded to do so. With the Report of the Krishna Tribunal having been submitted to the Central Government on the 24th December, 1973 the Godavari Tribunal decided to take up the Godavari case in January, 1974. The first opening address in the Godavari case commenced on the 26th March, 1974 and concluded on 10th May, 1974. In the meetings of the Tribunal held on the 4th November, 1974, 9th December, 1974 and 20th January, 1975 the State of Andhra Pradesh opposed hearing of the Godavari case till after the references, received in the Krishna case, under Section 5(3) of the Inter-State Water Disputes Act, 1956 were disposed of and the decision thereon was finalised. Because of certain unforeseen developments like sudden death of Shri Justice Shamsher Bahadur, one of the members of the Krishna/Godavari Tribunal, and the time taken in the appointment of his substitute, the Krishna Tribunal could submit its Further Report only on the 27th May, 1976.

On the 19th December, 1975 all the five States signed an agreement relating to the sanction and clearance of projects in accordance with certain bilateral agreements entered into between them and annexed thereto. This agreement together with its annexures was filed

before the Tribunal on the 12th July, 1976. This agreement set the ball rolling for settling the disputes between the parties by negotiations.

The State of Maharashtra commenced its opening address for the second time on the 6th September, 1976 and concluded it on the 24th September, 1976. The State of Karnataka was to open its address for the second time on the 12th October, 1976 but on that day the Tribunal took up for consideration the application made by the State of Andhra Pradesh for adjournment on the ground that the States of Madhya Pradesh, Maharashtra, Orissa and Andhra Pradesh were conducting negotiations in order to settle some of the points of mutual interest. After hearing all the parties, the case was adjourned till the 17th January, 1977. Meanwhile, the Tribunal went on a tour of inspection of the Godavari basin from the 22nd November, 1976 to 26th December, 1976. The details of the places and projects visited by the Tribunal are given in Appendix 'D' in Volume II of this Report.

It appears that while the parties were tenaciously keen to place their respective cases before the Tribunal, they were making all possible efforts to reach bilateral and multilateral agreements on several points of dispute. From time to time, this Tribunal allowed a long time to the party-States to settle their disputes amicably with the assistance of counsel. There was complete disclosure of all relevant documents by the party-States and after a thorough and searching inquiry, the relevant documents, in the possession of the party-States or the Central Water & Power Commission and other authorities, were brought before the Tribunal and were marked as exhibits. After intensive study of these documents the parties well knew all the facts relevant to the equitable apportionment of the Godavari waters. The representatives of all the parties accompanied the Tribunal when it made an intensive tour of the Godavari valley in all the five States and saw for themselves the condition of the areas visited, their need for water and the project sites. During the tour the representatives of the parties discussed and explored the possibilities of a negotiated settlement of the river water disputes. In this background helpful suggestions and encouragements with regard to the settlement of disputes were made by the Tribunal whenever they were approached in this matter by counsel for the States. From time to time, certain agreements settling the disputes were reached between the parties and filed before the Tribunal. Thereafter, certain submissions were made by the parties or some of them. These agreements and submissions are noted and discussed in Chapter IV of this Report.

We may also mention that on the 2nd February, 1979 all inter-locutory applications or any item in the lists of documents, if any pending before the Tribunal, were not pressed by the party-States and were disposed of accordingly. On the same date, the representative of the State of Karnataka also appended his signature on the map of the Godavari basin which had earlier been signed by the representatives of the other four States. With the consent of all the parties, the map was received in evidence. Thereafter, the party-States agreed to the colour scheme on a copy of the blue-print of the original may already signed by them. This coloured map was placed before the parties and approved by them on the 9th April, 1979. A copy of this may is appended in Volume II (Part II) of this Report.

CHAPTER III

THE GODAVARI RIVER AND RIVER BASIN

PART I

THE GODAVARI RIVER SYSTEM

The Godavari :

The Godavari is the largest river in South India and the second largest in the Indian Union. It rises in the Sahyadris, at an altitude of 3,500 feet above mean sea level near Trimbakeshwar in the Nasik district of Maharashtra and flows across the Deccan Plateau from the Western to the Eastern Ghats. Rising in the Western Ghats about 50 miles from the shore of the Arabian Sea, it flows for a total length of about 910 miles in a general south-eastern direction through the States of Maharashtra and Andhra Pradesh before it joins the Bay of Bengal, about 60 miles to the south of Rajahmundry.

After passing through the dam site of Gangapur Project, upstream of Nasik City, about 20 miles from its source and further traversing a distance of about 20 miles, the Godavari receives the waters of the Darna from its right bank. A short distance lower down, the Kadwa joins the Godavari from its left. The river has already got out of the high rainfall zone near the Western Ghats and there is no further significant contribution to the river flow until about 135 miles from its source when it receives the combined waters of the Pravara and the Mula which rise in the hills of Akola. About 28 miles lower down, the Paithan Dam (Jayakwadi project) is located. About 96 miles further lower down, the Godavari receives the waters of Sindphana river from its right bank and thereafter at about 345 miles from its source, while still in Maharashtra, it receives the combined waters of the Purna and Dudhna rivers from the left. About 431 miles from its source, just at the border between Maharashtra and Andhra Pradesh, the Godavari receives the united waters of Manjra (Manjira), Manar and Lendi rivers from its right. At this point, the Godavari runs at an elevation of about 1060 feet and has again entered a high rainfall zone of about 40 inches and more. The average bedfall of the river in Maharashtra is about 5.6 ft. per mile. The river now flows further east through Andhra Pradesh. At about 475 miles from its source the Pochampad dam site is located. The river bed level at Pochampad is about 982 feet above the mean sea level and the bedfall between the Manjra confluence and Pochampad is about 1.8 ft. per mile.

After flowing for a distance or about 175 miles in Andhra Pradesh and about 606 miles from its source, the Godavari receives the waters of the Maner on the right bank. About 620 miles from its source, the river Pranhita, conveying the united waters of the Penganga, the Wardha and the Wainganga which drain Nagpur and the southern slopes of the Satpura Range, falls into the Godavari from its left bank, about 189 miles below the Manjra confluence and about 290 miles above its outfall in the Bay of Bengal. The elevation at the confluence of Pranhita is about 312 feet above the mean sea level. The average fall of the river Godavari between the confluence of the Manjra and that of the Pranhita is about 3.9 feet per mile.

After the confluence of the Pranhita, the Godavari forms the boundary of Maharashtra and Andhra Pradesh for about 30 miles at the end of which it receives the waters of Indravati river on the left bank. After its confluence with the Indravati, the Godavari forms the boundary of Madhya Pradesh and Andhra Pradesh for about 15 miles and then further flows through Andhra Pradesh. Both the Pranhita and the Indravati are major rivers in their own right. The last major tributary of the Godavari is the Sabari which falls into the Godavari about 788 miles from its source and about 60 miles above Rajahmundry. Shortly after the confluence of the Sabari, the Godavari begins to wind amongst the spurs of the Eastern Ghats which gradually close in on it till it has to force its way through a picturesque gorge with a width of only 600 to 900 feet against a width of nearly one mile at Polavaram 20 miles below the gorge.

About 850 miles from its source, the Godavari flows past Dowlaishwaram anicut from which the Delta Canals take off. The elevation at this point is about 30 feet above the mean sea level. The fall of the river bed between the Pranhita confluence and the Dowlaishwaram anicut is about 1.2 feet per mile. Beyond this point streching away on both sides of the river lies the wide alluvial plain formed by the deposit of silt through the centuries and bearing the name of the Godavari Delta. At this point, the river bifurcates into two major channels called the Vasishta and Gautami. Each of these channels, after flowing for a few miles bifurcates into two branches before joining the Bay of Bengal.

During the monsoon season the Godavari occasionally swells into floods. The maximum flood so far recorded at Dowlaishwaram occurred on the 15th August 1953 and was 28,30,000 cusecs. The minimum discharge recorded is of the order of 1,500 cusecs.

Almost two-thirds of the catchment of the Godavari drains into the river in the lowest one-third of its length. The Godavari drains only a short length i.e. about 80 miles of the Western Ghats. It has, however, a large catchment of medium to high rainfall in the north-east of its basin.

The Pravara :

The river Pravara rises in the Western Ghats at an altitude of about 3,500 feet in Ahmednagar

district of Maharashtra and flows in an easterly direction for about 130 miles before falling into the Godavari about 6 miles north of Newasa, at an altitude of about 1,500 feet. The average bed-fall of the river is thus 15.4 feet per mile. The headworks of Pravara canals are located at Ozar about 64 miles from its source. About 110 miles from its source, the Pravara receives the waters of the Mula from its right bank.

The Mula rises on the eastern slopes of the Sahyadris between Ratangad and Harichandragad in Ahmednagar district of Maharashtra at an elevation of about 3,000 feet. It joins the Pravara near Newasa village at an elevation of about 1,600 feet. The total length of the Mula is about 90 miles from its origin upto its confluence with the Pravara. About 65 miles from its source, the river flows past the Mula dam.

The Pravara has a drainage area of 2,524 sq. miles lying entirely in Maharashtra. Its principal source of supply is about 20 miles length of the western ghats. There are two distinct rainfall zones in the sub-basin; the Western Ghats area has high rainfall above 40 inches and the rest of the sub-basin has low rainfall less than 24 inches annual.

The Purna :

The river Purna rises in the Ajanta range of hills in Aurangabad district of Maharashtra at an altitude of about 2,750 feet and flows in south-easterly direction before joining the Godavari at an elevation of 1,150 feet, about 40 miles upstream of Nanded. The average bed-fall of the river from its source to the confluence with the Godavari is about 6.9 feet per mile. The total length of the Purna is 232 miles. About 205 miles from its source the Purna receives the waters of the kapra on its right bank and about 5 miles lower down, it receives the waters of the Dudhna from its right bank. The Dudhna is the longest tributary of the river Purna. The Purna (Yeldari) Hydel Project and the Sidheshwar Project are located at distances of about 144 miles and 176 miles from its source respectively.

The total catchment area of the Purna and its tributaries is 6,015 sq. miles lying entirely in Maharashtra in a rainfall zone of about 28 inches to 35 inches annual.

The Manjra :

The Manjra rises in the Balaghat range of hills in Bhir district of of Maharashtra at an altitude of about 2,700 feet. The river flows in general east and south-easterly direction for about 306 miles through Osmanabad district of Maharashtra, Bidar district of Karnataka and Medak district of Andhra Pradesh until it changes its direction northward near Sangareddi. After flowing about 150 miles in Maharashtra, the river forms the boundary between Maharashtra and Karnataka for about 10 miles. It then runs through Bidar district for some distance before negotiating a U-turn and forming once again the boundary between Maharashtra and Karnataka for about 12 miles. The Karanja joins the Manjra in Karnataka at the bend of the U-turn. The river runs in Karnataka for about 72 miles in two stretches. The Manjra then forms boundary between Karnataka and Andhra Pradesh for about 14 miles. After flowing for 44 miles further from Sangareddi, it enters Nizamabad district of Andhra Pradesh. For another 56 miles, it flows in Andhra Pradesh and then left bank of the river forms the boundary between Maharashtra and Andhra Pradesh for about 20 miles. At about 375 miles from source, it flows past the Nizamsagar dam in Nizamabad district. The total length of the river from source to its confluence with the Godavari is about 426 miles. The Manjra joins the Godavari at an altitude of 1,060 feet. The average bed-fall of the river is thus about 3.9 feet per mile.

The principal tributaries of the Manjra joining it from its right bank are the Tirna in Osmanabad district of Maharashtra joining at about mile 160, the Karanja in Bidar district of Karnataka joining at mile 174 and the Haldi in Medak district of Andhra Pradesh joining at about mile 346. The principal left bank tributaries are the Lendi and the Manal both joining the Manjra on the boundary between Maharashtra and Andhra Pradesh at about mile 406 and mile 412 respectively.

The Karanja* rises near Khir village in Medak district of Andhra Pradesh at an altitude of about 2,200 feet and flows east to west almost parallel to the river Manjra. After flowing for about 17 miles in Andhra Pradesh, it forms the boundary between Andhra Pralesh and Karnataka for about 10 miles. It then flows in Karnataka for a length of 46 miles and joins the Manjra at Narda-Sangam. The total length of the Karanja from its source to its confluence with the river Manjra is about 73 miles.

The Manjra and its tributaries have a total catchment area of 11,909 sq. miles lying in Maharashtra, Karnataka and Andhra Pradesh. This is nearly one-tenth of the Godavari catchment. The catchment falls in the rainfall zone of about 25 inches annual in the upper reaches of the river gradually increasing to about 40 inches annual towards the lower end.

The Maner :

The river Maner rises at an altitude of about 1,750 feet in Nizamabad district of Andhra Pradesh. After flowing in south-easterly direction for about 20 miles, it takes a turn and flows further in Karimnagar district of Andhra Pradesh in a general north-easterly direction for another 120 miles to join the Godavari at an altitude of about 345 feet. The average bed-fall of the river is about 10.0 feet per mile. After the initial length of about 20 miles, the river flows past the existing Upper Manner dam. The main

*Karnataka wanted to mention the Karanja dam project presently under construction on the Karanja.

tributaries of the Maner are the Kudaliar and the Mohedamada river joining the Maner on its right bank at miles 20 and 65 respectively.

The catchment area of the Maner with all its tributaries is 5,060 sq. miles and lies in the rainfall zone (annual) of about 32 inches to 40 inches. The entire catchment of the Maner lies in Andhra Pradesh.

The Pranhita :

The Pranhita with its three principal branches, the Penganga, the Wardha, and the Wainganga is the largest tributary of the Godavari.

The Penganga :

The Penganga, a tributary of the Wardha, rises at an altitude of 2,250 feet in the Buldhana range in Maharashtra. After flowing for an initial length of about 155 miles in a general south-easterly direction, the river takes an 'S' turn and then further flows in easterly direction for about 100 miles to join the river Wardha at an elevation of 570 feet. The total length of the Penganga from its source to its confluence with the Wardha is about 400 miles. The average bed-fall of the river from its source to the confluence with the Wardha is 4.2 feet per mile. The uppermost reach of about 100 miles is hilly. The river forms the boundary of Akola and Parbhani districts for a few miles and then the boundary of Yeotmal and Nanded districts on the 'S' curve portion where it passes through dense forests of Yeotmal and Nanded districts. After the 'S' curve it forms the boundary of Maharashtra and Andhra Pradesh for a length of about 40 miles.

The river Kiodoh joins the Penganga from its right bank at about 189 miles from its source. The Pus river joins the Penganga from its left bank at about 270 miles from its source. The combined waters of the Arna and the Aran join at about 300 miles and the Waghari river joins at about 315 miles from left bank. After flowing for a total length of 400 miles, it joins the Wardha river near Ghughus about 20 miles west of Chandrapur. The catchment area of the Penganga with all its tributaries is 9,227 sq. miles lying mostly in Maharashtra. A small catchment area lies in Andhra Pradesh. The annual rainfall varies from about 32 inches in its upper reaches to about 44 inches near its confluence with the Wardha.

The Wardha

The river Wardha rises at an altitude of 2,550 feet in Betul district of Madhya Pradesh and after flowing for a distance of about 26 miles from its source, it forms boundary of Madhya Pradesh and Maharashtra for a length of 10 miles and then enters Maharashtra. After flowing further for a distance of 292 miles in a general south-easterly direction, it joins the Wainganga at an elevation of 480 feet. For the last 26 miles of its length, it forms the boundary between Maharashtra and Andhra Pradesh. The average bed-fall of the river is about 6.3 feet per mile. The major tributaries of the Wardha are the Wunna from its left which joins at about mile 135 and the Bembla and the Penganga from the right bank joining at mile 185 and mile 240 respectively. The catchment of the river mostly lies in Maharashtra. The total catchment area of Wardha river is 9,300 sq. miles and lies in rainfall zone of about 34 inches to about 52 inches annual.

The Wainganga :

The river Wainganga, rising at an altitude of about 2,100 feet in Seoni district of Madhya Pradesh, flows north for a short distance, then east and finally south to form a great loop. After flowing for a total length of 170 miles in Seoni and Balaghat districts of Madhya Pradesh, it forms the boundary between Madhya Pradesh and Maharashtra for about 20 miles. It then continues to flow due south in Maharashtra for another 188 miles and is joined by the Wardha. The combined waters of the Wainganga and the Wardha are now called Pranhita river. The elevation of the Wainganga at the confluence of the Wardha is 480 feet. The average bed-fall of the Wainganga is about 4.3 feet per mile. In Madhya Pradesh the Wainganga receives from its right the waters of the Sagar, the Hirri and the Chandan rivers at miles 75, 110 and 190 respectively. It flows past the Wainganga weir near Dhuti at about 115 miles from its source, where from the Wainganga right bank canal takes off. Roughly at about the point where it touches the boundary of Madhya Pradesh and Maharashtra, the Wainganga receives the waters of the Bagh from its left bank and the waters of the Bawanthari from its right bank before it enters Maharashtra.

The Bagh is one of the major left bank tributaries of the Wainganga. It rises at about 5 miles east of Chinchgarh in Durg district of Madhya Pradesh at an elevation of 1,588 feet. The river flows generally in north and north-westerly direction for a total length of 78 miles. It forms boundary between Madhya Pradesh and Maharashtra in two stretches for a total length of 32 miles. For the remaining 46 miles it flows in Maharashtra. It joins the Wainganga at about 78 miles from its source at an elevation of 900 feet. About 16 miles from its source, the river flows past the dam site of Bagh Project near Sirpur on the boundary of Madhya Pradesh and Maharashtra. The Bagh Project is the joint venture of Madhya Pradesh and Maharashtra.

The Bawanthari is a right bank tributary of the Wainganga. It originates in the Khurai forests of Madhya Pradesh at an altitude of 1,500 feet and after flowing in Madhya Pradesh for 16 miles, it enters Maharashtra near village Lodha in Bandhara district. Throughout its length in Maharashtra, till it joins the Wainganga, the Bawanthari forms the boundary between Madhya Pradesh and Maharashtra. The total length of the Bawanthari from its origin to its confluence with the Wainganga is about 64 miles,

It flows in southern direction for the first 32 miles and then for a short distance it flows in south-east direction. Thereafter, it takes a sharp loop and changes its course to an easterly direction. The river thereafter continues its course more or less in easterly direction till it joins the Wainganga. After entering Maharashtra territory, the Wainganga receives on the right bank the combined waters of the Kanhan and its tributary the Pench at about 235 miles from its source.

The Kanhan is one of the major right bank tributaries of the Wainganga, rising at an elevation of 2,830 feet in Chhindwara district of Madhya Pradesh. After flowing for 98 miles in Madhya Pradesh, the river continues to flow in south-easterly direction. Before entering Maharashtra, it forms the boundary of Madhya Pradesh and Maharashtra for about 4 miles. At about 126 miles from the source, its main tributary the Pench joins from the left.

The Pench is the largest tributary of the Kanhan on its right bank. The Pench rises in Chhindwara district of Madhya Pradesh about 12 miles southeast of the Mahadev hills in Satpura ranges at an elevation of 3,500 feet. During the initial course for a few miles, the Pench travels through the hilly forest-clad region of Chhindwara district meandering in the easterly direction. The river then turns towards south, forms the big loop after about 80 miles from its source and then flows in a more or less north-south direction. After flowing for a length of 130 miles in Madhya Pradesh, it forms the boundary of Madhya Pradesh and Mahartshtra for a length of about 6 miles. It then enters Maharashtra near Totaladoh, the dam site of the Pench Hydro-electric Project, a joint venture of Madhya Pradesh and Maharashtra. The Pench joins the Kanhan about 170 miles from its source at an elevation of 900 feet.

Further south, the Wainganga receives the waters of the Garhvi from its left and the Andhari from its right at about miles 300 and 365 respectively from its source. The combined waters of the Wainganga and the Wardha, now called the Pranhita, flow for 70 miles along the boundary of Maharashtra and Andhra Pradesh before joining the Godavari at an elevation of 312 feet.

The major tributaries of the Pranhita are the Dina on the left bank in Maharashtra and the Paddavagu on the right bank in Andhra Pradesh, joining at miles 393 and 400 respectively. The catchment area of the Pranhita and of all its branches is 42,115 sq. miles which is a little more than one-third of the entire Godavari catchment. It lies mainly in Madhya Pradesh and Maharashtra in rainfall zone of about 36 inches to 63 inches annual.

The Indravati :

The river Indravati rises at an altitude of 3,000 feet near Thuamal Rampur in Kalahandi district of Orissa on the western slopes of the Eastern Ghats. It flows westward through Kalahandi and Koraput districts of Orissa for a length of 102 miles. After forming the boundary between Orissa and Madhya Pradesh for a length of 6 miles, it enters Bastar district of Madhya Pradesh. After flowing 145 miles, it then turns south and flows along the boundary of Madhya Pradesh and Maharashtra for about 80 miles. It joins the Godavari about 333 miles from its source and at an elevation of about 270 feet. The junction of the Indravati and the Godavari happens to be the junction of the boundaries of the three States viz. Maharashtra, Andhra Pradesh and Madhya Pradesh. The average bed-fall of the river is about 8.2 feet per mile.

The important right bank tributaries of the Indravati are the Bhaskel, the Narangi, the Boardhig, the Nibra, the Kotri and the Bandia joining the Indravati at miles 108, 150, 170, 268 and 285 respectively. The important left bank tributary is the Nandiraj (Berudi) joining at about mile 235.

During its course of nearly 333 miles, the Indravati drains an area of 16,087 sq. miles in the States of Orissa, Madhya Pradesh and Maharashtra in a rainfall zone of about 55 to 63 inches annual.

The Sabari :

The Sabari also known as the Kolab, is the last important tributary of the Godavari. The Sabari rises at an altitude of 4,500 feet in the Sinkaram hill range of the Eastern Ghats in Koraput district of Orissa. After flowing for an initial short distance in a north, north-westerly and westerly direction, it turns south and flows in south-westerly direction up to its junction with the Godavari. At mile 48 from source, it flows past the Upper Kolab dam site in Orissa.

It flows in Koraput district of Orissa and Bastar district of Madhya Pradesh for a total length of about 239 miles and then enters Andhra Pradesh to flow for a further length of about 21 miles before joining the Godavari. The total length of the Sabari is about 260 miles from its source. It joins the Godavari about 60 miles upstream of Rajahmundry at an elevation of 83 feet. The average bed-fall of the river is about 17 feet per mile.

The Sileru (also known as Machkund river in initial reaches) is the most important left bank tributary of the Sabari. The Sileru rises at an altitude of 4,000 feet in the Eastern Ghats and flows for a length of about 175 miles before joining the Sabari at an elevation of about 100 feet, 21 miles above the Sabari confluence with the Godavari. In its initial course of about 45 miles, the Sileru flows in a north-westerly direction and then turns to south-westerly direction to flow roughly along the boundary of Orissa and Andhra Pradesh to join the Sabari on its left bank at the junction of the boundaries of Madhya Pradesh, Orissa and Andhra Pradesh. In its upper reach, the Sileru (Machkund) flows past the Jalaput dam of the Machkund Hydro-electric Scheme

on the boundary of Orissa and Andhra Pradesh, 60 miles from its source. Further 40 miles lower down, the river flows past the Balimela dam. Both these projects are joint ventures of Orissa and Andhra Pradesh. Eight miles down stream of Balimela dam the river flows past the Guntewada weir of Upper Sileru Hydro-electric Scheme. Another 20 miles lower down viz., 128 miles from source, Donkarai dam of Lower Sileru Hydro-electric Project is located. Both these projects are of Andhra Pradesh.

The Potteru is another important tributary of the Sabari. It rises at an altitude of about 3,000 feet in Koraput district of Orissa. The tail race waters of the Balimela power house (Orissa) which is located in the Potteru valley are picked up at the Potteru barrage. The Potteru joins the Sabari at an elevation of about 218 feet. The entire catchment of the Potteru lies in Orissa

The catchment area of the Sabari and of its tributaries is 7,887 sq. miles and lies mostly in Orissa and partly in Madhya Pradesh and Andhra Pradesh in a rainfall zone of about 55 inches to 63 inches annual.

General :

Greater portion of the area drained by the Godavari receives much more rain during the south-west monsoon (June to September) than in the north-east monsoon. The river, therefore, brings down most of its water between June and September. The water level begins to rise at Dowlaishwaram some ten days after the south-west monsoon sets in at Bombay, usually about the middle of June and it is almost continuously high till the end of September. High floods during October are rare. The flood season ends by October but during the next two months there are occasional freshets caused by north-east monsoon over that part of the catchment which comes under its influence. After the north-east monsoon rains have ceased, the river gradually goes down.

Inter-State Rivers :

The inter-State rivers of the Godavari river system are set out in the statement appended herewith.

Inter-State Rivers

Sl. No.	Name of the river	States through which the river passes
1	Godavari	Maharashtra, Andhra Pradesh and Madhya Pradesh.
2	Manjra (Godavari)	Maharashtra, Karnataka and Andhra Pradesh
3	Karanja (Manjra) ;	Karnataka and Andhra Pradesh.
4	Devan (Manjra)	Maharashtra and Karnataka
5	Hibalmandi (Manjra)	do.
6	Nalawag (Manjra)	Karnataka and Andhra Pradesh.
7	Kanlas (Manjra)	Maharashtra, Karnataka and Andhra Pradesh.
8	Lendi (Manjra)	Maharashtra and Andhra Pradesh.
9	Madhura (Karanja)	do.
10	Siddha (Godavari)	do.
11	Suvarna (Godavari)	do.
12	Penganga (Wardha)	do.
13	Nallavagu (Penganga)	do.
14	Wardha (Pranhita)	Maharashtra, Madhya Pradesh and Andhra Pradesh.
15	Churaman (Wardha)	Maharashtra & Madhya Pradesh.
16	Sakti (Wardha)	do.
17	Dhawagir (Wardha)	do.
18	Paknadi (Wardha)	do.
19	Maru (Wardha)	do.
20	Narha (Wardha).	do.
21	Charghar (Wardha)	do.
22	Deo (Charghar)	do.
23	Chikhal Sanghi (Charghar)	do.
24	Madar (Jam)	do.
25	Lanri (Jam)	do.
26	Wainganga (Pranhita)	do.
27	Bawanthari (Wainganga)	do.
28	Kanhan (Wainganga)	do.
29	Bagh (Wainganga)	do.
30	Kobragarhi (Wainganga)	do.
31	Telia (Bawanthari)	do.
32	Khekra (Kanhan)	do.
33	Kolar (Kanhan)	do.
34	Pench (Kanhan)	do.
35	Lamanan (Bagh)	do.
36	Palukasa (Bagh)	do.
37	Eastern Bagh (Bagh)	do.
38	Kalisarar (Bagh)	do.
39	Kuadhas (Bagh)	do.
40	Tipagarhi (Kobragarhi)	do.
41	Chiklivagu (Peddavagu)	Maharashtra and Andhra Pradesh.
42	Pranhita (Godavari)	do.
43	Kataur (Kathani)	Madhya Pradesh and Maharashtra.
44	Talperu (Godavari)	Madhya Pradesh and Andhra Pradesh
45	Gubbalvagu (Godavari)	Andhra Pradesh and Madhya Pradesh.
46	Ramamidivagu (Godavari)	do.
47	Dhabbathogu (Godavari)	do.
48	Peddavagu (Godavari)	do.
49	Peddavagu (Godavari), last from left before the Sabari.	do.
50	Chinnagubbalvagu (Gubbalvagu).	do.
51	Indravati (Godavari)	Orissa, Madhya Pradesh and Maharashtra.
52	Bhaskel (Indravati)	Orissa and Madhya Pradesh
53	Narangi (Indravati)	do.
54	Boardhig (Indravati)	do.
55	Nibra (Indravati)	Maharashtra and Madhya Pradesh.
56	Kotri (Indravati)	do.
57	Bandia (Indravati)	do.
58	Komra (Indravati)	do.

Sl. No.	Name of the river	States through which the river passes
59	Markandi (Narangi)	Orissa and Madhya Pradesh
60	Jarandi (Narangi)	do.
61	Korandi (Bhaskel)	do.
62	Dhobighat (Boardhig)	do.
63	Lahir (Nibra)	Maharashtra and Madhya Pradesh
64	Bhurke (Kotri)	do.
65	Kudal (Bandia)	do.
66	Kaneli (Bandia)	do.
67	Gowar (Bandia)	do.
68	Kutgaon (Bandia)	do.
69	Petpula (Markandi)	Orissa and Madhya Pradesh
70	Phuldahani (Petpula)	do.
71	Sabari(Godavari)	Orissa, Madhya Pradesh and Andhra Pradesh.
72	Bhimsen (Sabari)	Orissa and Madhya Pradesh
73	Akkuru N. (Sabari)	do.
74	Chandra Vanka (Sabari)	Madhya Pradesh and Andhra Pradesh
75	Sivu Nadi or Dorli N. (Sabari).	Madhya Pradesh and Orissa
76	Chakabuka (Bhimsen)	Do.
77	Sileru (Sabari)	Orissa and Andhra Pradesh
78	Gurepreo (Sileru)	do.
79	Patal (Sileru)	do.
80	Taburu Kalava (Sileru)	do.
81	Kumda Gedda (Sileru)	do.
82	Pitta Gedda (Sileru)	do.
83	Budu Gedda (Gurepreo)	do.
84	Ruma Revu (Gurepreo)	do.

NOTE :—1. The name of the principal stream to which the inter-state river is tributary is indicated in the bracket.

2. This list is not exhaustive.

PART II

THE GODAVARI RIVER BASIN

Location :

The Godavari basin lies between latitude 16°—16′N to 22°—43′N and longitude 73°—26′E to 83°—7′E. It is roughly triangular in shape with the main river itself running practically along the base of the triangle. The basin extends over an area of 1,20,777* sq. miles which is nearly 10 per cent of the total geographical area of India. The basin comprises areas in the States of Maharashtra, Andhra Pradesh, Madhya Pradesh, Orissa and Karnataka.

Boundaries :

The Western Ghats, running parallel to the coast form a continuous water-shed on the west.

On the north, the basin is bounded by the Satmala hills, the Ajanta range and the Mahadeo hills.

The basin is bounded on the east by Eastern Ghats and the Bay of Bengal. The Eastern Ghats are not so well defined or continuous as the Sahyadri range on the west. They rise from the plains of East Godavari and Visakhapatnam to the level of the table land of Jeypore.

On the south, the Balaghat and the Mahadeo ranges stretching forth from the eastern flank of the Western Ghats and the Anantgiri and other ranges of the hills and ridges separate the Godavari basin from the Krishna basin.

A map of Godavari basin is appended to this Report.

Sub-Basins :

The Godavari basin may be divided into the following twelve sub-basins :—

G-1 Upper Godavari :

This sub-basin includes the reach of river Godavari from its source to its confluence with the Manjra. The sub-basin excludes the catchment areas of the Pravara, the Purna and the Manjra but includes that of all other tributaries which falls into the Godavari in this reach.

G-2 Pravara :

This sub-basin includes the entire catchment of the Pravara from the source to its confluence with the Godavari including the catchment areas of the Mula and other tributaries of the Pravara.

G-3 Purna :

The sub-basin includes the entire catchment of the Purna and of all its tributaries.

G-4 Manjra :

This sub-basin includes the entire catchment of the Manjra from its source to its confluence with the Godavari including the catchment areas of the Tirna, the Karanja, the Haldi, the Lendi, the Manar and other tributaries.

G-5 Middle Godavari :

This sub-basin comprises the river Godavari from its confluence with the Manjra to its confluence with the Pranhita. The sub-basin includes the direct catchment of the Godavari in this reach as well as of its tributaries, except the Maner and the Pranhita.

G-6 Maner :

This sub-basin includes the entire catchment of the Maner from its source to its confluence with the Godavari, including all its tributaries.

G-7 Penganga :

This sub-basin includes the entire catchment of the Penganga from its source to its confluence with the Wardha with all its tributaries.

G-8 Wardha :

This sub-basin comprises river Wardha from its source to its confluence with the Wainganga with all its tributaries but excluding the catchment of the Penganga (G-7 above).

*Area as per K. G. Commission Report Page 9.

G-9 Pranhita :

The sub-basin comprises the catchments of river Wainganga from its source to its confluence with the Wardha and the Pranhita upto its confluence with the Godavari. The sub-basin includes all the tributaries of the Wainganga and the Pranhita except the Penganga and the Wardha (G-7 and G-8 above). The Wainganga after its confluence with the Wardha is called the Pranhita.

G-10 Lower Godavari :

This sub-basin consists of the lower part of the river Godavari from its confluence with the Pranhita up to the sea. The sub-basin includes the direct catchment of the Godavari in this reach with all its tributaries except the Indravati and the Sabari (G-11 and G-12 below).

G-11 Indravati :

This sub-basin includes all the areas drained by the Indravati and its tributaries from its source to its confluence with the Godavari.

G-12 Sabari :

The sub-basin includes the entire catchment of the Sabari river from its source to its confluence with the Godavari including its main tributary Sileru (also known as Machkund river in its initial reaches).

Elevation :

A broad view of the elevations of the sub-basins is presented in the following table :—

Sub-basin	Range of elevation (in feet)
G- 1 Upper Godavari . .	5000—1100
G- 2 Pravara	3500—1500
G- 3 Purna	2800—1200
G- 4 Manjra	3000—1100
G- 5 Middle Godavari . .	1100— 350
G- 6 Maner	2000— 360
G- 7 Penganga . . .	2300— 600
G- 8 Wardha . . .	4000— 500
G- 9 Pranhita . . .	4000— 350
G-10 Lower Godavari .	350— 0
G-11 Indravati . . .	4500— 300
G-12 Sabari	4500— 100

Topography :

Except for the hills forming the water shed around the basin, the entire drainage basin of the river comprises rolling and undulating country —a series of ridges and valleys interspersed with low hill ranges. Large flat areas of the type characteristic of the Indo-Gangetic plains are scarce except in the delta.

The western edge of the basin is an almost unbroken line formed by the Sahyadri range of the Western Ghats.

The interior of the basin is a plateau divided into a series of valleys sloping generally towards east.

The Eastern Ghats which from the eastern boundry of the Peninsula are by no means so well-defined or continuous as the Sahyadri range on the west. They rise from the plains of East Godavari and Visakhapatnam to the level of table land of Jeypore.

The northern boundary of the basin comprises a series of table land varying in elevation which have with-stood the effect of ages of denudation better than the terrain to the north and south of them.

Large stretches of plains interspersed with hill ranges lie to the south.

The delta of the Godavari formed by the deposits at the mouth of the river over the ages, consists of a wide belt of the river borne alluvium.

Political Divisions, Effect of Reorganisation of States :

Since independence, there were important political changes affecting Godavari basin. During 1947-48, the Chhattisgarh States Agency, having riparian interests in the Godavari basin, was merged in the Provinces of Orissa and Madhya Pradesh. Before 1951, the five riparian States were Bombay, Hyderabad, Madhya Pradesh, Madras and Orissa. As from October 1, 1953, the Andhra Pradesh State was constituted with the territories specified in Section 3 of Andhra Pradesh States Act 1953 and thereupon, Madras ceased to be a riparian State. As from November 1, 1956, there was a general reorganisation of States and the new States of Andhra Pradesh, Mysore (now Karnataka), Bombay and Madhya Pradesh were formed with the territories specified in Sections 3, 7, 8 and 9 of the States Reorganisation Act 1956, while Hyderabad ceased to be a separate State. There was no reorganisation as far as Orissa State was concerned. As a result of the reorganisation, the five States of Bombay, Andhra Pradesh, Madhya Pradesh, Mysore (Karnataka) and Orissa came to possess* respectively 58,764 sq. miles, 28,263 sq. miles, 25,195 sq. miles, 1,701 sq. miles and 6,854 sq. miles of the territories in the Godavari basin. In 1960, the State of Bombay bifurcated into the States of Maharashtra and Gujarat and all the Godavari basin areas of the old Bombay State fell within the new State of Maharashtra.

Before the reorganisation of States the main Godavari ran in Bombay, formed a common boundary between Bombay and Hyderabad, ran in Hyderabad and formed common boundary between Hyderabad and Madhya Pradesh, then formed a common boundary between Hyderabad and Madras and finally ran in Madras before meeting the Bay of Bengal.

*Areas as per page 9 of KGC Report.

Now, the main Godavari runs in Maharashtra, forms a common boundary between Maharashtra and Andhra Pradesh, runs in Andhra Pradesh, again forms a common boundary between Andhra Pradesh and Maharashtra, and thereafter forms a common boundary between Andhra Pradesh and Madhya Pradesh and finally runs in Andhra Pradesh.

As a result of the States Reorganisation, the Purna Valley (G-3) which formerly lay within the States of Hyderabad and Madhya Pradesh, now lies exclusively within the Maharashtra State. The Manjra Valley (G-4) which lay formerly within the Hyderabad State exclusively, now lies in the three States of Maharashtra, Karnataka and Andhra Pradesh. The Maner Valley (G-6) which lay formerly within the Hyderabad State exclusively, now lies exclusively in Andhra Pradesh. The Penganga Valley (G-7) which lay formerly within the States of Madhya Pradesh and Hyderabad, now lies within the States of Maharashtra and Andhra Pradesh.

The Wardha Valley (G-8) which lay formerly within the States of Madhya Pradesh and Hyderabad now lies in the States of Madhya Pradesh, Maharashtra and Andhra Pradesh.

The Indravati Valley (G-11) which lay formerly within the States of Madhya Pradesh and Orissa, now lies within the States of Madhya Pradesh, Maharashtra and Orissa.

District-wise Distribution of Sub-Basin Areas :

The District-wise distribution of the sub-basin areas is given below:

Sl.No.	District	Region	Area within Godavari Basin			Normal Weighted annual rainfall of District in inches
			Area in sq. miles	Percentage of total area of district	Sub-basin	
1	2	3	4	5	6	7
		Maharashtra State				
1	Ahmednagar	West Maharashtra	4205	63·8	G1, G2, G4	25·6
2	Akola	Vidarbha	1446	35·3	G3, G7, G8	33·5
3	Amravati	Vidarbha	1620	34·3	G8	35·4
4	Aurangabad	Marathawada	5872	93·0	G1, G3	27·6
5	Bhandara	Vidarbha	3582	100·0	G9	59·1
6	Bhir	Marathawada	3656	85·8	G1, G4	27·6
7	Buldana	Vidarbha	1485	39·6	G3, G7	33·5
8	Chanda	Vidarbha	9872	99·0	G7, G8, G9, G10, G11	55·1
9	Jalgaon	West Maharashtra	23	0·5	G1	23·5
10	Nagpur	Vidarbha	3842	100·0	G8, G9	46·3
11	Nanded	Marathawada	3918	100·0	G1,G4, G5, G7	39·4
12	Nasik	West Maharashtra	2842	47·2	G1, G2	39·4
13	Osmanabad	Marathawada	3773	68·2	G1, G4	33·5
14	Parbhani	Marathawada	4853	100·0	G1, G3, G7	33·5
15	Poona	West Maharashtra	54	0·9	G2	51·2
16	Sholapur	Do.	46	0·8	G4	23·6
17	Wardha	Vidarbha	2429	100·0	G8	43·3
18	Yeotmal	Do.	5246	100·0	G7, G8	39·4
		TOTAL	58764			
		Karnataka State				
1.	Bidar	Hyderabad	1701	82·1	G4	35·4
		Andhra Pradesh				
1.	Adilabad	Telengana	6236	100·0	G5, G7, G8, G9	39·4
2.	East Godavari	Andhra	3857	66·8	G10, G12	43·3
3.	Hyderabad*	Telengana	44	1·5	G4	27.6
4.	Karimnagar	Telengana	4490	99·7	G5, G6, G10	38·4
5.	Khammam	Telengana	2383	51·8	G10, G12	41·3
6.	Medak	Telengana	3226	84·8	G4, G6	33·5
7.	Nizamabad	Telengana	3203	100·0	G4, G5, G6	39.4
8.	Warangal	Telengana	2796	52·5	G6, G10	41·3

*Hyderabad district has been bifurcated into Hyderabad and K.V. Rangareddy districts.

1	2	3	4	5	6	7
		Andhra Pradesh—*Contd.*				
9.	West Godavari	Andhra	598	20·0	G10	43·3
10.	Visakhaptnam	Andhra	1430	27·5	G10, G12	45·3
		TOTAL	28263			
		Madhya Pradesh				
1.	Balaghat		2708	75·8	G9	63·0
2.	Bastar	Chhatisgarh	14277	94·4	G11, G12, G10	59·1
3.	Betul.		866	22·3	G8,G9	43·3
4.	Chhindwara		3460	75·8	G8, G9	45·3
5.	Durg@	Chhatisgarh	1000	13·2	G9,G11	51·2
6.	Mandla		318	6·2	G9	59·1
7.	Raipur.	Chhatisgarh	41	0·5	G11	55·1
8.	Seoni		2525	74·8	G9	55·1
		TOTAL	25195			
		Orissa State				
1.	Kalahandi		561	11·0	G11	55·1
2.	Koraput		6293	63·8	G11, G12	59·1
		TOTAL	6854			

Total area of Godavari Basin : 120,777·0

K.G.C. Report pp. 10—14, 68—71.

@Durg district has been bifurcated into Durg and Rajnandgaon districts.

Basin Population :

On the basis of 1971 census and the percentage of the area of each district within the basin to district as a whole, the total population in the Godavari basin is about 35.46* million. The Statewise distribution is shown in the table below :—

Population in Godavari basin—State-wise :

Sl.No.	State	Population in Million
1	Maharashtra	18·56
2	Karnataka	0·66
3	Andhra Pradesh	10·83
4	Madhya Pradesh	3·98
5	Orissa	1·43
	Total	35·46

There are only four cities in the basin with a population of more than one lakh each. They are Rajahmundry and Warangal in Andhra Pradesh and Nagpur and Nasik in Maharashtra. The density of population varies from region to region. For the basin as a whole, it is 293 persons per sq. mile. The coastal plain is the most densely populated while the hilly areas have a low density. In 1971 the district of Hyderabad, the most densely populated area, had 937 persons per sq. mile while the hilly district of Bastar with 101 persons per sq. mile stood at the other extremity. The composition of the population in hilly areas is somewhat different from that in other areas of the basin. It has a relatively larger component of persons belonging to the scheduled tribes. The tribal people, who form a distinct ethnic group, have lived for centuries in forests isolated from the main stream of social and economic life. They are economically backward and depend for their livelihood mainly on forests and shifting cultivation or a primitive form of settled agriculture in the forests. They have little of industrial activity even on a cottage scale. They are strongly attached to their own culture and traditions, which have made them less responsive to the change taking place around them.

85.5 per cent of the population in the basin live in rural areas and the balance of 14.5 per cent in cities and towns. The working force (comprising the Census categories of self-supporting persons and earning dependents), constitutes about 37.3 per cent of the population. Nearly 40.2 per cent of the working force is engaged as cultivators, 30.0 per cent as agricultural labourers and the balance of 29.8 per cent in mining, manufacturing and tertiary activities.

Rainfall :

The source of all waters in the Godavari basin, whether stream-flow or ground water, is the rain which falls over the basin. The dominant natural factor that affects basically the life and economy of the people in the Godavari basin is the rainfall and its regional and seasonal distribution, amount and variability. Like most other

*Figures as per page 131 of Irrigation Commission Report, Vol. III (Part II).

parts of India, the Godavari basin receives the major portion (about 84 per cent) of its rainfall during the south-west monsoon period (June to September).

South-West Monsoon Season :

At the end of May, when the weather is at its hottest in India, the trade winds from the south of the equator blow northwards into the Bay of Bengal and the Arabian sea and are deflected in land as south-westerly winds which give rise to the cool and humid south-west monsoon. The monsoon winds strike the west coast of the Indian Peninsula from the west, south-west and meet the western ghats or Sahyadri Range which present an almost uninterrupted barrier. After surmounting this barrier and depositing most of the moisture on the windward side, the monsoon currents sweep across the interior peninsula on a course which is mainly west. The amount of rainfall on the ghats at any place is governed largely by the orographic features there. This factor introduces considerable spatial variation in the rainfall amount. In crossing the ghats, the monsoon winds lose a large part of the moisture. As the crest of the ghats forms the general watershed of the peninsula and the average slope of the country therefrom is towards the east coast, which slope is followed by the monsoon winds, the conditions in the interior are somewhat unfavourable for heavy precipitation except in association with the depressions from the Bay of Bengal. The north-east part of the Godavari basin also receives some rain in association with monsoon depressions which move west northwest across the Orissa coast. Agriculture depends mainly on the amount and distribution of the rainfall. The rainfall during the months of June and July is crucial for Kharif crops. The normal date of commencement of the south-west monsoon in the Godavari basin is about the middle of June. The strength of the monsoon current increases from June to July, remains more or less steady in August and begins to weaken in the month of September. The normal date of withdrawal of south-west monsoon from most of the parts in the Godavari basin is between the 1st October and 15th October. The character of the monsoon season is determined by the date of onset and cessation of the monsoon, the monthly and seasonal rainfall, the intensity of the rain, the number of rainy days and the frequency and duration of dry spells.

Other Rainy Seasons :

The other rainy seasons are not as well defined and well spread as the south-west monsoon season. They contribute about 16 per cent of the total annual rainfall in the Godavari basin. After the withdrawal of south-west monsoon in the middle of October, the weather generally improves and becomes cool and pleasant. The onset of the winter (north-east) monsoon is not clearly defined. In fact, on many occasions there is no clear distinction between the withdrawal of summer monsoon over peninsular India and the onset of the winter monsoon. One tends to merge into the other. During the months of October to December, most parts of the basin receive a rainfall of less than 6 inches. This is exceeded only at a few stations in the eastern ghats. January and February are almost entirely dry in the Godavari basin, the rainfall during these two months being less than half inch except in the north-eastern part of the basin and near the delta. During the next three months, upto the end of May, it varies from 1 inch to 2 inches in most parts of the basin except in the Rajamundry-Koraput-Jagdalpur area.

Rainfall Distribution :

The rainfall distribution in the basin is mainly influenced by the geographical position and the physical features of the area within the basin.

The Godavari river receives the drainage from a length of about 80 miles of the high rainfall zone in the Western Ghats. The annual rainfall varies from 118 inches to 39 inches in this reach. East of the Western Ghats, the annual rainfall decreases rapidly to about 20 inches in the reach between Adula and Bhandardara dam sites in Ahmednagar district of Maharashtra. East of this line the rainfall again increases gradually. It is about 35 inches near Nanded and increases further to about 71 inches in the eastern most part of the basin near Koraput.

There is a belt, some distance east of the Western Ghats and in width varying from about 50 miles in the south to about 60 miles in the north, with less than 24 inches, the normal annual rainfall. This belt which is about 4,000 sq. miles in area, includes portions of the Aurangabad and Ahmednagar districts of Maharashtra.

Variability of Rainfall * :

The studies carried out by India Meteorological Department indicate that during July the values of the coefficient of variation range between 40 to 50 per cent except for a small area in the west, where coefficient of variation is as high as 60 to 70 per cent. August is more variable than July. June and September are highly variable months. Coefficient of variation is more than 60 per cent in June. In September coefficient of variation ranges from 45 to 65 per cent. For the period June to September, taken as a whole, the variations are much reduced being only between 20 to 30 per cent over most of the areas. The coefficient of variation is the highest in the western part of the basin ranging between 30 to 40 per cent. The annual pattern is similar to June to September. The eastern half is less variable than the west.

Climate :

The Godavari basin enjoys a monsoon tropical climate. Four distinct seasons occur in the Godavari basin, viz. (i) the cold weather; (ii)

*'Rainfall Variability of Krishna and Godavari Basins', issued by I.M.D., March, 1970.

the hot weather; (iii) the south-east monsoon; and (iv) the post-monsoon. The cold wether season in the entire basin, from mid-October to mid-February is generally pleasant, the western and north-eastern regions being colder than the rest of the basin. In the hot weather, the heat is excessive in the central, northern and eastern regions. The south-west monsoon sets in by mid-June and ends by mid-October. After the withdrawal of the south-west monsoon in the middle of October, the weather gradually improves and becomes cool and pleasant.

Temperature :

The mean annual surface temperature in Godavari Basin in the western ghat area is about 24°C (75°F) which increases gradually towards the east and attains a maximum of 29.4°C (85°F) on the east coast. During January which may be taken as representative of winter months, the mean daily minimum temperature increases from west to east, from 15°C (59°F) in the western ghats to about 18°C (64°F) at the east coast; the mean daily maximum temperature generally exceeds 30°C (86°F) in the western part of the Godavari basin and is only slightly less than 30°C (86°F) in the eastern part. The daily maximum and the daily minimum temperatures in Godavari basin during this month are considerably higher than in northern India.

During April, which may be taken as representative of the summer months, preceding the monsoon, the mean daily minimum temperature is about 22°C (72°F) in the western end and it increases eastward to a maximum of about 26°C (79°F) near the east coast; the mean daily maximum temperature, which is about 35°C (95°F) in the western end, increases to about 40°C (104°F) in the middle of the plateau and then falls to about 35°C (95°F) near the east coast. During this month the temperature in the Godavari basin is about the highest anywhere in the country. During July, which may be taken as representative of the monsoon months, the mean daily minimum temperature in the western ghats area is about 20°C (68°F) and it increases eastward to about 26°C (79°F) near the east coast; the mean daily maximum temperature is about 27°C (81°F) in the western ghats area and it increases eastward to about 33°C (91°F) near the east coast. During October, which may be taken as representative of the post monsoon months, the mean daily minimum temperature is about 20°C (68°F) in most parts of the Godavari basin but increases to about 23°C (74°F) on the east coast, the mean daily maximum temperature is a little more than 30°C (86°F) in the entire area of the basin.

Humidity :

Except during the rainy season, humidity is low in most parts of the basin.

Municipal and Domestic water supply :

Open wells and borewells are the main sources of water supply in villages. Since independence rural water supply has received special attention by its inclusion under various programmes in the Five Year Plans. Most of the cities and towns have some provision of water supply.

CHAPTER IV

AGREEMENTS

All disputes concerning the equitable apportionment of the waters of or in the inter-State Godavari river and river valley have been referred to this Tribunal for adjudication. The entire area drained by the river and its tributaries is called the river basin.[1] The river basin is also called the river drainage basin. This Tribunal has jurisdiction over the entire surface and underground water of and in the entire Godavari basin.

The river basin is necessarily bounded completely by the watershed or divide which separates it from other adjacent basins.[2] The waters of the river basin can be diverted and beneficially applied to areas in the adjacent watersheds but those areas cannot be regarded as parts of the river basin.

The expressions "Godavari basin", "Godavari river basin" and "Godavari drainage basin" used in this Report mean the entire area drained by the Godavari river and its tributaries. The Godavari basin is bounded by the watershed or divide which separates it from other adjacent basins.

It is now well settled that in deciding water disputes regarding an inter-State river, the rule of equitable apportionment of the benefits of the river should be applied. In this connection, we may refer to the following passages in the Report of the Krishna Water Disputes Tribunal Volume I, pages 302 to 305 :

"Law" applicable :

If there is competent legislation by Parliament on the subject of the apportionment of the waters of an inter-State river and river valley, that law binds all the States and there is no room for an inconsistent apportionment. The Tribunal has no power to override the paramount Central Legislation.

Sections 2 and 3 of the Inter-State Water Disputes Act, 1956 indicate that, if there is an agreement between the States relating to the use, distribution or control of the waters, that agreement should be implemented. The agreement determines their respective rights and obligations and furnishes the agreed "law" on the subject.

Likewise competent arbitral awards and judicial decrees should be respected.

In the absence of legislation, agreement, award or decree, the Tribunal has to decide the dispute in such a way as will recognise the equal rights of the contending States and at the same time establish justice between them. Equal right does not mean an equal division of the water. It means an equitable apportionment of the benefits of the river, each unit getting a fair share.

Equitable apportionment :

The decisions of the USA Supreme Court firmly established the doctrine of equitable apportionment of the benefits of an inter-State river. The principle was earlier recognised by the Swiss Federal Tribunal in 1878 and it also contains the essence of international law on the matter.

In India also, the right of States in an inter-State river is determined by applying the rule of equitable apportionment, each unit getting a fair share of the water of the common river. The doctrine of riparian rights governs the rights of private parties, but it does not afford a satisfactory basis for settling inter-State water disputes."

Where agreements apportion the river water between the States, the apportionment is regarded as an equitable division of waters similar to that made by a decree of court or Tribunal.[3]

River disputes may appropriately be settled by negotiation and agreement.[4] Helsinki rules on the uses of the waters of International rivers emphasise that in case of a dispute between States as to their legal rights or other interests, they should seek a solution by negotiation.[5]

Indeed, the most satisfactory solution of such disputes is by agreement between the parties concerned.[6]

In this case, the parties have adjusted their claims regarding the utilisation of the waters of the river Godavari and its tributaries through a number of solemn agreements entered into by them from time to time.

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[1] See W.G. Moore, Dictionary of Geography p. 24; L. Dudley Stamp, The World 10th Ed. p. 44; Webster's Third New International Dictionary p. 182; The Oxford English Dictionary Vol. I, p. 691.

[2] R.K. Linsley, M.A. Kohler and J.L.R. Paulhus, Applied Hydrology 1st Ed. (1949), p. 244.

[3] Ven Te Chow, Handbook of Applied Hydrology Section 27, 28; M.C. Hinderlider v La Plata River & Cherry Creek, Ditch Company 304 U.S. 92 82 L. ed. 1202—1210.

[4] T. Richard Witmer-Documents on the Use and Control of the Waters of Inter-State and International Streams Second Edition p. 511, at pp. 515—516; Colorado v Kansas 320 U.S. 383 (1943).

[5] C.J. Olmstead—The Law of International Basins Appendix A, p. 820.

[6] Report of the Indus (Rau) Commission Vol. I, p. 10; F.J. Berber—Rivers in International Law 1959 Ed. p. 272

The following Agreements were entered into from time to time :

(1) Agreement dated the 19th December, 1975 between the States of Karnataa, Maharashtra, Madhya Pradesh, Orissa and Andhra Pradesh agreeing to the sanction and clearance of projects for the utilisation of waters of the Godavari river and its tributaries in accordance with :—

(a) Agreement between the States of Karnataka and Andhra Pradesh on the 17th September, 1975—Annexure I;

(b) Agreement between the States of Maharashtra and Andhra Pradesh on the 6th October, 1975—Annexure II;

(c) Agreement between the States of Madhya Pradesh and Andhra Pradesh on the 7th November, 1975—Annexure III; and

(d) Agreement between the States of Orissa and Madhya Pradesh on the 9th December, 1975—Annexure IV.

The Agreement dated the 19th December, 1975 was filed[7] before the Tribunal on the 12th July, 1976.

(2) Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh. This Agreement was filed[8] before the Tribunal on the 8th August, 1978.

(3) Agreement dated the 4th August 1978 between the States of Andhra Pradesh and Karnataka. This Agreement was filed[9] before the Tribunal on the 18th October, 1978.

(4) Agreement dated the 15th December, 1978 between the States of Orissa and Andhra Pradesh. This Agreement was filed [10] before the Tribunal on the 2nd January, 1979.

(5) Agreement between the States of Karnataka and Maharashtra as evidenced by letters dated the 29th January, 1979, 30th January, 1979 and 31st January, 1979 exchanged between them. This Agreement was filed[11] before the Tribunal on the 2nd February, 1979.

(6) Agreement dated the 11th July, 1979 between the States of Orissa and Madhya Pradesh. This Agreement was filed[12] before the Tribunal on the 16th July, 1979.

The above mentioned Agreements are set forth in the Annexures to our Final Order and marked as Annexures "A", "B", "C", "D", "E" and "F" respectively.

The Agreement dated the 19th December, 1975 was duly filed before the Tribunal pursuant to the stipulation mentioned in the said Agreement. Each of the other Agreements mentioned above was filed before the Tribunal by the States which entered into the Agreement stating that the Agreement had been reached between them. These Agreements were received in evidence and marked as Exhibits without any objection by any State.

In order to understand the Agreements mentioned above, it is necessary to bear in mind the twelve divisions of the Godavari basin:—

(1)	G-1	Upper Godavari
(2)	G-2	Pravara
(3)	G-3	Purna
(4)	G-4	Manjra
(5)	G-5	Middle Godavari
(6)	G-6	Maner
(7)	G-7	Penganga
(8)	G-8	Wardha
(9)	G-9	Pranhita
(10)	G-10	Lower Godavari
(11)	G-11	Indravati
(12)	G-12	Sabari

The entirety of the sub-basins G-1 Upper Godavari, G-2 Pravara and G-3 Purna fall within the territory of the State of Maharashtra. Sub-basin G-4 Manjra is situated within the territories of the three States of Maharashtra, Karnataka and Andhra Pradesh. Sub-basin G-5 Middle Godavari falls within the territories of the two States of Maharashtra and Andhra Pradesh. Sub-basin G-7 Penganga is situated within the territories of the two States of Maharashtra and Andhra Pradesh. Sub-basins G-8 Wardha, G-9 Pranhita and G-10 Lower Godavari fall within the territories of the three States of Madhya Pradesh, Maharashtra and Andhra Pradesh. Sub-basin G-11 Indravati is situated within the territories of the States of Orissa, Madhya Pradesh and Maharashtra and the river Indravati joins the river Godavari at the junction of the boundaries of the three States of Maharashtra, Andhra Pradesh and Madhya Pradesh. Sub-basin G-12 Sabari is situated within the territories of the States of Orissa, Madhya Pradesh and Andhra Pradesh.

By Annexure II to the Agreement dated the 19th December, 1975 to which all the five States were parties, the entire waters of sub-basin G-2 (Pravara) and the waters of sub-basin G-1 (Upper Godavari) up to Paithan Dam site and the waters of sub-basin G-3 (Purna) up to Siddeshwar Dam site were allotted to the State of Maharashtra and Maharashtra was further allowed the use of the waters of the Godavari basin not exceeding 60 TMC below Paithan Dam site on the Godavari river and below Siddeshwar Dam site on the Purna river and below Nizamsagar Dam site on the Manjra river and up to Pochampad Dam site on the Godavari river.

[7] CMPs No. 17(7)/76-GWDT and No. 17(8)/76-GWDT, dt. 12-7-76.

[8] CMP No. 17(14)/78-GWDT, dated 8-8-1978.

[9] CMP No. 17(15)/78-GWDT, dated 18-10-1978.

[10] CMP No. 17(1)/79-GWDT, dated 2-1-1979.

[11] CMP No. 17(2)/79-GWDT, dated 2-2-1979.

[12] CMP No. 17(4)/79-GWDT, dated 16-7-1979.

defined reaches among the States which alone can utilise these waters within the river basin. Having regard to the peculiarities of the Godavari river and river basin, the Tribunal finds no objection in allotting to one or more State or States its water up to defined points or projects sites or within certain sub-basins or reaches of the river. Seen in this light, every agreement need not apportion and allocate all waters of a river and river basin. Disputes with regard to the waters of a single tributary or a sub-basin of the main river may be settled by agreement or by decree of court. Thus disputes with regard to the South Platte river which is a tributary of the North Platte river were settled by the South Platte River Compact, 1923;[13] and disputes with regard to the Laramie river which is another tributary of the North Platte river were settled by a decree of the U.S.A. Supreme Court in the case of Wyoming v. Colorado.[14] Subsequently, disputes with regard to the main North Platte river were settled by a decree of the U.S.A. Supreme Court in Nabraska v. Wyoming.[15] This decree in no way affected the earlier apportionment of its tributary Laramie river by decree of Court or of its tributary South Platte River by compact. Likewise, the waters of the Canadian river, a tributary of the Arkansas river, were apportioned by the Canadian River Compact, 1950.[16] Similarly, disputes with regard to the waters of the Costilla Creek, a tributary of the Rio Grande river, were settled by the Costilla Creek Compact, 1963[17] and disputes regarding the waters of the Pecos river, another tributary of the Rio Grande river, were settled by the Pecos River Compact, 1948[18] while earlier certain disputes with regard to the main Rio Grande river had been settled by the Rio Grande Compact, 1938.[19]

After filing of the Agreements between the party-States mentioned above. Counsel for the States of Andhra Pradesh, Orissa and Madhya Pradesh closed their final addresses on the 2nd January, 1979. On the 2nd February, 1979 Counsel for the States of Karnataka and Maharashtra closed their final addresses. Thus, all the party-States concluded their final arguments in this case. On the 2nd February, 1979 the party-States volunteered to prepare a comprehensive agreement by incorporating all the agreements entered into between the parties. From time to time, at the request of the parties time was given to enable them to file the comprehensive agreement until the 16th July, 1979 but even on that date the parties did not file such agreement and some of them prayed for further time. After hearing the parties, the Tribunal held that in the circumstances of the case, it was not necessary to grant any further time for this purpose.

Thereupon, for the first time on the 16th July, 1979 Shri M. N. Phadke, counsel for the State of Maharashtra, contended that until a comprehensive agreement was signed by all the parties there was no complete allocation of the entire waters of the Godavari river and the Tribunal cannot proceed to give its decision. On the other hand, the submission of counsel for the States of Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa is that the agreements mentioned above have made an equitable distribution of the waters and these agreements should be enforced by the Tribunal.

Counsel for the State of Maharashtra, however, admitted that the agreements to which Maharashtra is a party would be binding on it. Accordingly, there is no dispute that the State of Maharashtra is bound by following agreements to which Maharashtra is a party namely (i) the Agreement dated the 19th December, 1975 signed by all the five participants including the State of Maharashtra and confirming the four bilateral Agreements annexed to it, (ii) the Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, and (iii) the Agreement of January, 1979 between the States of Karnataka and Maharashtra filed on the 2nd February, 1979.

We shall now refer to the Agreement dated the 4th August, 1978 between the States of Karnataka and Andhra Pradesh which provides for diversion of 80 T.M.C. of Godavari waters at 75% dependability to the Krishna river through the Polavaram Project, for sharing this water in the proportion of Andhra Pradesh 45 T.M.C. and Karnataka and Maharashtra jointly 35 T.M.C. and for sharing the water diverted in excess of 80 T.M.C. in the same proportion. This Agreement regarding the sharing of the Godavari waters diverted into the Krishna river was adopted and acted upon by the Agreement of January, 1979 between the States of Karnataka and Maharashtra whereby the two States agreed to use their aforesaid joint share of 35 T.M.C. in the proportion of Karnataka 21 T.M.C. and Maharashtra 14 T.M.C. subject to variation in case of diversion of Godavari waters in excess of 80 T.M.C. Thus, Maharashtra though not a party to the Agreement of the 4th August, 1978 cannot say that it is not binding on it. In fact, in para 5 of its CMP No. 17(7)/79-GWDT, dated the 15th October, 1979 it has taken the position that the Agreement of the 4th August, 1978 be ordered to be carried out.

Now, we come to the Agreement between the States of Orissa and Madhya Pradesh dated the 11th July, 1979. This Agreement is supplemental to the Agreement between the five States

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[13] T. Richard Witmer—Documents on the Use and Control of the Water of Interstate and International Streams, Second Edition p. 319.

[14] *Ibid.*, p. 665,259 U..S. 419 (1922)

[15] *Ibid.*, p. 726, 325 U.S. 589 (1945)

[16] T. Richard Witmer—Documents on the Use and Control of the Waters of Interstate and International Streams, Second Edition p. 40.

[17] *Ibid.*, p. 85

[18] *Ibid.*, p. 238

[19] *Ibid.*, p. 272

dated the 19th December, 1975. So far as the Indravati sub-basin is concerned, the water allocated to the States of Orissa and Madhya Pradesh in the Agreement dated the 11th July, 1979 is practically the same as in the Agreement between the States of Madhya Pradesh and Orissa dated the 9th December, 1975 and confirmed by all the five States by Agreement dated the 19th December, 1975. Therefore, the State of Maharashtra can have no objection to the Agreement dated the 11th July, 1979. Further, it is noticeable that in the Agreement dated the 7th August, 1978 between the States of Maharashtra, Andhra Pradesh and Madhya Pradesh the allocations to the State of Madhya Pradesh in the Indravati sub-basin are on the same lines as in the Agreement between the States of Orissa and Madhya Pradesh dated the 11th July, 1979. Maharashtra is a party to the Agreement dated the 7th August, 1978. Again, under the Agreement dated the 7th August, 1978 after making an allowance for the water to be allocated to the States of Madhya Pradesh and Maharashtra, the balance of the water is to be used by the State of Andhra Pradesh. Maharashtra can thus have no grievance in the matter of allocation of water between the States of Madhya Pradesh and Orissa under the Agreement of the 11th July, 1979.

Lastly, we come to the Agreement dated the 15th December, 1978 between the States of Andhra Pradesh and Orissa which is supplemental to the Agreement between the five States dated the 19th December, 1975. So far as the Indravati sub-basin is concerned, this Agreement does not depart in any material way from the previous Agreements. It is definitely stated in Clause 1 of the Agreement that the State of Orissa can utilise its share of water in (G-11) Indravati sub-basin in terms of the Agreement dated the 19th December, 1975 confirming the bilateral Agreement dated the 9th December, 1975 between the States of Orissa and Madhya Pradesh.

So far as (G-12) Sabari sub-basin is concerned, the river Sabari does not flow in Maharashtra and it cannot utilise any water from it. Maharashtra can, therefore, have no grievance to the allocation of waters to the States of Orissa and Andhra Pradesh in this sub-basin. It may also be mentioned that in the Agreement dated the 7th August, 1978 the share of Madhya Pradesh having been determined the balance of water after such allocations as may be made by the Tribunal to the State of Orissa, was to go to Andhra Pradesh and the State of Andhra Pradesh has itself shared waters with the State of Orissa under this Agreement in the Sabari-sub-basin.

We may examine this matter from another stand-point. Agreement or no agreement, should Orissa be allocated the quantity of water of the river Sabari for its utilisation which has been allocated to it under the aforesaid Agreement? After all, the State of Orissa contributes enough water to the river Godavari and it has the capacity to use the water allocated to it. It is also an economically backward State. In our opinion, the water that has been allocated to the State of Orissa in the Sabari sub-basin is according to its equitable share.

Moreover, para 2 of the petition of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh with which the Agreement of the 7th August, 1978 between those three States was filed before the Tribunal clearly stated "The said agreement of 7-8-1978 covers all outstanding matters between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, regarding the sub-basinwise allocations of the waters of the Godavari and its tributaries downstream of the Pochampad Dam in the State of Andhra Pradesh. The said agreement of 7-8-1978 covers the allocations for the sub-basins G-5 (part); G-6; G-7; G-8; G-9; G-10; G-11 and G-12 concerning the three States of Maharashtra, Madhya Pradesh and Andhra Pradesh. Accordingly, the said disputes between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh have ceased to exist". For all these reasons, we find no substance in the contention of the State of Maharashtra that we cannot give effect to and enforce these Agreements unless a comprehensive agreement signed by all the States is filed before the Tribunal.

We have, therefore, decided to enforce the Agreements except on one point with regard to which there is some controversy or conflict between the parties. It is stated in para 5 of CMP No. 17(7)/79-GWDT, dated the 15th October, 1979 that there is some conflict between the parties with regard to Polavaram Project only. At the end of para 5 of this petition Maharashtra has stated that "The parties have also met several times after 16-7-1979 and not been able to resolve the conflict in the terms of different bipartite and tripartite agreements with regard to Polavaram Project. Therefore, it has become necessary for the State of Maharashtra to place on record the conflicts arising in the terms of these agreements on Polavaram Project which need reconciliation before a Report under Section 5(2) is forwarded to the Central Government". In fact, the Tribunal was already aware of this conflict. This conflict is resolved by the Tribunal in the subsequent part of the judgement.

This controversy relates to the full reservoir level and maximum water level of the Polavaram Dam to be constructed by the State of Andhra Pradesh.

The dam was first conceived under the Ramapadasagar Project[20] which consisted of:—

(a) a dam 428 feet high at the deepest portion across the Godavari with appurtenant works such as canal heads, locks, etc., near Polavaram 20 miles above the town of Rajahmundry,

(b) a canal 130 miles long on the left side emptying into the Vizagapatam Port,

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[20] Exhibit MRG-36, Volumes APPG 7—9

(c) a canal on the right side 124 miles long up to the Krishna river and (after crossing it by an aqueduct) 89 miles long up to the Gundlacama river, and

(d) hydro-electric power station to develop 150,000 K.Ws. of firm power.

Under this project full supply level at the off-take at head of the left bank gravity canal was + 137 feet and that of the right bank gravity canal was + 138 feet. This project was, however, given up.

Before the Tribunal, Andhra Pradesh filed a Report[1] of Polavaram Barrage Scheme, June, 1970. The scheme consists of a barrage across the river Godavari with two canals; one taking-off on the right up to Krishna river and the other on the left up to Vizag port. It was to be located at Polavaram which is situated 25 miles above Dowlaishwaram anicut and 175 miles downstream of Inchampalli Reservoir. The project also contemplated generation of power and navigation in the river and canal etc. The F.R.L. of the barrage as given in this Report is + 145 ft. and minimum pond level + 45 ft. The full supply level of the left bank canal is proposed to be + 137 ft. and that of the right bank canal + 138 ft.

Andhra Pradesh submitted another Report called Polavaram Project Volume I, May 1978 (Exhibit APG-360). This project envisages.—

"Head Works:

The head works consist of an earth-cum-rockfill dam across the main river with spillways on the right flank and power-cum-river sluices block on the left flank as detailed below :—

(i) The earth-cum-rockfill dam with a maximum height of 48.77 m (160 ft.) and a crest length of 1555 m (5100 ft.) involving a total quantity of 7.3 M.cum.

(ii) Two spillways on the right flank saddle controlled by 50 Nos. of radial gates each 15.24 m×12.80 m (50 ft.×42 ft.) with flood lift of 4.3 m (14 ft.) for the peak designed flood of 0.102 M.cum. (3.6 million cusecs).

(iii) A concrete gravity dam on the left flank with power house and river sluices.

The earth dam is about 35.05 m (115 ft.) high above the average river bed and 48.77 m (160 ft.) above the deepest bed level of the river, which is stated to be necessary for diverting the required quantity of water into the canals which proposed to irrigate vast areas on both the flanks. The M.D.D.L. and F.R.L. stated to be required are R.L. + 44.20 m (+ 145 ft.) and R.L. + 45.72 m (+ 150 ft.) respectively. The lake proposed to be formed by the dam has a waterspread of 552.63 sq. km. (213 sq. miles) at F.R.L. with + 45.72 m and a gross capacity of 5665 M.cum. (192 T.M.C.). The storage available between the minimum draw-down level and F.R.L. (44.20 m to 45.72 m) is only 800 M.cum. (28.31 T.M.C.).

Canal System:

The project has a potential to serve about 4.82 lakh hectares (11.90 lakh acres) of ayacut during Kharif season (June to October) and 2.27 lakh hectares (5.6 lakh acres) under second crop (January-April) in the ultimate stage as detailed below :—

(a) Polavaram Left Main Gravity Canal 208 Km. long up to Visakhapatnam which besides supplying the required water to meet the needs of the Visakhapatnam township, industries existing and proposed including the proposed steel plant complex, would irrigate 1.89 lakh hectares of first crop and 1.25 lakh hectares of second crop in the districts of East Godavari and Visakhapatnam.

(b) A lift canal taking off from Km. 177.00 of the left main canal near Anakapalli town, 130 km. in length would irrigate an area of 1.15 lakh hectares in Visakhapatnam and Srikakulam districts.

(c) A lift canal 177 km. in length taking off at Km. 0.00 of the left main gravity canal to serve the uplands, would irrigate an area of 0.57 lakh hectares of first crop and 0.20 lakh hectares of second crop in the districts of East Godavari and Visakhapatnam.

(d) Polavaram Right Main Gravity Canal, 176 km. in length up to Budameru river irrigating an area of 1.21 lakh hectares of first crop and 0.80 lakh hectares of second crop in West Godavari and Krishna districts."

It appears that so far as the left bank gravity canal and right bank gravity canal are concerned, this project adopts the same canal alignments as in the Ramapadasagar scheme except that the right bank canal tails off in the Krishna river.

Submergence under the reservoir is as shown below :—

State	Submersible area in			
	Hectares	Acres	Sq.km.	Sq. Miles
Andhra Pradesh .	53,480	1,32,151	534·80	206·49
Madhya Pradesh .	1,357	3,353	13·57	5·24
Orissa . . .	426	1,052	4·26	1·64
	55,263	1,36,556	552·63	213·37

[1] Exhibit MRG—34, Volume APPG 5

It will not be out of place to refer here to another project report called the Polavaram Project Stage I of March 1978 (Exhibit No. APG-364) which had been submitted by the State of Andhra Pradesh to the Central Water Commission for securing clearance of the Polavaram Project. Under this scheme the location and the main features of the dam and other pertinent works i.e. earth dam, spillways, river sluices etc. remain the same, as described above, but the construction has been divided into two stages as described below.

The proposals under Stage I consist of the following :—

Phase I :

(a) Polavaram dam.

(b) Left main gravity canal to irrigate 1.89 lakh hectares in East Godavari and Visakhapatnam districts apart from supplying water to Visakhapatnam city, existing industries and proposed steel plant and other industries.

Phase II :

(c) Installation and commissioning of the power units.

(d) Lift canal from Km 0.00 of the left main gravity canal to irrigate 60,705 hectares.

It is stated in the Project Report that in view of the fact that the upstream storages are not constructed there will be a lot of surplus during the monsoon period which would produce enough seasonal power during the said period and to utilise this seasonal power, it is proposed to take up the lift canal from Km. 0.00 of the left canal to irrigate areas in Phase II of Stage I itself.

The proposals under Stage II and benefits as given in this Project Report are as follows :—

(a) Polavaram Right Canal 176 km long to irrigate 1.21 lakh hectares in West Godavari and Krishna districts as well as supplying the required quantity of water to the towns enroute and the proposed thermal scheme and industries.

(b) Lift canal from Km. 177 of the left main gravity canal, 130 km. in length to irrigate 1.15 lakh hectares in Visakhapatnam and Srikakulam districts.

(c) Second crop under the Polavaram canals and the Godavari delta canals.

Submergence in both the Project Reports is the same.

The States of Maharashtra and Karnataka had been agitating for utilisation of more water of the Krishna river on account of the diversion of Godavari water into the Krishna. On 4th August, 1978 an Agreement was entered into between the States of Karnataka and Andhra Pradesh Clause 7 of which provides that—

"(a) Subject to the clearance of Polavaram Project by the Central Water Commission for an FRL/MWL plus 150 ft. the State of Andhra Pradesh agrees that a quantity of 80 T.M.C. at 75 per cent dependability of Godavari waters from Polavaram Project can be diverted into Krishna river above Vijayawada Anicut displacing the discharges from Nagarjunasagar Project for Krishna Delta, thus enabling the use of the said 80 T.M.C. for projects upstream of Nagarjunasagar.

(b) The States of Andhra Pradesh and Karnataka agree that the said quantity of 80 T.M.C. shall be shared in the proportion of Andhra Pradesh 45 T.M.C., Karnataka and Maharashtra together 35 T.M.C.

(c) Andhra Pradesh agrees to submit the Polavaram Project report to Central Water Commission within three months of reaching an overall agreement on Godavari waters among the five-party States.

(d) Andhra Pradesh agrees to bear the cost of diversion fully.

(e) Maharashtra and Karnataka are at liberty to utilise their share of 35 T.M.C. mentioned in sub-para 7(b) above from the date of clearance of the Polavaram Project by Central Water Commission with FRL/MWL of plus 150 ft. irrespective of the actual diversion taking place.

(f) It is also agreed that if the diversion at 75 per cent dependability as stated in clause (a) above exceeds the said quantity of 80 T.M.C. due to diversion of Godavari waters from the proposed Polavaram Project into Krishna river, further diminishing the releases from Nagarjunasagar Project such excess quantity shall also be shared between the three States in the same proportion as in sub-clause (b) above."

In order to resolve the difficulties about the submergence of land of the States of Madhya Pradesh and Orissa under this Project, two Agreements were entered into :—

(1) between the States of Andhra Pradesh, Madhya Pradesh and Maharashtra on the 7th August, 1978, and

(2) between the States of Andhra Pradesh and Orissa on the 15th December, 1978.

Clause VIII(E) of the Agreement dated the 7th August, 1978 between Andhra Pradesh, Madhya Pradesh and Maharashtra provides—

"(E) The State of Madhya Pradesh agrees subject to the State of Orissa agreeing for the construction of Polavaram Project of the State of Andhra Pradesh so that the maximum submergence in Madhya Pradesh territory at Konta does not exceed R. L. + 150 ft. due to all effects including backwater effect. The Polavaram Project shall be designed for

the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above."

Clause II(I) of the Agreement between the States of Andhra Pradesh and Orissa dated the 15th December, 1978 provides—

"(I) The States of Orissa and Andhra Pradesh agree for the construction of Polavaram Project of the State of Andhra Pradesh, so that the maximum submersion in the State of Orissa territory at Motu/Konta does not exceed R.L. + 150 ft. due to all effects including backwater effect. The Polavaram Project shall be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above."

On a close examination of the three Agreements referred to above, it appears there is some difficulty in regard to maintaining F.R.L. and M.W.L. at + 150 ft. at Polavaram and at the same time ensuring by Andhra Pradesh that maximum submergence in the States of Orissa and Madhya Pradesh at Motu/Konta would not exceed R.L. + 150 due to all effects including backwater effect. If the maximum submergence in the States of Orissa and Madhya Pradesh at Motu/Konta is not to exceed R.L. + 150 ft. due to all effects including backwater effect, the FRL/MWL at Polavaram Dam may be less than + 150 ft. unless submergence to a larger extent is avoided in other ways. Clause 7(e) of the Agreement dated the 4th August 1978 between the States of Andhra Pradesh and Karnataka provides that Maharashtra and Karnataka will be at liberty to utilise their share of 35 T.M.C. subject to the clearance of Polavaram Project by the Central Water Commission with FRL/MWL of + 150 ft. Polavaram Project can be cleared for FRL/MWL + 150 ft. only if there is larger submergence of the territories of Madhya Pradesh and Orissa than what has been envisaged under the Agreements dated the 7th August, 1978 and 15th December, 1978 unless steps are taken to aviod such larger submergence.

The parties could not arrive at a settlement on these points and so they were unable to draft a comprehensive agreement.

On the the 15th October, 1979 the State of Maharashtra submitted CMP No. 17(7)/79-GWDT stating that in view of certain facts it was no longer necessary to consider the question of submergence even if the dam is designed for FRL/MWL + 150 ft. It is stated therein that the State of Andhra Pradesh had submitted to the Central Water Commission the Polavaram Project designed for FRL/MWL + 150 ft. The Central Water Commission sent letter No. 6/125/78-TE/2512-2514, dated the 3rd July, 1979 to Andhra Pradesh Government, the material portion of which is as follows:—

"It is seen from the project report that the State Government of Andhara Pradesh have proposed the Polavaram Project for an FRL/MWL of + 150 ft. Therefore, prima facie, with MWL at Polavaram at RL + 150 ft. submergence due to all effects including that of backwater effect will always be more than RL + 150 ft. upstream and also at Konta. The State Government will no doubt be working out the backwater effects at Konta/Motu considering advance releases from Polavaram Dam. It is however seen that during the year 1966 CWC had observed that a flood level at Konta had reached an RL 46.595 m (R. L. 152.88 ft.) which is 0.875 m higher than RL 45.72 m (RL + 150 ft.). This is an observed flood whose frequency is expected to be high. For a flood at Konta corresponding to frequency the flood adopted for the Palavaram Dam (which will be between 1 in 500 years to 1 in 1000 years), the natural flood level at Konta should be expected to be substantially higher than RL 45.72 m (RL +150 ft.). It would thus be seen that the stipulation that a flood level at Konta/Motu should not rise above RL + 150 ft. will not be practicable and that the agreements entered into by the States may have to be suitably modified. Perhaps this situation about observed flood level at Konta might not have been known to you and other States when this agreement was concluded."

It submitted that the State of Andhra Pradesh made necessary flood and backwater calculations for the pre and post project conditions of Polavaram Project a copy of which was sent by the State of Andhra Pradesh to the State of Maharashtra. Relying on these calculations, it has been urged that—

"It will be seen from these calculations of Andhra Pradesh that even under natural conditions of maximum flood in the Godavari and Sabari rivers—Motu/Konta being located on the bank of the Sabari and without any Polavaram Dam the flood level at Motu/Konta would be 167.88 ft. and with FRL/MWL at Polavaram + 150 ft. this flood level at Motu/Konta would rise to + 173.83 ft. Therefore, the agreement entered into between the States of Orissa, Madhya Pradesh and Andhra Pradesh on Polavaram level is impractical, unworkable and contrary to the situation in natural conditions of the flood levels in the rivers even without Polavaram Dam ought to be rejected in the Report of the Tribunal under Section 5(2) of the Act."

"On the other hand, the agreement entered into between Andhra Pradesh and Karnataka with regard to Polavaram Project

level as FRL/MWL + 150 ft. is practicable. With the project designed and constructed to this level, the permanent submergence at Motu/Konta would still not exceed +150 ft. but during the floods, areas upto RL + 173.83 ft. may be temporarily submerged in comparison to temperary submergence of these areas already upto RL+167.88 ft. under natural flood conditions even without any dam. This temporary submergence near Motu/Konta during floods could be prevented by Andhra Pradesh by constructing and maintaining protective embankments."

The State of Maharashtra prayed that in the interest of justice and for securing most equitable allocation of waters in the Godavari river, the Tribunal be pleased to incorporate and give effect to Clause 7 in Karnataka Agreement in its Report under Section 5(2) and pass such further orders as may be deemed just and necessary.

The notice of this CMP was given to the parties and they were also given time to file their replies.

The State of Andhra Pradesh has filed CMP No. 17(12)/79-GWDT, dated the 26th October, 1979, the State of Madhya Pradesh has filed CMP No. 17(15)/79-GWDT, dated the 31st October, 1979 and the State of Orissa has filed CMP No. 17(16)/79-GWDT, dated the 31st October, 1979 in reply to CMP No. 17(7)/79-GWDT, dated the 15th October, 1979 of the State of Maharashtra. The State of Karnataka has filed no reply. The arguments on these applications were heard, on the 2nd November, 1979. The State of Andhra Pradesh submitted in its reply that it had agreed to the allocation to the upper States under various agreements in good faith and with reciprocal assurance regarding the storage and that the Polavaram Project being the terminal storage which is below the confluence of the Sabari with the Godavari, it is absolutely necessary to balance the inflows from Inchampalli, Sileru, etc. in addition to tapping and utilising the yield from intermediate catchment which would otherwise go waste. It also submitted the following revised statement of the Polavaram Project showing the backwater effect/levels for the pre and post project conditions :—

Name of the site	Discharge in cusecs	
	30,00,000	36,00,000
(i) WITHOUT DAM :		
Polavaram Dam . . .	92·07	94·88
Kunavaram	157·37	165·57
Konta	158·07	166·10
(ii) WITH DAM (and with different pond levels during floods) :		
(a) Polavaram Dam . .	140·00	140·00
Kunavaram . . .	163·80	170·09
Konta	164·23	170·75
b) Polavaram Dam . .	145·00	145·00
Kunavaram . . .	165·85	172·03
Konta	166·23	172·33
(c) Polavaram Dam . .	150·00	150·00
Kunavaram . . .	168·23	173·97
Konta	168·54	174·22

The State of Andhra Pradesh also submitted that it was willing and prepared to adopt the suggestion of the State of Maharashtra to the effect that the temporary submergence near Motu/Konta during flood conditions could be prevented by Andhra Pradesh by constructing and maintaining protective embankments. In the end the State of Andhra Pradesh submitted that the Polavaram Project may be allowed FRL + 150 ft. subject to such safeguards regarding protection of land and property as the Tribuanl may deem proper.

The State of Madhya Pradesh in its reply vide CMP No. 17(15)/79-GWDT, dated the 31st October, 1979 stated that it did not accept the stand of the State of Maharashtra that the agreements entered into between the States of Orissa, Madhya Pradesh and Andhra Pradesh on Polavaram level are impracticable and unworkable. Notwithstanding the flood levels indicated, it would be possible to limit the submergence to the level agreed to in the Agreements dated the 7th August, 1978 and 15th December, 1978 by designing the dam and its appurtenant works and by operating the same to meet this objective.

The State of Madhya Pradesh also pointed out that the State of Andhra Pradesh had forwarded the Polavaram Project Report to the Central Water Commission on 1st December, 1978 for clearance and this project report is titled as 'Polavaram Project Stage-I, Phase (i), March 1978. This project report is not and could not be in consonance with the Agreements dated the 7th August, 1978 and 15th December, 1978 as they were entered into subsequently. The State of Madhya Pradesh also contested the correctness of the various calculations of backwater effects/levels as prepared by the State of Andhra Pradesh. It also submitted that it is willing to consider that the FRL for the Polavaram Project be maintained at RL + 150 ft. after the monsoon while during the monsoon the pond/reservoir level be kept low so that the maximum probable flood for the project, which is to be designed in consultation with the Central Water Commission, the MWL will not go above RL + 150 ft.

The State of Madhya Pradesh has further stated that with the present mode of communications, advance intimation of flood warning could be received at Polavaram site from the various gauge sites as well as storage projects located upstream and the water level at Polavaram could be lowered in advance to regulate the maximum probable flood so as not to exceed the MWL of RL 150 ft. It had also made several suggestions for this purpose to the State of Andhra Pradesh such as lowering crest level, increasing the gate height, omitting the breast wall and removing construction in the river Sabari.

The State of Madhya Pradesh has also raised an objection that the Project Report of March 1978 filed before the Central Water Commission by the State of Andhra Pradesh is not on the record of the Tribunal.

On the 2nd November, 1979 this Project Report[22] has been brought on the record of this case. On a comparison of the March 1978 Project Report with the Project Report[23] of May, 1978 we find that in both the Project Reports the location and design of the dam are the same. The March 1978 Project Report varies from the May 1978 Project Report in that in the former Project Report the work is to be done in two stages but this is not material for determining the FRL/MWL of the Polavaram Dam.

The State of Madhya Pradesh prayed inter alia that the petition made by the State of Maharashtra be rejected.

The State of Orissa in CMP No. 17(16)/79-GWDT, dated the 31st October, 1979 stated that the question relating to submersion of territories in Orissa and Madhya Pradesh due to construction of Polavaram Project has already been resolved by agreements submitted before the Tribunal. The State of Orissa did not accept the correctness of the letter sent by the Central Water Commission to the State of Andhra Pradesh already referred to above. It also did not accept the calculations regarding backwater effect/levels made by the State of Andhra Pradesh. It also submitted that Polavaram Project and Inchampalli Multi-purpose Projects are closely interlinked as Polavaram Project is dependent on the releases from Inchampalli power house. The FRL and MWL, of Polavaram Project are dependent on the FRL/MWL, discharging capacity of spillway, pattern of releases, etc. of Inchampalli Multipurpose Project. Since all these features about the Inchampalli Project were to be finalised later by the three States the FRL and MWL of Polavaram Project could also not be finalised. All that the three States could decide about Polavaram Project was that the two projects Inchampalli and Polavaram would be so planned that the submergence in Madhya Pradesh and Orissa territory would not exceed beyond + 150 ft. due to all causes. As this involved submergence of its territory, naturally the Agreement dated the 15th December, 1978 was entered into between the States of Andhra Pradesh and Orissa. Under this Agreement, the State of Orissa was assured that the submergence of its territory due to backwater and other effects of Polavaram Dam would not exceed + 150 ft. The State of Orissa prayed that the CMP of the State of Maharashtra be rejected.

During the course of arguments, the State of Karnataka emphatically supported the case put forward by the State of Maharashtra in CMP No. 17(7)/79-GWDT, dated the 15th October, 1979.

The extreme contention of the State of Maharashtra is that because under high flood conditions the land of the States of Madhya Pradesh and Orissa will be submerged in the natural course, such submergence should be taken into account for determining the FRL/MWL of the Polavaram Dam. This contention is not acceptable to us.

The Agreements dated the 7th August, 1978 and 15th December, 1978 both speak of backwater effect due to the construction of Polavaram Dam. The water held or forced back in consequence of the construction caused by a dam, weir or regulator is known as backwater. The rise in elevation of the surface profile of a stream when the flow is retarded above a dam or any other obstruction is referred[24] to as the backwater effect of the dam. Under certain circumstances which may be called flood conditions, there may be submergence of land above the river bed. But if the dam is constructed downstream, the area under submergence under those very circumstances is likely to increase due to backwater effect. A distinction must be drawn between the submergence as a consequence of the construction of a dam and submergence due to floods without a dam in existance.

From the materials on record also it is evident that there is a difference in the submergence caused by the backwater effect/level due to the Polavaram Dam after it comes into existance and the natural submergence due to floods before the Polavaram Dam comes into existance. It is the excess submergence caused by the backwater and other effects of Polavaram Dam which is to be avoided or minimised as far as possible. Correct backwater effect/level due to Polavaram Dam is to be determined by the Central Water Commission.

One step to minimise the excess submergence, suggested by the State of Maharashtra, is to construct and maintain protective embankments. In its reply dated the 26th October, 1979 Andhra Pradesh has stated in para 2 that it is willing and prepared to adopt the suggestion made by the State of Maharashtra in its petition to the effect that temporary submergence near Motu/Konta during floods could be prevented by Andhra Pradesh by constructing and maintaining protective embankments.

It may also be noted that the construction of various projects as envisaged in the various agreements filed by the party States and also by diversion of about 90 T.M.C. of water of the river Indravati to the Mahanadi basin are anticipated to retard the floods in due course. Thus, lesser submergence is anticipated in future.

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[22] Exhibit No. APG-364, Volume No. APPG-XXXV.

[23] Exhibit No. APG-360, Volume No. APPG-XXXIII.

[24] Sl. Nos. 4872 and 4874 of Multilingual Technica Dictionary on Irrigation and Drainage (International Commission on Irrigation and Drainage).

Again, with the improved methods of flood forecasting and tele-communication of flood warnings, Andhra Pradesh will be able to take suitable action to lower the pond level of the Polavaram Dam in time on receiving such warnings. On the construction of a number of dams upstream, sending of such warnings will be no problem. The Central Water Commission is already aware of it and has mentioned in its letter dated the 3rd July, 1979 sent to Andhra Pradesh that "The State Government will no doubt be working out the backwater effects at Konta/Motu considering advance releases from Polavaram Dam".

Another safeguard that may be adopted is to lower the reservoir level of the dam during flood season every year.

Yet another safeguard that may be adopted is that the level of the two canals be kept slightly lower than + 138 ft. and + 137 ft. which are the proposed full supply levels of the right and left canals respectively. The area which will be deprived of irrigation by lowering the full supply levels of canals can be fed by lift irrigation. Andhra Pradesh has already provided irrigation by lift on the left side. If necessary, another lift canal may be constructed on the right side.

In course of arguments on the 2nd November, 1979 Andhra Pradesh and Maharashtra emphatically submitted that with certain safeguards, FRL/MWL of Polavaram Dam should be kept as + 150 ft. but the States of Madhya Pradesh and Orissa insisted that in order to limit the submergence of their territory to the level mentioned in the Agreements of the 7th August, 1978 and the 15th December, 1978 the FRL/MWL must be reduced. The State of Karnataka urged that the FRL/MWL should be left to the discretion of the Central Water Commission.

So far as submergence is concerned, it is significant that Andhra Pradesh entered into an agreement with Karnataka on the 4th August, 1978 mentioning FRL/MWL of Polavaram Project as plus 150 ft. but subsequently on the 7th August, 1978 it entered into an agreement with Madhya Pradesh agreeing to the construction of Polavaram Project in the manner that the maximum submergence in Madhya Pradesh territory at Konta does not exceed R.L. + 150 ft. due to all effects including the backwater effect. To that Agreement Maharashtra, which was interested in the diversion, was also a party. Thereafter, Andhra Pradesh entered into the other agreement with Orissa on the 15th December, 1978 agreeing that the maximum submergence of the Orissa territory at Motu/Konta shall not exceed R.L. +150 ft. due to all effects including backwater effect. This shows that even at that stage, the State of Andhra Pradesh had envisaged that by making suitable changes in the Project and adopting proper safeguards, the excess submergence could be avoided.

During the course of arguments, Counsel for the State of Andhra Pradesh after due consideration has assured us that the State of Andhra Pradesh is willing to adopt and observe the following safeguards with regard to Polavaram Project :—

(i) the design of the Polavaram Dam including spillway, number and size of the gates, crest level, etc. be left to the Central Water Commission, but the Central Water Commission shall keep the FRL/MWL as + 150 ft.;

(ii) the Central Water Commission may determine the places and height of the embankments to be constructed in the States of Madhya Pradesh and Orissa to avoid submergence higher than +150 ft. at Konta/Motu due to backwater effect on account of the construction of Polavaram Dam;

(iii) the State of Andhra Pradesh shall pay and bear the cost of construction and maintenance of all necessary protective embankments;

(iv) Andhra Pradesh is prepared to lower the full supply level of the canals on both sides of the dam by two feet; and

(v) the pond level of Polavaram Dam will be so regulated that there is no aggravation in the submergence of land of the two States due to the backwater effect of the Polavaram Dam.

The following further safeguards may be considered:—

(1) if the Central Water Commission considers it necessary that during the monsoon period from 1st June to 30th September the reservoir level of Polavaram Dam be kept below the level to be determined by it, the State of Andhra Pradesh shall not exceed such limit and if the reservoir level rises above that level, it should be brought down to the lower level as soon as possible;

(2) the flood disposal capacity of the spillways at Polavaram shall be in conformity with the direction of the Central Water Commission to ensure that flood conditions at Konta/Motu are cleared and not aggravated due to backwater effect;

(3) that flood warning stations shall be established in consultation with the Central Water Commission on the main river and its major tributaries before starting operation of the Polavaram Dam. These stations will be provided with wireless equipments.

While giving clearance of the Polavaram Project, the Central Water Commission may impose all or any of the safeguards mentioned above or such other safeguards as it may consider proper in the circumstances of the case. We direct that such safeguards shall be observed by the State of Andhra Pradesh.

If because of any default or negligence on the part of the State of Andhra Pradesh in carrying out the aforesaid safeguards or any of them, any damage or injury is caused to the States of Madhya Pradesh and Orissa or to any of their inhabitants or to their properties, the State of Andhra Pradesh shall have to pay full compensation for such damage or injury as may be assessed by any competent authority.

If all these safeguards are observed and carried out, it would be possible to limit the submergence at Konta/Motu at R. L. + 150 ft. for most part of the year. The MWL denotes the maximum water level and when MWL is equal to FRL, the FRL is also the highest limit for storing the water in a dam and if this limit can be maintained for some period in a year taking in view all the safeguards undertaken by the State of Andhra Pradesh and directed by us to be undertaken the project could be cleared for that reservoir level. Further, if a controlling clause is inserted in the Agreement of the 4th August, 1978 to the effect that maximum submergence of the territories of the States of Madhya Pradesh and Orissa shall not be aggravated or increased by the backwater effect of the Polavaram Dam more than what would have been caused by floods had Polavaram Dam not been constructed, it will be imperative for the State of Andhra Pradesh to regulate the pond level of the Polavaram Dam accordingly.

In the course of arguments on the 2nd November, 1979 counsel for the States of Maharashtra, Karnataka and Andhra Pradesh agreed that subject to these safeguards, the Polavaram Dam could be cleared for FRL/MWL+150 ft. The State of Madhya Pradesh stated that it did not want to scuttle the Polavaram Project of the State of Andhra Pradesh. Orissa has submitted that the operation of the Polavaram Project will more or less be dependent on the storage in and water releases from Inchampalli Project. The Central Water Commission will naturally keep all these points in view while clearing the Polavaram Project in consultation with the concerned parties, after giving due consideration to achieve the objectives mentioned in the Project Reports of Andhra Pradesh. The Tribunal, however, on its part does not find any difficulty for clearing the Polavaram Project at FRL/MWL + 150 ft.

The long controversy of the diversion of the water of the Godavari river into the Krishna and the division of the waters of river Krishna due to such diversion must be settled once for all in the interest of the parties. This dispute can be solved by bringing into harmony all the three Agreements dated the 4th August, 1978, 7th August, 1978 and 15th December, 1978 without affecting materially the interests of the parties. On the point of submergence, Andhra Pradesh itself is a party to the Agreements dated the 7th August, 1978 and 15th December, 1978 and we do not think that we should make any change in these Agreements but some modifications in the Agreement of the 4th August, 1978 are called for if the objectives for which this Agreement has been entered into are to be achieved. If the Polavaram Project is cleared for FRL/MWL+150 ft. by the Central Water Commission, there is no difficulty in giving effect to all the three Agreements together. But ultimately the States of Karnataka and Andhra Pradesh had left the question of clearing the project in the hands of Central Water Commission and it has to exercise its discretion. We think that the Central Water Commission should be at liberty to clear the Polavaram Project for FRL/MWL lower than 150 ft. if it is necessary and technically feasible to do so keeping in view that as far as possible (i) all the areas of the State of Andhra Pradesh mentioned in the Polavaram Project Report of May, 1978 and Polavaram Project Stage I of March, 1978 are brought under Irrigation, (ii) the other benefits mentioned in the said Reports of the State of Andhra Pradesh are realised, and (iii) water to the extent of 80 T. M. C. or more is diverted to the river Krishna.

The Central Water Commission shall no doubt take care that such lowering of FRL/MWL will be to the minimum extent possible under the circumstances of the case. Taking this view of the matter we are making some modifications as mentioned hereinafter in the Agreement dated the 4th August, 1978.

The Tribunal has power to modify the Agreement dated the 4th August, 1978 to bring it into harmony with the other two Agreements. The Indus Commission while referring to the order of the Government of India made on the most part with the consent of the units concerned observed[25], "If owing to material errors in the original data, or a material change in river conditions, or other sufficient cause, those orders are now found to be inequitable, and if a more equitable arrangement can be discovered in present circumstances, with due regard to the interests of all the units concerned, the original orders may properly be modified. This implies of course that a modification of the orders in one particular may necessitate consequential modifications in other particulars by way of redressing the balance between the several units". Similarly, the Anderson Committee[26] recommended that circumstances may arise justifying review of an agreement which is no longer equitable. The Committee[27] found that the Sutlej Agreement of 1920 required modification and this finding was upheld by the Government of India (see Report of the Indus Commission, Volume I, p. 120, item 26).

Considering all the aspects of the matter, we direct that the Agreement of the 4th August, 1978 between the States of Karnataka and Andhra Pradesh be modified as follow :—

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[25] Report of the Indus Commission, Vol. I (1942) pp. 13-14.

[26] Report of a Committee of the Central Board of Irrigation on Distribution of the Waters of the Indus and its Tributaries, Vol.I, Final Report, (1935), pp. 24, 28, 30.

[27] *Ibid.* pp. 28, 31.

(i) In Clause 7(a), after the words "FRL/MWL plus 150 ft." and in Clause 7(e), after the words "FRL/MWL of plus 150 ft." the following words be added:—

"or such other FRL/MWL as the Central Water Commission may find necessary and technically feasible keeping in view that as far as possible (i) all the areas of the State of Andhra Pradesh mentioned in the Polavaram Project Report of May, 1978 and Polavaram Project Stage I of March, 1978 are brought under irrigation, (ii) the other benefits mentioned in the said Reports of the State of Andhra Pradesh are realised, and (iii) water to the extent of 80 T.M.C. or more is diverted to the river Krishna".

(ii) After Clause 7(a), the following proviso be added :—

"Provided that the excess submergence over and above the natural submergence due to all effects including backwater effect on account of the construction of the Polavaram Dam does not exceed the limits mentioned in the Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh and the Agreement dated the 15th December, 1978 between the States of Andhra Pradesh and Orissa or in any other agreement that may be entered into hereafter".

In our Final Order, the Agreement dated the 4th August, 1978 between the States of Karnataka and Andhra Pradesh shall stand amended as aforesaid.

Now, we come to another CMP No. 17(9)/79-GWDT, filed on the 18th October, 1979 by the State of Karnataka. The material part of this CMP is that—

"the recital in the bilateral agreement dated 4-8-1978 between Karnataka and Andhra Pradesh, Exhibit No. MRG-86 for the clearance of the Polavaram Project for an FRL/MWL of +150 ft. recognises and agrees to the proposal of the State of Andhra Pradesh and that it is not in any way a condition precedent for distribution and utilisation of the 80 T.M.C. of Godavari waters. It is a term of the Agreement dated 4-8-1978 that the States of Maharashtra and Karnataka would be entitled to utilise their respective shares in the waters from the date of clearance of the Polavaram Project by the Central Water Commission irrespective of the actual diversion taking place. It is submitted further that in any event the rights of Karnataka and Maharashtra to utilise their shares of the waters would be exercisable from the date of clearance of the Polavaram Project by the Central Water Commission either with FRL/MWL of + 150 ft. or for such other height as may be sanctioned by the Central Water Commission."

The State of Karnataka prayed that the Tribunal may be pleased to hear arguments on behalf of the State of Karnataka on the meaning, scope, import and effect of the Agreements dated the 4th August, 1978, 7th August, 1978 and 15th December, 1978 and allow the parties to adduce further evidence if necessary and to pass such order or further orders as this Tribunal deems just and proper.

Notice of this CMP was given to the other party-States. The State of Andhra Pradesh submitted C.M.P. No. 17(11)/79-GWDT, dated the 26th October, 1979 in which it took the position that the assumption of the State of Karnataka that FRL/MWL+150 ft. for Polavaram is not in any way a condition precedent for distribution and utilisation of 80 T.M.C. of Godavari water is absolutely incorrect and is contrary to the very terms of Clause 7(a) of the Agreement of the 4th August, 1978 . The State of Andhra Pradesh also submitted that there can be no question of diversion of the Godavari waters into the Krishna unless Polavaram Project is cleared for F.R.L.+ 150. It prayed that the Tribunal may be pleased to allow a level of + 150 above M.S.L. for the F.R.L. of Polavaram Project subject to such safeguards as the Tribunal may be pleased to provide so as to give effect to all the agreements without detriment to any of the parties.

The State of Madhya Pradesh filed C.M.P. No. 17(14)/79-GWDT, dated the 31st October, 1979 in which it submitted that the entire dispute of the Godavari waters allocation and their use has been settled and that the petition of the State of Karnataka be dismissed.

The State of Orissa filed C.M.P. No. 17(17)/79-GWDT, dated the 31st October, 1979 in which it stated that the agreements between the five States completely resolve the issues regarding sharing of Godavari waters and the petition of the State of Karnataka be dismissed.

Arguments were heard on the 2nd November, 1979 in connection with the decision of the C.M.P. No. 17(7)/79-GWDT, dated the 15th October, 1979 filed by the State of Maharashtra. The Tribunal has already expressed its views and modified Clause 7(a) and Clause 7(e) of the Agreement dated the 4th August, 1978 between the States of Andhra Pradesh and Karnataka. These modifications are sufficient to dispose of C.M.P. No. 17(9)/79-GWDT, filed by the State of Karnataka.

We shall next consider whether we should make any provision in our Final Order with regard to (1) underground water; (2) the definition of use; (3) measurement of use; (4) diversion by a party-State of its share of the Godavari waters to any other basin; and (5) future amendment of our Final Order by agreement.

The underground water resources of an inter-State river basin is a relevant factor for the equitable apportionment of the waters of a river basin. Underground water may furnish alternative means for satisfying irrigation needs. Moreover, there may be such a close connection between the surface and ground water resources of a river basin that it may be necessary to limit the use of ground water to prevent diminution of the water supply downstream[28].

Further, ground water flow is not fully calculable from the technical point of view and, therefore, not fully cognisable as yet from the legal point of view[29]. Being invisible, ground water resources baffle quantitative measurement[30].

In the present case, however, we are dividing the waters of the river Godavari on the basis of the agreements already arrived at between the parties. The question of furnishing alternative means for satisfying the irrigation needs of a State does not, therefore, arise.

Under the Indian Law,[31] every owner of land has the right to collect and dispose of within his own limits all water under the land which does not pass in a defined channel. The Indian Law is based on the common law of England. The common law doctrine has been considerably modified in England by the Water Resources Act 1963, Chapter 38, Sections 23 to 32, but the general Indian law continues to be the same as before. The States of Maharashtra, Madhya Pradesh and Andhra Pradesh by the agreement dated the 7th August, 1978 and the States of Andhra Pradesh and Orissa by the Agreement dated the 15th December, 1978 have agreed that "all the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari", but the State of Karnataka has not made any such declaration by any agreement to which it is a party. However, beyond doubt, the Tribunal has power to pass orders on matters on which an agreement entered into between any State or States is silent. We, therefore, propose to make the following provision in our Final Order :—

> "All the States can make use of the underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as the use of water of the river Godavari".

[28] Arizona v. California 376 U. S. 340 (Clause IV of the decree); Master's Report in the same case cited in AH Garrestson and others. The Law of International Drainage Basins 1967, pp. 525-526, see also ibid, p.p. 585-586.

[29] A. H. Garreston and others, The Law of International Drainage Basins 1967 p. 312; L.A. Teclaff, The River Basin in History and Law, p. 10.

[30] The Nation's Water Resources, United States Water Resources Council 1968, pp. 3-2-1, 3-2-7.

[31] The Indian Easements Act, 1882, Section 7, Illustration (g); Report of the Indus (Rau) Commission Vol. I, pp 54 55.

In order to prevent any misunderstanding with regard to the significance of the word "use", we propose to make the following provision in our Final Order :—

> "Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storage created for the above purposes."

We may mention that the States of Maharashtra, Madhya Pradesh and Andhra Pradesh in their Agreement dated the 7th August, 1978 and the States of Orissa and Andhra Pradesh in their Agreement dated the 15th December, 1978 have defined the word 'use' in the same manner.

With regard to measurement of use, we find that by the Agreement of the 7th August, 1978 the States of Maharashtra. Madhya Pradesh and Andhra Pradesh have agreed and by the Agreement of the 15th December, 1978 the States of Andhra Pradesh and Orissa have agreed that the use of water shall be measured in the manner indicated below :—

Use	Measurement
(i) Irrigation use	100 per cent of the quantity diverted or lifted form the river or any of the tributaries or from any reservior, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use	100 per cent of evaporation losses in the storage.
(iii) Domestic and municipal water supply within the basin.	By 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	By 2·5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

There is no provision with regard to measurement of uses in any agreement to which the State of Karnataka is a party. But we are of the opinion that the formula of measurement of use, mentioned in the aforesaid Agreements dated the 7th August, 1978 and the 15th December, 1978 is proper and should be made applicable wherever the measurement of use of the

waters of the river Godavari and its tributaries is necessary, We, therefore, propose to make the following provision in our Final Order:—

> "The uses of water mentioned in column (1) below shall be measured in the manner indicated in column (2):—

Use	Measurement
(i) Irrigation use .	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use . .	100 per cent of evaporation losses in the storage.
(iii) Domestic and municipal water supply within the basin.	20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	2.5percent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

The Agreement of the 19th April, 1971 between the States of Maharashtra, Karnataka, Madhya Pradesh, Andhra Pradesh and Orissa, as modified by the Agreement of the 27th July, 1971 and the Tribunal's orders passed thereon, set forth in Appendix C in Part I, Vol. II, provided that "Each of the States concerned will be at liberty to divert any part of the share of the Godavari waters which may be allocated to it by this Honourable Tribunal from the Godavari basin to any other basin." In view of these Agreements and orders, we propose to insert the following provision in our Final Order:—

> "Each of the States concerned will be at liberty to divert any part of the share of the Godavari water allocated to it from the Godavari basin to any other basin."

In the agreements filed by the parties, they have not provided for any future alteration, amendment or modification of our decision by mutual consent but in the Tribunal's Final Order, it is necessary to state whether such future modifiaction is permissible or not. We are of the opinion that nothing contained in the Tribunal's Final Order should prevent the parties from making such modification. We, therefore, propose to insert the following clause in our Final Order:—

> "Nothing contained herein shall prevent the alteration, amendment or modification of all or any of the foregoing Clauses by agreement between the parties or by legislation by Parliament."

Lastly, there remains the question of allocation of cost to be shared between the parties. We are of the opinion that Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own cost of appearing before the Tribunal. The expenses of the Tribunal shall be apportioned and paid by the States of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares. Necessary provision in this regard has been made in our Final Order.

CHAPTER V

DECISION OF ISSUES

In this Chapter we proceed to decide the Issues.

Issue No. I:

"Was the agreement of 1951 between the States other than Orissa regarding allocation of the waters of the river Godavari valid and enforceable? Is it still subsisting and operative and binding upon the States concerned in the present reference? If so, with what effect? Is there any breach of agreement as alleged?

Sub-Issues:

(1) Was the agreement invalid in as much as Orissa was not a party to it?

(2) Was the agreement in conformity with Article 299 of the Constitution? Was it within the purview of the Article?

(3) Was the agreement inequitable or arbitrary or based on inadequate data? If so, with what effect?

(4) Did the agreement on its true construction allocate waters for specific projects? Have some of the projects been abandoned? If so, has the agreement become void?

(5) Has the agreement ceased to be operative on the reorganisation of the States?

(6) If the agreement is binding what reallocation of waters, if any, should be made, in view of the reorganisation of States?

(7) Is there any breach of the agreement as alleged by Andhra?

(8) Is the validity of the agreement dependent upon the validity of the Krishna agreement?"

The Memorandum of Agreement of 1951 determined the dependable flow of the Godavari river system and allocated specific quantities of water to the then four States of Bombay, Hyderabad, Madhya Pradesh and Madras. The allocation implied that each State would be entitled to utilise the quantity of water allotted to it. Orissa, a co-riparian State, is not a party to the Agreement and is not bound by it. As a matter of fact, on the 6th January, 1970 all the parties conceded that Orissa was not bound in any way by the Agreement of 1951. Orissa now claims that it is entitled to its equitable share in the Godavari waters. On allotment to Orissa of its equitable share, the other States could not have got the quantity of water allocated to them under the Agreement of 1951. Thus the Agreement cannot take effect according to its tenor and must be held to be invalid.

Moreover, the Agreement of 1951 was in operation for a period of 25 years only and the Agreement has ceased to be operative since July, 1976. Issue No. I was raised at the instance of the State of Andhra Pradesh but the Issue is no longer pressed by it. On the 12th July, 1976 the learned Advocate General of the State of Andhra Pradesh made the following statement:

"It was provided in the Inter-State Agreement dated the 27th/28th July, 1951 in Part III General, Clause 3, that 'the allocations made under Parts I and II shall be reviewed after 25 years' and so the agreement will expire by 27th/28th July, 1976. Further on 19-12-1975 another Inter-State agreement was entered in to between all the five Riparian States for partial allocation of the waters of the River Godavari and its Tributaries.

In view of the above circumstances, I on behalf of the State of Andhra Pradesh, state that Issue No. I need not be answered by this Hon'ble Tribunal."

Accordingly, Issue No. I no longer survives and is disposed of accordingly.

Issue No. II:

Do the waters flowing through any State belong exclusively to that State? If so, with what effect?

This issue was raised at the instance of the States of Madhya Pradesh and Orissa. On the 24th April, 1974 the State of Madhya Pradesh stated that it did not press Issue No. II and on the 10th May, 1974 the State of Madhya Pradesh expressly abandoned the Issue. On the 2nd January, 1979 the State of Orissa stated that it did not also press this Issue and thus Issue No. II no longer survives and is disposed of accordingly.

Issue No. III:

What directions, if any, should be given for the equitable apportionment of the beneficial uses of the waters of the Godavari and the river valley ?

Sub-Issues:

(1) On what basis should the available waters be determined?

(2) How and on what basis should the equitable apportionment be made?

(3) What projects and works in operation or under construction, if any, should be protected and/or permitted? If so, to what extent?

(4) Should diversion or further diversion of the waters outside the Godavari drainage basin be protected and/or permitted? If so, to what extent and with what safeguards? How is the drainage basin to be defined?

(5) Should any preference or priority be given to irrigation over production of power? Should any preference or priority be given to any other use?

(6) Has any State alternative means of satisfying its needs? If so, with what effect?

(7) Is the legitimate interest of any State affected or likely to be affected prejudicially by the aggregate utilisation and requirements of any other State?

(8) What machinery, if any, should be set up to make available and regulate the allocations of waters, if any, to the States concerned or otherwise to implement the decision of the Tribunal?"

The Agreements filed by the parties have apportioned the waters of the Godavari river between them.

In the Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, the three States have agreed to set up a duly constituted Tripartite Inter-State Control Board for Inchampalli Project *inter-alia* for its operation and maintenance. Except as aforesaid the Agreements filed by the parties do not provide for setting up of any machinery by the Tribunal for making available and regulating the allocations of water to the States concerned or otherwise to implement the Agreement between the parties or the decision of the Tribunal. Issue No. III (8) is disposed of accordingly.

No other question arises under Issue No. III in view of the Agreements between the parties and the Issue is disposed of accordingly.

Issue No. IV:

"(a) Are (i) Inchampalli and (ii) Ippur (Polavaram) Projects likely to submerge the territories of Madhya Pradesh? If so, to what extent and with what effect?

(b) Are (i) Pochampad, (ii) Swarna (iii) Suddabhagu and (iv) Inchampalli Projects, as proposed by Andhra Pradesh, likely to submerge the territories of Maharashtra? If so, to what extent and with what effect?

(c) Is it lawful for Andhra Pradesh to execute projects likely to submerge the territories of other States without their prior consent?"

Issue No. IV raised questions regarding submergence by projects of some States of the territories of other States.

The Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh provided for the submergence of the territories of Madhya Pradesh, Maharashtra and Andhra Pradesh by Inchampalli Project which will be a joint project, submergence of the territories of Madhya Pradesh by Polavaram Project and submergence of the territories of Maharashtra by Pochampad Project and settled all questions and disputes regarding submergence by these projects. The Agreement dated the 17th September, 1975 between the States of Karnataka and Andhra Pradesh, being Annexure I to the Agreement of the 19th December, 1975 between the five States, settled disputes regarding submergence of the territory of Karnataka by Singur Project of Andhra Pradesh. The Agreements of the 19th December, 1975, 4th August, 1978, 7th August, 1978, 15th December, 1978 and 11th July, 1979 settled all questions and disputes regarding submergence by Pochampad, Inchampalli, Taliperu, Polavaram, Lower Sileru Projects and Lower Sileru Irrigation Scheme, joint projects on the river Sabari, storages of Maharashtra to be constructed in the territory of the State of Madhya Pradesh, pick up weir at Temurdoh, submergence under storages in the territory of Madhya Pradesh and other questions of possible submergence to the satisfaction of the parties concerned. These Agreements dispose of Issue No. IV(a)(i) Inchampalli and IV(a)(ii) Ippur (Polavaram), IV(b)(i) Pochampad and IV(b)(iv) Inchampalli Projects. The subsequent controversy with regard to the submergence of the territories of Madhya Pradesh and Orissa by the Polavaram Project has been settled by our directions given in Chapter IV.

All questions regarding submergence of the territories of Maharashtra by Swarna Project[1] of Andhra Pradesh have been settled by the Agreement dated the 31st January, 1970 between the States of Maharashtra and Madhya Pradesh. This Agreement disposes of Issue No. IV(b) (ii) Swarna.

With regard to Suddabhagu Project, Andhra Pradesh stated[2] that the reservoir scheme originally contemplated for this project had been dropped and the scheme as now proposed by Andhra Pradesh involved no submergence in Maharashtra. In view of this statement, the State of Maharashtra in its argument on the 24th August, 1978 stated that it did not press the issue regarding the submergence due to Suddabhagu Project. Issue No. IV(b)(iii) Suddabhagu is disposed of accordingly.

Issue No. IV(c) raises a general question whether it is lawful for the State of Andhra Pradesh to execute projects likely to submerge the territories of other States without their prior con-

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1. Exh. MRG-116; MRDG Vol XXV p. 18
2. APG III, p. 59

sent. The parties have carefully considered the question of possible submergence of the territories of a party-State by the projects of another State and have made adequate provision for them in the Agreements between them with regard to submergence. It is to be observed that each case of possible submergence must be dealt with separately after consideration of a concrete project involving submergence and all relevant facts bearing on the question of such submergence. But it cannot be said generally that any project of the State of Andhra Pradesh involving submergence of the territory of other States is permissible without the prior consent of the affected States. Issue No. IV(c) is disposed of accordingly.

Paras 3 and 4 of the petition jointly filed by the States of Maharashtra, Madhya Pradesh and Andhra Pradesh on the 8th August, 1978 annexing the Agreement dated the 7th August, 1978 settled all disputes between the three States including the disputes raised in Issue No. IV and the level of Inchampalli Project. Para 3 of the petition jointly filed by the States of Orissa and Andhra Pradesh on the 2nd January, 1979 annexing the Agreement dated the 15th December, 1978 settled all outstanding matters between the two States regarding Issues I to IV and the sub-basinwise allocation between them of the water of the Godavari and its tributaries below Pochampad. Paras 2 and 3 of CMP No. 17(4)/79-GWDT, dated the 16th July, 1979 stated that the Agreement of the 11th July, 1979 between the States of Orissa and Madhya Pradesh settled all outstanding matters between the two States regarding the sub-basinwise allocation of the water of the Godavari and its tributaries downstream of Pochampad and all disputes on Issues I to IV. No further question on Issue IV survives and the Issue is disposed of accordingly.

Issue No. V :

Is it possible to divert waters from the river Godavari to the river Krishna? Should such diversion be made, and if so, when, by whom, in what manner and at whose cost? Is the Tribunal competent to adjudicate on these questions?

Issue No. V raises the question with regard to diversion of water from the river Godavari to the river Krishna. The Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, the Agreement dated the 4th August, 1978 between the States of Andhra Pradesh and Karnataka and the Agreement between the States of Karnataka and Maharashtra evidenced by letters dated the 29th January, 1979, 30th January, 1979 and 31st January, 1979 and our Final Order have settled the dispute concerning diversion of the waters from the river Godavari to the river Krishna.

The State of Maharashtra has, however, filed CMP No. 17(8)/79-GWDT, dated the 15th October, 1979. The material contention of this CMP is contained in para 7 which is as follows :—

"Clause XIV(B) of the Final Order of the Krishna Water Disputes Tribunal states that :—

'In the event of the augumentation of the water of the river Krishna by the diversion of the waters of any other river no State shall be debarred from claiming before any authority or Tribunal even before the 31st May, 2000 that it is entitled to a greater share in the waters of the river Krishna on account of such augmentation nor shall any State be debarred from disputing such claim'.

So far as diversion of the Godavari waters to the Krishna from Polavaram barrage is concerned, the States of Maharashtra, Karnataka and Andhra Pradesh shall not exercise the above liberty as the diversion and its consequences have been specifically agreed to by the three States. But if the diversion of the Godavari water to the Krishna takes place from any point other than Polavaram barrage, then the liberty to the parties as granted in Clause XIV(B) of the Final Order of Krishna Water Disputes Tribunal should not be disturbed by the Report of this Honourable Tribunal".

It is submitted by the State of Maharashtra that while preparing the Report, the Tribunal be pleased to order that what is granted to the States of Maharashtra, Karnataka and Andhra Pradesh by Clause XIV(B) of the Krishna Water Disputes Tribunal in its Final Order is not affected or disturbed except for the diversion of the Godavari waters from the Polavaram barrage which has been specifically agreed to and provided for in the Agreements of the parties. The notice of this application was given to all the parties.

The State of Andhra Pradesh in its CMP No. 17(10)/79-GWDT, dated the 26th October, 1979 submitted that no decision or clarification can be made by the Godavari Tribunal regarding Clause XIV(B) in the Final Order of the Krishna Water Disputes Tribunal.

The State of Karnataka did not submit any reply. The other States viz. the States of Madhya Pradesh and Orissa submitted their replies but they are not interested in this matter. The arguments were heard on the 2nd November, 1979. We are of the opinion that in view of the Agreements filed by the parties and our Final Order, it is not necessary for us to make any comment or clarification on Clause XIV(B) of the Final Order of the Krishna Water Disputes Tribunal. Issue No. V is answered as aforesaid.

Issue No. VI :

"To what relief are the parties entitled?"

Issue No. VI raises the issue with regard to general and other reliefs. The Agreements filed by the parties and the Tribunal's Final Order provide for all the reliefs to which the parties are entitled and the Issue is answered accordingly.

CHAPTER VI

CONCLUDING OBSERVATIONS

We would like to take this opportunity to express our gratitude to the States of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Orissa, and their eminent counsel and engineers for giving us their active cooperation and assistance at every stage. We are happy to record that the party-States displayed remarkable spirit of accommodation and sincerety of purpose in their efforts to reach a settlement of this highly technical and complicated water dispute through negotiations. We congratulate the party-States in successfully resolving the differences between them through mutual efforts. The precedent so established by the party-States in settling the Godavari water disputes is unique indeed. We sincerely trust that this precedent will set an example for resolving water disputes that may arise in future.

We must give our sincere thanks to both the Assessors Shri K. R. Mehndiratta and Shri B. R. Palta who were fully conversant with the various complicated technical problems connected with the Godavari case. They discharged their duties with a deep sense of devotion.

To the officers and members of our office staff we owe our gratitude for their dedication with which they completed the tasks assigned to them within the time schedule set by us. The remarkable sense of responsibility and team spirit displayed by them are highly praiseworthy. Shri R. P. Marwaha who has been the Secretary of the Tribunal since December, 1973 and during whose tenure of office most of the important hearings of the Godavari case took place has been conspicuous in the discharge of his duties with zeal and devotion, in inspiring team spirit amongst all the officers subordinate to him, and for his thorough mastery of the entire records of the Godavari case. We place on record our appreciation of the services rendered by him.

CHAPTER VII

FINAL ORDER OF THE TRIBUNAL

The Tribunal hereby passes the following Order :—

Clause I :

All the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

Clause II :

Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

Clause III :

The uses of water mentioned in column (1) below shall be measured in the manner indicated in column (2) :

Use (1)	Measurement (2)
(i) Irrigation use	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use . .	100 per cent of evaporation losses in the storage.
(iii) Domestic and municipal water supply within the basin.	20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or form any reservoir, storage or canal
(iv) Industrial use within the basin.	2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

Clause IV :

Each of the States concerned will be at liberty to divert any part of the share of the Godavari waters allocated to it from the Godavari basin to any other basin.

Clause V :

The following Agreements so far as they relate to the Godavari river and Godavari river basin be observed and carried out :—

A. The Agreement dated the 19th December, 1975 between the States of Karnataka, Maharashtra, Madhya Pradesh, Orissa and Andhra Pradesh annexed hereto and marked Annexure "A" agreeing to the clearance of projects for the utilisation of waters of the Godavari river and its tributaries in accordance with :—

(a) Agreement between the States of Karnataka and Andhra Pradesh on the 17th September, 1975—Annexure I.

(b) Agreement between the States of Maharashtra and Andhra Pradesh on the 6th October, 1975—Annexure II.

(c) Agreement between the States of Madhya Pradesh and Andhra Pradesh on the 7th November, 1975—Annexure III.

(d) Agreement between the States of Orissa and Madhya Pradesh on the 19th December, 1975—Annexure IV.

B. Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh annexed hereto and marked Annexure "B".

C. Agreement dated the 4th August, 1978 betweeen the States of Andhra Pradesh and Karnataka annexed hereto and marked Annexure "C" subject to the modifications in Clauses 7(a) and 7(e) of this Agreement as contained in Chapter IV.

D. Agreement dated the 15th December, 1978 between the States of Orissa and Andhra Pradesh annexed hereto and marked Annexure "D".

E. Agreement between the States of Karnataka and Maharashtra evidence by letters dated the 29th January, 1979, 30th January, 1979 and 31st January, 1979 annexed hereto and marked Annexure "E".

F. Agreement dated the 11th July, 1979 between the States of Orissa and Madhya Pradesh annexed hereto and marked Annexure "F".

Clause VI :

Regarding Polavaram Project, the State of Andhra Pradesh shall observe such safeguards as it may be directed to do so by the Central Water Commission.

Clause VII :

Nothing in the Order of this Tribunal shall impair the right or power or authority of any State to regulate within its boundaries the use of water, or to enjoy the benefit of waters within that State in a manner not inconsistent with the Order of this Tribunal.

Clause VIII :

In this Order,—

(a) Use of the water of the river Godavari by any person or entity of any nature whatsoever within the territories of a State shall be reckoned as use by that State.

(b) The expression "Godavari waters" with its grammatical variations and cognate expressions includes water of the main stream of the Godavari river, all its tributaries and all other streams contributing water directly or indirectly to the Godavari river.

Clause IX :

Nothing contained herein shall prevent the alteration, amendment or modification of all or any of the foregoing clauses by agreement between the parties or by legislation by Parliament.

Clause X :

The Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal. The expenses of the Tribunal shall be apportioned and paid by the States of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares.

ANNEXURE A

GODAVARI RIVER BASIN AGREEMENT

WHEREAS certain discussions have taken place amongst the five States of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Orissa, subsequent to meeting of 19th July, 1975 held at New Delhi on the use of the waters of the Godavari river and its tributaries, and

WHEREAS in pursuance thereof the following agreements have been entered into between the States hereinafter mentioned viz.

(a) Agreement between the States of Karnataka and Andhra Pradesh on 17-9-1975—Annexure I;

(b) Agreement between the States of Maharashtra and Andhra Pradesh on 6-10-1975—Annexure II;

(c) Agreement between the States of Madhya Pradesh and Andhra Pradesh on 7-11-1975—Annexure III;

(d) Agreement between the States of Orissa and Madhya Pradesh on 9-12-1975—Annexure IV;

WHEREAS the States of Karnataka, Andhra Pradesh, Maharashtra, Madhya Pradesh and Orissa have considered the said bilateral agreements in their meeting on 19-12-1975 at New Delhi.

NOW the States of Karnataka, Andhra Pradesh, Maharashtra, Madhya Pradesh and Orissa hereby agree to the sanction and clearance of projects for the utilisation of waters of the Godavari river and its tributaries in accordance with the said agreements provided that nothing in these agreements will be treated as a concession by any State in respect of any of its contentions in any other water disputes with any other State or with respect to the dispute regarding the sharing of the balance quantity of water in the Godavari and its tributaries. State in this agreement means any of the aforesaid five States.

The five basin States agree that this agreement will be filed before the Godavari Water Disputes Tribunal.

Now as a testimony thereof, we the Chief Ministers of concerned States append our signatures.

New Delhi,

December 19, 1975.

Sd/- 19/12/75
(J. VENGAL RAO)
Chief Minister,
Andhra Pradesh.

Sd/- 19/12/75
(D. DEVRAJ URS)
Chief Minister,
Karnataka.

Sd/- 19/12/75
(P. C. SETHI)
Chief Minister,
Madhya Pradesh.

Sd/-
19-12-75
(S. B. CHAVAN)
Chief Minister,
Maharashtra.

Sd/-
(NANDINI SATPATHY)
Chief Minister,
Orissa.

In the presence of—

Sd/-
(K. N. SINGH)
Deputy Minister,
Ministry of Agriculture
and Irrigation,
Government of India.

Sd/-
(JAGJIVAN RAM)
Minister of Agriculture
and Irrigation,
Government of India.

ANNEXURE I

PROCEEDINGS OF A MEETING BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH, HELD AT BANGALORE ON THE 17TH SEPTEMBER 1975

The following were present :—

KARNATAKA

1. Shri D. Devaraj Urs.
   Chief Minister.
2. Shri Subhash Asture.
   Minister of State for
   Major and Medium
   Irrigation.

ANDHRA PRADESH

1. Shri J. Vangal Rao.
   Chief Minister.
2. Shri Ch. Subbarayudu.
   Minister for
   Municipal
   Administration.

KARNATAKA

3. Shri G.V.K. Rao, Chief Secretary.
4. Shri I. M. Magdum, Special Secretary to Government, P.W.D
5. Shri J. C. Lynn, Secretary to Chief Minister.
6. Shri B. Subramanyam, Superintending Engineer, W.R.D.O.
7. A. V. Shankar Rao, Superintending Engineer W.R.D.O.
8. Shri S. K. Mohan, Under Secretary to Government, P.W.D.

ANDHRA PRADESH

3. Shri C. R. Krishnaswami, Raosaheb, Secretary to Chief Minister
4. Shri M. Gopalkrishnan, Secretary, Irrigation & Power.
5. Shri B. Gopalkrishna Murthy, Special Officer, Water Resources.
6. Shri G.K.S. Iyyengar, Superintending Engineer, Interstate-1, Water Resources.

1. The discussions related to the clearance of projects upstream of Nizamsagar in Karnataka and Andhra Pradesh States.

2. After full discussion, the following points were agreed to, as an interim measure :—

(a) Karnataka may go ahead with the following two projects, and the utilisation will be as indicated against each :

Name of project	Utilisation of water
(i) Karanja Project . .	13·10 TMCft.
(ii) Chulkinala Project .	1·17 TMCft.

(b) Andhra Pradesh may go ahead with the construction of a reservoir at Singur for the withdrawal of 4 (four) TMCft. for purposes of drinking water for Hyderabad city.

D. DEVRAJ URS
Chief Minister
Karnataka.

3. Andhra Pradesh stated that they propose to construct the Reservoir at Singur with a capacity of 30 TMCft., and that this may involve the submersion of some land in Karnataka State. In that event, the details regarding the project and of the submersible land in Karnataka will be furnished to the Government of Karnataka for their consideration. Karnataka stated that any evaporation loss from the Reservoir should come out of the share of Andhra Pradesh.

4. The Chief Minister of Andhra Pradesh is having discussions with the Chief Minister of Maharashtra also about the construction of projects in the Manjira sub-basin. Details of any agreement arrived at will be made available to the Government of Karnataka, so that all the three State Governments could arrive at mutually consistent agreements.

5. The details of the interim agreement among the three States will be furnished to the Government of India, and also filed before the Tribunal, at the appropriate time.

J. VENGAL RAO
18-9-1975
Chief Minister
Andhra Pradesh.

ANNEXURE II

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF MAHARASHTRA AND ANDHRA PRADESH HELD AT HYDERABAD ON THE 6TH OCTOBER 1975

The following were present :—

ANDHRA PRADESH

1. Sri J. Vengal Rao Chief Minister.
2. Sri J. Chokka Rao Minister for Agriculture and Transport.
3. Sri N. Bhagwandas, IAS Chief Secretary.
4. Sri P. Ramchandra Reddi Advocate-General.
5. Sri A. Krishnaswami, IAS Ist Member, Board of Revenue.
6. Sri CR Krishnaswamy Rao Sahib, IAS Secretary to Chief Minister.
7. Sri M. Gopalakrishnan, IAS Secretary, Irrigation & Power.

MAHARASHTRA

1. Sri S. B. Chavan Chief Minister.
2. Sri V. B. Patil Minister, Irrigation.
3. Sri M. N. Phadke Barrister-at-Law.
4. Sri V. R. Deuskar Secretary, Irrigation Deptt.
5. Sri M. G. Padhye Chief Engineer (WR) and Joint Secretary Irrigation Deptt.

ANDHRA PRADESH

8. Sri P. Sitapati, IAS
Joint Secretary,
Irrigation & Power.
9. Sri B. Gopalkrishnamurthy
Special Officer, Water
Resources.
10. Sri M. Jaffer Ali
Adviser, Irrigation.
11. Sri D. V. Sastry
Government Pleader.
12. Sri G.K.S. Iyengar
S.E., Inter-State
Circle-I.

MAHARASHTRA

6. Sri K. S. Shankar Rao
S.E. & Dy. Secy.
Irrigation Deptt.
7. Sri Sridhara Rao Joshi
Spl. Officer,
Irrigation Deptt.

The discussions related to the clearance of the projects on and the use of waters of Godavari river and its tributaries.

After full discussions the following points were agreed to :—

I. Maharashtra can use for their beneficial use all waters upto Paithan dam site on the Godavari and upto Siddheswar dam site on the Purna.

II. (i) From the waters in the area of the Godavari basin below Paithan dam site on the Godavari and below Siddhewar dam site on the Purna and below Nizamsagar dam site on the Manjira and upto Pochampad dam site on the Godavari, Maharashtra can utilise waters not exceeding 60 TMC for new projects including any additional use over and above the present sanctioned or cleared utilisation, as the case may be.

(ii) Andhra Pradesh can go ahead with building its Pochampad Project with FRL 1091 and MWL 1093 and is free to utilise all the balance waters upto Pochampad dam site in any manner it chooses for its beneficial use. Maharashtra will take necessary action to acquire any land or structures that may be submerged under Pochampad Project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of some bridges and roads that may become necessary. Maharashtra also agrees to the submergence of the river and stream beds.

III. (i) In the Manjira sub-basin above Nizamsagar dam site, Maharashtra can utilise waters not exceeding 22 TMC for new projects including any additional use over and above the present sanctioned or cleared utilisation as the case may be.

(ii) Andhra Pradesh can withdraw 4 TMC for drinking water supply to Hyderabad city from their proposed Singur project on the Manjira.

(iii) Andhra Pradesh can construct Singur project with a storage capacity of 30 TMC. Andhra Pradesh can also use 58 TMC under Nizamsagar project.

IV. Maharashtra concurs with the agreement arrived at between the States of Andhra Pradesh and Karnataka in regard to the use proposed by Karnataka in the Manjira sub-basin upstream of Nizamsagar dam site.

V. Maharashtra and Andhra Pradesh will be free to use additional quantity of 300 TMC of water each below Pochampad dam site for new projects.

VI. Maharashtra and Andhra Pradesh agree in principle to the taking up of the Inchampalli Project with FRL as commonly agreed to by the interested States., viz., Maharashtra, Andhra Pradesh and Madhya Pradesh.

VII. Maharashtra and Andhra Pradesh agree to take up the following joint projects at the appropriate time with agreed utilisation :—

(a) Lendi Project
(b) Lower Penganga Project
(c) Pranhita Project

and to set up joint committees for this purpose.

VIII. The States of Maharashtra and Andhra Pradesh agree that this agreement will be furnished to the Government of India and also be filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
(J. VENGALA RAO)
6-10-75
Chief Minister,
Andhra Pradesh.

Sd/-
(S. B. CHAVAN)
6-10-75
Chief Minister,
Maharashtra.

ANNEXURE III

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF MADHYA PRADESH AND ANDHRA PRADESH HELD AT NEW DELHI ON THE 7TH NOVEMBER, 1975

The following were present :—

MADHYA PRADESH

1. Shri P. C. Sethi,
Chief Minister.
2 Shri V. R. Vike,
Minister of Irrigation
and Electricity.

ANDHRA PRADESH

1. Shri J. Vengala Rao,
Chief Minister.
2. Shri P. Ramachandra Reddi,
Advocate General.

MADHYA PRADESH

3. Shri Manohar Keshav, Secretary, Irrigation & Electricity.
4. Shri Y. S. Chitale, Senior Advocate.
5. Shri R. C. Jain, Commissioner, Madhya Pradesh Delhi.
6. Shri S. R. Bhatia, Secretary to Chief Minister.
7. Shri V. M. Chitale, Deputy Secretary, Irrigation.
8. Shri H. V. Mahajani, Superintending Engineer, Godavari Basin Circle.

ANDHRA PRADESH

3. Shri C.R. Krishna Swamy Rao Saheb, Secretary to Chief Minister.
4. Shri C. M. Shastry, Special Commissioner, Govt. of Andhra Pradesh.
5. Shri M. Gopalakrishnan, Secretary, Irrigation & Power.
6. Shri B. Gopalkrishnamurthy, Special Officer, Water Resources.
7. Shri D. V. Sastry, Govt. Pleader.
8. Shri G.K.S. Iyanger, Superintending Engineer, Inter State Circle, I.

The discussions related to the clearance of the projects and the use of water of Godavari River and its tributaries.

2. After full discussions, the following points were agreed to :—

(I) Madhya Pradesh and Andhra Pradesh will be free to use an additional gross quantity of 300 T.M.C. each out of the water in the Godavari River and its tributaries below Pochampad Dam site for new projects.

(II) Madhya Pradesh concurs generally with the agreement arrived at between Andhra Pradesh and Maharashtra on 6-10-1975. The quantity of 300 TMC mentioned in clause I above will not be in addition to 300 TMC agreed to between Andhra Pradesh and Maharashtra as per agreement dated 6-10-1975.

(III) In agreeing to 300 TMC referred to in clauses I and II above, for Andhra Pradesh, Madhya Pradesh on its part, has taken into account the estimated requirements within the basin only.

(IV) Madhya Pradesh and Andhra Pradesh agree in principle to the taking up of the Inchampalli project with F.R.L. as commonly agreed to by the interested States viz. Maharashtra, Andhra Pradesh and Madhya Pradesh.

(V) It is also agreed that Madhya Pradesh and Andhra Pradesh will consider the feasibility of taking up the Inchampalli project as a Joint Project with costs and benefits equitably shared amongst the above 3 States in accordance with a common agreement.

(VI) Madhya Pradesh agree to the taking up of Taliperu project by Andhra Pradesh involving a use of 5 TMC (Gross) of water out of the 300 TMC agreed to in clause I and to the submersion of river bed only in Madhya Pradesh. Andhra Pradesh agrees to put up at its cost such protective measures as would be necessary in consultation with Mandhya Pradesh to prevent submersion of other areas in Madhya Pradesh.

(VII) The States of Madhya Pradesh and Andhra Pradesh agree that nothing in this agreement will be treated as a concession by either State in respect of any of their contentions in any other water dispute with any other State or with respect to the dispute regarding the sharing of the balance of water in Godavari and its tributaries.

(VIII) The States of Madhya Pradesh and Andhra Pradesh agree that this agreement will be furnished to the Government of India and they would be requested to expedite the clearance of the projects. This Agreement will also be jointly filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
(P. C. SETHI)
Dt. 7-11-75
Chief Minister
Madhya Pradesh

Sd/-
(J. VENGALA RAO).
Dt. 7-11-75
Chief Minister
Andhra Pradesh

ANNEXURE IV

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF ORISSA AND MADHYA PRADESH HELD AT NEW DELHI ON THE 9TH DECEMBER, 1975

The following were present :—

ORISSA

1. Smt. Nandini. Satpathy, Chief Minister.
2. Shri Dibyalochan Shekar Deo Minister for Irrigation & Power.
3. Shri B. K. Mishra, Additional Development Commissioner.
4. Shri N. R. Hota, Secretary, Irrigation and Power.
5. Shri Suresh Chandra Tripathy, Chief Engineer, Irrigation

MADHYA PRADESH

1. Shri P. C. Sethi, Chief Minister.
2. Shri V. R. Uike, Minister for Irrigation and Electricity.
3. Shri Aziz Qureshi, Minister for State for Irrigation and Electricity.
4. Shri Manish Bahl, Secretary, Irrigation and Electricity.
5. Shri K. L. Handa, Irrigation Adviser.

ORISSA

6. Shri K.S.R. Chandran,
Special Commissioner,
Liaison.
7. Shri R.K. Rath,
Secretary to Chief Minister.
8. Shri Govind Das,
Senior Advocate.
9. Shri M. Lath,
Executive Engineer.

MADHYA PRADESH

6. Shri Y. S. Chitale,
Senior Advocate.
7. Shri R. C. Jain,
Commissioner, Madhya Pradesh,
8. Shri V. M. Chitale,
Deputy Secretary,
Irrigation.
9. Shri H. V. Mahajani,
Superintending Engineer.

The discussions related to the use of water of the Godavari basin and the clearance of projects of Madhya Pradesh and Orissa.

2. After full discussions, the following agreement was arrived at :—

I. Pending final allocation of the Godavari water, Madhya Pradesh and Orissa will be free to use additional gross quantity of 300 TMC and 200 TMC respectively, out of the water of the Godavari basin below Pochampad Dam site for new projects in such manner as they deem fit.

II. In agreeing to 200 TMC referred to in Clause I for Orissa, Madhya Pradesh on its part has taken into account the estimated requirements within the basin only. All the utilisation by Orissa and Madhya Pradesh contemplated in the various Clauses shall be only as a part of the 200 TMC and 300 TMC respectively agreed to in Clause I above. The States of Orissa and Madhya Pradesh will not be entitled on the basis of the subsequent Clauses to utilise in any way more than 200 TMC and 300 TMC respectively.

III. Below the dam sites of the Upper Indravati Project, as proposed by Orissa, there is a catchment area of about 1,855 sq. miles in the Indravati Sub-basin upto Orissa border with Madhya Pradesh. From this catchment there is some natural flow across the Jaura Nallah to Sabari (Kolab) river. It was agreed that Orissa will ensure at its border with Madhya Pradesh a flow of 45 TMC in the Indravati and its tributaries at 75 percent dependability for use by Madhya Pradesh. In the years of shortage, the shortage will be shared proportionately between the two States and the assurance of flow in the Indravati and its tributaries, referred to above, will stand proportionately reduced. Both the States agree to joint gauging at suitable points to ascertain the yield data and to ensure the flow of 45 TMC at 75 percent dependability or the proportionately reduced flow in years of shortage that has to flow below the common border. The figure of 45 TMC is on the assumption of total yield of 204 TMC from the Indravati sub-basin in Orissa and 91 TMC utilisation for the Upper Indravati Project. If the assessment of 204 TMC is found to be high and the correct figure is lower than 204 TMC and the utilisation for the Upper Indravati Project gets reduced from the figure of 91 TMC then the figure of 45 TMC will get reduced in the same proportion as the reduction in the figure of 91 TMC.

IV. In view of the agreement incorporated in the above clauses, Madhya Pradesh agrees to the clearance and execution of Upper Indravati Project, as proposed and submitted by Orissa to the Government of India. Orissa also agrees to the clearance and execution of Bodhghat Project, as may be modified by Madhya Pradesh taking into account the water availability specified in Clause III.

V It is agreed that Madhya Pradesh and Orissa will consider the feasibility of taking up joint projects in the Sabari Sub-basin from the point Sabari (Kolab) river forms the common boundary between both the States upto the point where it joins the Sileru river, on the basis of common agreements to be drawn up at appropriate time. The hydel power and the cost debitable to generation of such power will be shared equally between the two States in these projects. The costs and benefits of irrigation, if any from these projects will also be equitably shared among both the States. Orissa will be free to make beneficial use of the water of this river above the common boundary point and lying in its territory in such manner as it deems fit.

VI. Notwithstanding the agreement on the joint projects on the river Sabari (Kolab) mentioned in Clause V, if there is any submersion of land and properties of either State by other projects sponsored by the other State or any other State in the Godavari basin, the question of submersion and the problems connected therewith will have to be mutually settled before execution of such projects.

VII. Madhya Pradesh and Orissa agree that nothing in this agreement will be treated as a concession by either State in respect of any of their contentions in any other water dispute with any other State or with respect to the dispute regarding the sharing of the balance of water in Godavari and its tributaries.

VIII. Madhya Pradesh and Orissa agree that this agreement will be furnished to the Government of India and they would be requested to expedite the clearance of the new projects. This agreement will also be jointly filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
9-12-1975
(NANDINI SATPATHY)
Chief Minister,
Orissa.

Sd/-
9-12-1975
(P. C. SETHI)
Chief Minister,
Madhya Pradesh.

(True copy as received from the Chief Minister, Orissa under D.O. letter No. 7173 dated 9-12-1975 to the Union Minister of Agriculture & Irrigation)

Sd/-
(H. J. DESAI)
Deputy Secretary (F)
Ministry of Agriculture & Irrigation
(Department of Irrigation).

ANNEXURE B

AGREEMENT ENTERED INTO BETWEEN THE STATES OF MAHARASHTRA, MADHYA PRADESH AND ANDHRA PRADESH

On the basis of series of discussions held between the representatives of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, the following Agreement is arrived at regarding the sub-basin wise allocations of the waters of the Godavari and its tributaries downstream of the Pochampad Dam in the State of Andhra Pradesh, the projects therein and other allied matters, taking into consideration the allocations already agreed to under the Inter-State Agreement dated 19-12-1975 and in furtherance of the same and as a supplement thereto for final allocations of all the waters of the various sub-basins mentioned herein :

I. G-5 Middle Godavari sub-basin :

(1) Maharashtra.

The State of Maharashtra can use a quantity of 0.4 TMC of water in the Middle Godavari sub-basin for the existing, under construction and proposed projects/schemes downstream of the Pochampad Dam.

(2) Andhra Pradesh.

The State of Andhra Pradesh can use all the remaining waters in the Middle Godavari sub-basin downstream of the Pochampad Dam.

II. G-6 Manair Sub-basin :

Andhra Pradesh.

The State of Andhra Pradesh can use all the waters of the Manair sub-basin.

III. G-7 Penganga Sub-basin :

(1) Maharashtra.

(A) The State of Maharashtra can use all the water upto :—

(i) Lower Penganga Project site near Chikal Wardha on Penganga river, Lat. 19°-55'N and Long. 75°-15'E subject to the condition that the Lower Penganga Project would be taken up as a joint Project. The details of the joint project will be negotiated separately by the States of Maharashtra and Andhra Pradesh.

(ii) Waghadi Project Dam site on the Waghadi river near village Yelbara, Lat. 20°-12'-30"N and Long 78°-18'-10"E.

(iii) Saikheda Dam on Khuni river near village Lingti, Lat. 20°-06'-30"N and Long 78°-28'-15"E.

(B) In addition to the use of all the waters of the Penganga sub-basin upto the points as specified in clause (III)(1)(A)(i) to (A)(iii) above, the State of Maharashtra can use from the waters of the rest of the Penganga sub-basin 9 TMC for its existing, under construction and proposed schemes/projects each of which individually will not exceed an annual use of 1.5 TMC.

(2) Andhra Pradesh.

The State of Andhra Pradesh can use all the remaining waters of the Penganga sub-basin.

IV. G-8 Wardha Sub-basin :

(1) Madhya Pradesh.

(a) The State of Madhya Pradesh in terms of the Agreement relating to certain inter-State irrigation and hydel projects between Madhya Pradesh and Maharashtra dated 18th December, 1968 can use 9 TMC for its existing, under construction and proposed schemes/projects which are located upstream of the contemplated Upper Wardha Project of the State of Maharashtra.

(b) In addition to the use of the waters in clause (IV)(1)(a) above, the State of Madhya Pradesh can use a quantity of 1 TMC for its existing, under construction and proposed schemes/projects in the remaining portion of the sub-basin.

(2) Maharashtra.

(i) Subject to the use by State of Madhya Pradesh as stipulated above, the State of Maharashtra can use all the waters of the river Wardha and/or its tributaries for its existing, under construction and proposed projects/schemes upto the following points :—

(a) upto Tulana Project, Lat. 20°-12'N and Long. 78°-57'E on the Wardha river at Tulana village subject to Para (IV)(1)(a) and (b) above.

(b) on the tributaries of the Wardha river joining downstream of the Tulana Project site upto :

(i) Chargaon Project (under construction) across Chargaon river Lat. 20°-23'-20"N and Long. 79°-10'45"E;

(ii) Nirguda Project, Lat. 20°-03'-N and Long. 78°-53'-E; and

(iii) Bandara Project Lat. 19°-40'15"N Long. 79°-23'-55"E.

(ii) In addition to the use of water upto the projects as specificd in clauses (IV)(2)(i)(a) & (b), the following uses are agreed to for the schemes existing, under construction and proposed in the Wardha sub-basin downstream of the project sites mentioned above :—

	TMC
(1) Mudhali Project	2·80
(2) Lift Irrign. from Dhanora weir . .	2·70
(3) Lift Irrign. from Mared weir . .	2·80
(4) Lift Irrign. from Kalmana weir . .	2·00
(5) Lift Irrign. from Tohegaon weir .	1·60
(6) Lift Irrign. from Sonapur weir . .	2·00
(7) Usagaon Bulsani and Chandur Lift Irrigation Schemes	3·00
(8) Other Schemes each of which individually utilising not more than 1.5 TMC	9·10
Total	26·00

Provided that in the event of full quantity of water agreed to be allocated for any of the items 1 to 7 above can not be sanctioned for use at any of those projects, the balance of the quantity of water allocated herein above for projects at items 1 to 7 above can be sanctioned for use by the State of Maharashtra in any of the other projects as specified in items 1 to 8 subject to the condition that the total uses of all such sanctions for the projects as specified in items 1 to 8 shall not exceed 26 TMC.

(3) Andhra Pradesh.

The State of Andhra Pradesh can use all the remaining waters of the Wardha sub-basin.

V. G-9 Pranhita sub-basin :

(i) Madhya Pradesh.

(A) The State of Madhya Pradesh can use all the waters for the various existing, under construction and proposed projects/schemes in the Pranhita sub-basin upto the sites indicated below :

Kanhan sub-valley :

(i) Nandna Integrated Project.

(a) Nandna dam site across the tributary of river Kanhan, near village Nandna. Lat. 22°-13′-0″N and Long. 78°-28′-48″E.

(b) Chenkatwari dam site across the Kanhan near village Piparia. Lat. 22°-12′-24″N and Long. 78°-26′-48″E.

(ii) Amla Integrated Project.

(a) Amla dam site across Bel river near village Amla, Lat. 21°-55′-0″N and Long. 78°-08′-50″E.

(b) Parsadi dam site across the tributary of Bel river near village Parsadi. Lat 21°-56′-55″N and Long. 78°-12′-0″E.

(c) Dhutmur dam site across the tributary of Bel river near village Dhutmur. Lat. 21°-58′-0″N and Long. 78°-13′-0″E.

(d) Mohali dam site across the tributary of Bel river near village Mohali. Lat. 21°-58′-0″N and Long. 78°-12′-0″E.

(iii) Dokdoh Integrated Project.

(a) Dokdoh dam site across the Dokdoh Nalla near village Dokdoh. Lat. 21°-33′-50″N and Long. 78°-44′-15″E.

(b) Chirkutagondi dam site across the tributary of the Jamnalla near village Chirkutagondi Lat. 21°-35′-0″N and Long. 78°-41′-0″E.

(c) Khairi dam site across the tributary of the Kanhan near village Khairi. Lat. 21°-31′-0″N and Long. 78°-50′-0″E.

(d) Chhindwani dam site across the tributary of Dokdoh nalla near village Chhindwani. Lat. 21°-34′-0″N and Long. 78°-45′-40″E.

(iv) Mohgaon integrated project.

(a) Mohgaon dam site across the Sampna nala near village Mohgaon. Lat. 21°-38′-55″N and Long. 78°-43′-30″E.

(b) Jamlapani dam site across the Satki nala near village Jamlapani. Lat. 21°-40′-20″N and Long. 78°-43′-20″E.

(c) Khurpara dam site across the Khurpara nala near village Ambakhapa. Lat. 21°-39′-0″N and Long. 78°-40′-0″E.

(d) Jam nalla dam site across the Jam nalla near village Kondar. Lat. 21°-38′-0″N and Long. 78°-38′-0″E.

(v) Sovana Nalla Project.

(a) Sovana Dam site across Sovana Nalla near village Badosa. Lat. 21°-41′-15″N and Long. 78°-53′-40″E.

(B) Downstream of the project sites as specified in clause (V)(1)(A) above, the State of Madhya Pradesh can use an additional quantity of 14 TMC for its existing, under construction and proposed projects/ schemes each using not more than 1.5 TMC annually.

(C)(a) The State of Maharashtra has suggested the need of creating certain storages in the territory of the State of Madhya Pradesh to regulate water for use in the State of Maharashtra. In this particular situation as a special case the State of Madhya Pradesh has agreed to construct or augment storage/storages across the Kanhan at sites within its territory, location of which will be decided by the State of Madhya Pradesh, for regulation of 15 TMC of the Kanhan flows at 75 per cent dependability for use in the State of Maharashtra between 15th October to 30th June. As these storages will be created for the State of Maharashtra, the entire cost of these storages or augmentation as the case may be including the cost of compensation for lands, properties and rehabilitation etc., will be incurred as per the norms for such works in vogue in the Country at the time of the construction of the project and will be borne entirely by the State of Maharashtra. The details of provision of such storage/storages or augmentation would be mutually settled by the two State Governments at the appropriate time later.

(b) The State of Madhya Pradesh can generate power, by bearing the cost of power component only at the storage/storages as specified in clause (V)(1)(C)(a) above, without any power to be allocated to the State of Maharashtra. The power component is not to include any cost on account of the dam/ storage.

(c) The State of Madhya Pradesh can construct at its cost a low dam/pick up weir or such other structure as may be necessary, below the storage/storages as mentioned in clause (V)(1)(C)(a) above at any future date, in order to improve the peaking capability of the power system within the State.

(d) The State of Maharashtra for its use of 15 TMC as regulated by storage/storages as specified in clause (V)(1)(C)(a) above, agrees to construct pickup weir, downstream, in its (E) territory with adequate pondage to cater for the fluctuating releases in consultation with the State of Madhya Pradesh.

(D) The State of Maharashtra has proposed a pickup weir at Temurdoh across the Kanhan, which will cause submergence in the State of Madhya Pradesh. The details of extent of submergence are not yet indicated. The State of Madhya Pradesh agrees to consider the proposal when the details of submergence are known, provided the submergence is kept to a minimum and is acceptable to the State of Madhya Pradesh.

The provision of compensation for lands, properties and rehabilitation etc., will be made as per the norms for such works being adopted in the Country at the time of the construction of the project and will be borne by the State of Maharashtra.

(E) The State of Madhya Pradesh can lift water from the river Kanhan and its tributaries within its territory and downstream of the storage/storages as specified in clause (V)(1)(A). The use will be within the use of 14 TMC as per specified in clause (V)(1)(B) above, and without prejudice to the right of the State of Maharashtra for the flow of 15 TMC of regulated water as specified in clause (V)(1)(C)(d) above.

(F) Rest of the Wainganga sub-valley.

The State of Madhya Pradesh can use all waters in the Wainganga sub-valley upto the sites mentioned below :—

(a) The Dhuti weir across the Wainganga near village Dhuti.

(b) The following project sites on the tributaries of the Wainganga, joining downstream of the Dhuti weir :—

(1) Mahakari dam site across the Mahakari river near village Lamta. Lat. 22°-07′-55″N & Long 80°-07′45″E.

(2) Nahara Multipurpose Project.

(i) Nahara dam site across Nahara river near village Warurgota. Lat. 22°-05'-30"N and Long. 80°-19'-35"E.

(ii) Diversion site across Nahara river near village Khami. Lat. 22°-04'-42"N and Long. 80°-13'-30"E.

(3) Son Multipurpose project.

(i) Son dam site across river Son near village Baigatola. Lat. 21°-42'-30"N and Long. 80°-40'-0"E.

(ii) Diversion site across Son river near village Sarra. Lat. 21°-32'-15"N and Long. 80°-38'-0"E.

(4) Deo Ama Multipurpose Project.

(i) Deo Dam site across Deo river near village Sukalpat. Lat. 21°-47'-30"N and Long. 80°-33'-0"E.

(ii) Ama Dam site across Ama river near village Bithli. Lat. 21°-52'-30"N and Long. 80°-30'-50"E.

(iii) Diversion site across Deo river near village Bhagatpur. Lat. 21°-45'-35"N and Long. 80°-29'-0"E.

(5) Karadi tank across Pandharipat Nalla near village Karadi. Lat. 21°-25'-0"N and Long. 80°-35'-0"E.

(6) Sarathi Tank across Sarathi nalla near village Tikari. Lat. 21°-56'0"N and Long. 79°-58'-50"E.

(7) Nahlesara tank across Chandan river near village Nahlesara. Lat. 21°-49'-30"N and Long. 79°-47'-30"E.

(8) Daidburra tank across Katanga nalla near village Daidburra. Lat. 21°-41'-24"N and Long. 79°-53'-0"E.

(G) The State of Madhya Pradesh can use the waters of the river Bagh upto the Pujaritola pickup weir and the waters of the river Bawanthadi upto Sitekasa dam site; and waters of the river Pench upto the Totladoh Dam, in accordance with the Agreements already entered into, or as may be agreed to in future, between the States of Madhya Pradesh and Maharashtra for use of waters upto these sites.

(H) Downstream of the project sites as specified in clauses (V)(1)(F) and (V)(1)(G) above, the State of Madhya Pradesh can use an additional quantity of 59 TMC for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(I) (i) The State of Maharashtra has suggested the need of creating certain storages in the territory of the State of Madhya Pradesh to regulate water for use in the State of Maharashtra. In this particular situation as a special case, the State of Madhya Pradesh agrees to make provision of suitable additional storage at one or more than one project/projects out of these specified in clause (V)(1)(F) above to be decided by the State of Madhya Pradesh, for the regulation of 15 TMC of water at 75 per cent dependability for use in the State of Maharashtra lower down during 15th October to 30th June. The entire cost of such additional storage/storages or augmentation for the above regulation will be borne by the State of Maharashtra. The cost to be borned by the State of Maharashtra will also include the cost on account of compensation for land and properties and rehabilitation etc., as per the norms for such works in vogue in the Country at the time of the construction of the project. This quantum of 15 TMC would be made available out of the waters which the State of Madhya Pradesh can use as specified in clause (V)(1)(F) above. The details of provisions of the necessary storages for this regulation will be mutually settled by the two State Governments at the appropriate time later.

(ii) The State of Madhya Pradesh can generate power from such storage/storages by bearing the necessary costs of power component only at the storage/storages as specified in clause (V)(1)(F) above, without any power to be allocated to the State of Maharashtra. The power component is not to include any cost on account of the dam/storage.

(iii) The State of Madhya Pradesh can provide at its cost a low dam/pickup weir or such other structure as may be necessary downstream of the Project sites as specified in clause (V)(1)(F) in order to improve the peaking capability of the power system within the State.

(iv) The State of Maharashtra for its use of 15 TMC as specified in clause (V)(1)(F) above agrees to construct a pickup weir downstream in its territory with adequate pondage to cater for the fluctuating releases, in consultation with the State of Madhya Pradesh.

(2) Maharashtra.

(A) Subject to what has been stated above regarding use of the Pranhita sub-basin waters by the State of Madhya Pradesh, the State of Maharashtra can use all waters of the river Wainganga and/or its tributaries upto the following points :—

(i) Gosikhurd Project site on the Wainganga river near village Gosikhurd. Lat. 20°-51'0"N and Long. 79°-37'-20"E.

(ii) Lower Chulbund Dam site on the Chulband river near village Bonde. Lat. 21°-02'-0"N and Long. 79°-57'-0"E.

(iii) Itiadoh dam on the Garvi river near village Gothangaon. Lat. 20°-47'-45"N and Long. 85°-10'-05"E.

(iv) Satti Project site on the Satti river near village Palasgad. Lat. 20°-38'-0"N and Long. 80°-17'-0"E.

(v) Lower Tultuli dam site on the Khobragadi river near village Tultuli. Lat. 20°-26'-0"N and Long. 80°-14'-0"E.

(vi) Lower Kathani dam site on the Kathani river near village Rajoli. Lat. 20°-14'-30"N and Long. 80°-15'-30"E.

(vii) Karwappa Project dam site on Karwappa Nalla near village Nakkaponli. Lat. 20°-07'-40"N and Long. 80°-13'-40"E.

(viii) Bhimkund dam site on the Pohar river near village Kakri. Lat. 19°-55'-0" and Long. 79°-58'-30"E.

(ix) Dina Dam on the Dina river near village Regree. Lat. 19°-45'-0"N and Long. 80°-07'-0"E.

(x) Buti nala dam site on the Buti nala near village Panoti. Lat. 20°-39'-0"N and Long. 79°-48'-0"E.

(xi) Gardi Project dam site on the Gardi nalla near village Chandgaon Khurd. Lat. 20°-35'-20"N and Long. 79°-50'-0"E.

(xii) Nimghat dam site on the Nimghat Dhoda nalla near village Mendki. Lat. 20°-28'-15"N Long. 79°-48'-50"E.

(xiii) Asolamendha dam on the Pathri river near village Asolamendha. Lat. 20°-12'15"N and Long. 79°-50'-0"E.

(xiv) Ghorajhari dam on the Bokardho nalla near village Ghorajhari. Lat. 20°-32'-0"N and Long. 79°-38'-0"E.

(xv) Human nalla dam site on the Human nalla near village Chirkbada. Lat. 20°-14'0"N and Long. 79°-34'-35"E.

(xvi) Naleshwar dam on the Upsa nalla near village Naleshwar. Lat. 20°-15'-0"N and Long. 79°-35'-35"E.

(xvii) Andhari dam site on the Andhari river near village Pahami. Lat. 20°-06'-0"N and Long. 79°-28'-0"E.

(B) In addition to the use of all the waters of the river Wainganga and/or its tributaries upto the points as specified in clauses (V)(2)(A)(i) to (V)(2)(A)(xvii) above, the State of Maharashtra can use, from the waters of rest of the Pranhita sub-basin 41 TMC for its existing, under construction and proposed schemes/projects using annually not more than 1.50 TMC individually.

(3) Andhra Pradesh

(A) The State of Andhra Pradesh can use the remaining waters of the Pranhita sub-basin.

(B) It is also agreed that Pranhita Hydro-electric Project is not viable and therefore has to be given up. However, the States of Andhra Pradesh and Maharashtra agree to have barrage/barrages across the Pranhita river at suitable sites so that they may provide irrigation facilities in their areas. The quantum of water that will be used by Maharashtra from these barrages will be reckoned against 41 TMC as specified in clause (V)(2)(B) above. The joint Project/Projects for such barrages are to be taken up after reaching separate Agreement/Agreements for them, between the States of Maharashtra and Andhra Pradesh, either for the benefit of both the States or one State.

VI. G-10 Lower Godavari sub-basin :

(1) Maharashtra.

The State of Maharashtra can use upto 1 TMC for its existing, under construction and proposed schemes/projects in the Lower Godavari sub-basin.

(2) Madhya Pradesh.

(A) The State of Madhya Pradesh can use all the waters upto the following sites :—

(a) Mukpara (Sankampalli) Project. Mukpara dam site across Talperu river near village Mallepalli. Lat. 18°-36'-43"N and Long. 80°-56'-45"E.

(b) Tummalvagu dam site across Tummalvagu near village Junaguda. Lat. 18°-25'35"N and Long. 81°-03'-32"E.

(c) Joranvagu Integrated Project.

(i) Joranvagu dam site across Joranvagu near village Durma. Lat. 18°-27'-26"N and Long. 81°-13'-36"E.

(ii) Dhondivagu dam site across Dhondivagu near village Kamaram. Lat. 18°-24'-10"N and Long. 81°-13'-20"E.

(d) Malavagu Project. Malavagu dam site across Malavagu near village Chintalnar. Lat. 18°-21'-35"N and Long. 81°-11'-48"E.

(e) Raspalle Project. Raspalle dam site across tributary of Chinta river near village Raspalle. Lat. 18°-12'-0"N and Long. 80°-58'-38"E.

(B) Downstream of the projects as specified in clause (VI)(2)(A) above, the State of Madhya Pradesh can use an additional quantum of 9 TMC for its existing under construction and proposed schemes/projects each using not more than 1.5 TMC annually.

(C) The State of Madhya Pradesh agree to the submersion of its river bed only due to the Taliperu project of the State of Andhra Pradesh. The State of Andhra Pradesh agrees to put up at its costs, such protective measures as would be necessary in consultation with the State of Madhya Pradesh, to prevent submergence of other areas in the State of Madhya Pradesh due to aforesaid project. The State of Andhra Pradesh agree to forward the details of submergence in the State of Madhya Pradesh along with the project Report. The construction of the project would be taken up in hand after mutual agreement to the submergence and measures to protect the flooding of the area of the State of Madhya Pradesh.

(D)(a) The States of Madhya Pradesh, Maharashtra and Andhra Pradesh agree to take up the Inchampalli Multi-purpose Project as a joint venture with an FRL and MWL as may be agreed to by the three States. The project will be surveyed, planned, executed and subsequently operated and maintained under the directions of a Tripartite Interstate Control Board, duly constituted for this purpose by the three States concerned. The State of Andhra Pradesh cannot divert for its use more than 85 TMC directly from the Inchampalli reservoir. No part of the reservoir losses at Inchampalli shall be debitable to the shares of water agreed to for the States of Maharashtra and Madhya Pradesh herein above or hereunder in this Agreement. The balance available water shall be used for power generation at Inchampalli Power House. The compensation for the acquisition of lands and properties belonging to both the Government as well as private parties would be charged to the construction of storage. The provision for the rehabilitation of the oustees will be made as per the norms for such works in vogue in the Country at the time of the construction of the project and charged to the construction of storage.

(b) The State of Andhra Pradesh shall bear 78.10 per cent of the cost of Inchampalli storage, the State of Maharashtra shall bear 10.50 per cent and the State of Madhya Pradesh shall bear 11.40 per cent.

(c) The power generation at Inchampalli and the cost of power component, excluding the storage cost, shall be shared between the States of Madhya Pradesh, Maharashtra and Andhra Pradesh in the proportion of 38, 35, 27 per cent, respectively. After generation of power the State of Andhra Pradesh can use the water released in any manner they like.

(d) The State of Madhya Pradesh, Maharashtra and Andhra Pradesh would be free to use 3 TMC, 4 TMC and 5 TMC, respectively, by lifting water from the Inchampalli reservoir for use in their own territory without bearing any cost of the storage. The quantum of this use will be accounted for against the provision under clauses (VI)(2)(B) and (VII)(C) for the State of Madhya Pradesh; and clauses (III)(1)(B), (IV)(2)(ii), (V)(2)(B), (VI)(1) and (VII)(E) for the State of Maharashtra; and out of 85 TMC specified in this clause for the State of Andhra Pradesh.

(e) The States of Madhya Pradesh, Maharashtra and Andhra Pradesh would be free to develop pisciculture and boating facilities in their own territories under submergence. The sovereign rights over the submerged lands upto their territorial limits shall continue to vest with the respective States.

(f) The three States agree that the FRL/MWL a may be agreed to for the Inchampalli reservo

shall be only on the express condition that any of the provisions, facilities given for utilisation of waters of the Godavari and its tributaries, to each other in this Agreement herein above or hereunder is not at all disturbed.

(g) Navigational facilities at the Inchampalli reservoir shall be allowed free to the States of Madhya Pradesh, Maharashtra and Andhra Pradesh.

(h) A pumped storage scheme may be introduced below the Inchampalli reservoir as part of the Inchampalli project Hydro-electric Component. Such a scheme may be constructed even by one or two of the three States and the other State or States may later share the benefits of the said scheme by paying their share of the cost of the scheme as may be mutually agreed to.

(3) Andhra Pradesh.

The State of Andhra Pradesh can use the remaining waters of the Lower Godavari sub-basin.

VII. G-11 Indravati Sub-basin :

(A) (i) Subject to the provisions of the Inter-State Agreement dated 19-12-1975 affirming the bilateral Agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh, and any equitable allocation that may be made to the State of Orissa by the Godavari Water Disputes Tribunal in the Indravati sub-basin, the State of Madhya Pradesh upto the Bhopalpatnam Hydro-electric Project Lat. 19°-03'-45" and Long. 80°-19'-05"E across the Indravati river (a joint project between the States of Madhya Pradesh and Maharashtra) can use 273 TMC for its various existing, under construction and proposed schemes/projects. This quantum includes the share of evaporation loss of the State of Madhya Pradesh at the Bhopalpatnam I Hydro-electric Project.

(ii) The State of Andhra Pradesh agrees that the States of Maharashtra and Madhya Pradesh may introduce Pumped Storage Scheme in their joint Bhopalpatnam Hydro-electric Project on the Indravati at any stage, making use of the Inchampalli reservoir on the downstream. No cost of Inchampalli storage will be debitable to Bhopalpatnam Hydro-electric Project on this account. However, there will be no obligation to maintain any specific level at any time at the Inchampalli reservoir to suit the above Pumped Storage Scheme.

(B) The State of Madhya Pradesh, in addition to the use as agreed to in clause (VII)(A)(i) above can use all the waters upto the following project sites on the tributaries joining the Indravati downstream of the Bhopalpatnam I Hydro-electric Project site :

(i) Chintavagu Project site on Chintavagu near village Pavrel. — Lat. 18°—41'—25" N Long. 80°—40'—47"E.

(ii) Jallavagu Project site on Jallavagu near village Chillamarka. — Lat. 18°—56'—34"N Long. 80°—21'—34"E.

(iii) Kothapalli Integrated project across tributary of Chintavagu.

(i) Kothpalli Project site. — Lat. 18°—40'—54"N Long. 80°—34'—54"E.

(b) Minur Project site. — Lat. 18°—45'—24" N Long. 80°—28'—13"E.

(C) The State of Madhya Pradesh can use an additional quantity of 19 TMC downstream of the project sites as specified in clauses (VII)(A)(i) and (VII)(B) above for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(D) The State of Maharashtra can use 34 TMC for its existing, under construction and proposed project/projects upstream of Bhopalpatnam I Hydro-electric Project. This includes the share of evaporation losses of Maharashtra at the Bhopalpatnam I Hydro-electric project.

(E) The State of Maharashtra can use an additional quantum of 7 TMC downstream of the Bhopalnatnam I Hydro-electric Project for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(F) The above uses by the States of Madhya Pradesh and Maharashtra would be without prejudice to the Agreements concerning Kotri-Nibra Hydel Project, Bandia Hydel Project and Nagur II Hydel Project entered into between the two States and as ratified by both the Governments.

(G) The State of Andhra Pradesh can use the remaining waters of the Indravati sub-basin downstream of the Bhopalpatnam I Hydro-electric Project site of the States of Madhya Pradesh and Maharashtra.

(H) The States of Madhya Pradesh and Maharashtra agree that regulated releases after generation of power from Bhopalpatnam I Hydro-electric Project, a joint project of the two States as per the finalised scope would be available for use lower down for the Inchampalli Project another joint project of all the three States, viz., Madhya Pradesh, Andhra Pradesh and Maharashtra.

VIII. G-12 Sabari sub-basin :

(A) Subject to the provisions of the Inter-State Agreement dated 19-12-1975 affirming the bilateral Agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh, and any equitable allocation that may be made to the State of Orissa by the Godavari Water Disputes Tribunal in the Sabari sub-basin, the allocation to the States of Madhya Pradesh and Andhra Pradesh shall be as agreed to hereunder. Downstream of the point where the Sabari forms the common boundary between the States of Orissa and Madhya Pradesh (at near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E), the State of Madhya Pradesh can use all the waters upto the following project sites on the tributaries of river Sabari as indicated below :—

(a) Baru Nadi Integrated Project.

(i) Barunadi site across Baru river near village Tankavada. Lat. 18°-45'-33"N and Long. 81°-48'-50"E.

(ii) Bhimsen storage site across Bhimsen near village Bodavada. Lat. 18°-45'-0"N and Long. 81°-55'-46"E.

(iii) Kudripal Pickup weir site across Baru river near village Kudripal. Lat. 18°-40'-42"N and Long. 81°-51'-30"E.

(b) Mupari Project site across Mupari (Jamair) river near village Jamair. Lat. 18°-42'-30"N and Long. 81°-45'-0"E.

(c) Gorali Nadi Project.

(i) Gorali dam site across Gorali nadi near village Kanjipani. Lat. 18°-32'-50"N and Long. 81°-40'-55"E.

(ii) Andumpal dam site across Pul nadi near village Andumpal. Lat. 18°-34'-43"N and Long. 81°-42'-04"E.

(d) Sailervagu Integrated Project.

(i) Mankapal dam site across Malengar river near village Mankapal. Lat. 18°-32'-06"N and Long. 81°-29'-26"E.

(ii) Sailervagu dam site across Sailervagu near village Paila. Lat. 18°-26'-12"N and Long. 81°-31'-38"E.

(e) Ordeltong Integrated Project.

(i) Ordeltong dam site across tributary of Tinarayavagu near village Ordeltong. Lat. 18°-13'-24"N and Long. 81°-24'-06"E.

(ii) Tinarayavagu dam site across Tinarayavagu near village Korrapal. Lat. 18°-11' 0"N and Long. 81°-18'-56"E.

(f) Janavagu Integrated Project.

(i) Janavagu dam site across Janavagu near village Gorkha. Lat. 17°-57'-24"N and Long. 81°-20'-15"E.

(ii) Elemmadugu vagu dam site across Elemmadugu vagu near Jarput village. Lat. 18°-03'-42"N and Long. 81°-18'-09"E.

(B) The State of Madhya Pradesh can use an additional quantity of 18 TMC downstream of the project sites as specified in clause (VIII)(A) above, for its existing, under construction and proposed schemes each using not more than 1.5 TMC annually.

(C) The quantum of water to meet the evaporation losses of the power projects across the Sabari, of the State of Madhya Pradesh will be in addition to the quantum as specified in clauses (VIII)(A) and (B) above and this quantum would however be limited to 10 TMC while excess if any, shall be borne by the State of Madhya Pradesh out of its quantum already specified in clauses (VIII)(A) & (B) above.

(D) The State of Andhra Pradesh can use the remaining waters of the Sabari sub-basin for the existing, under construction and proposed schemes/projects after the uses by the State of Madhya Pradesh for projects/schemes as specified in clauses (VIII)(A) to (VIII)(C) above and the allocation that may be made by the Godavari Water Disputes Tribunal to the State of Orissa in this sub-basin.

(E) The State of Madhya Pradesh agrees subject to the State of Orissa agreeing for the construction of Polavaram Project of the State of Andhra Pradesh so that the maximum submergence in Madhya Pradesh territory at Konta does not exceed RL+150 ft. due to all effects including back water effect. The Polavaram Project shall be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above. For the submerged lands and properties both of the Government as well as private parties, the cost of compensation and rehabilitation on the basis of the norms in vogue in the Country at the time of the construction of the project shall be charged to the project. Model villages with facilities/amenities etc., shall be constructed at the cost of the project before the submergence actually takes place. The sovereignity over the land shall continue to vest with the respective States. The State of Madhya Pradesh can lift 1.5 TMC from the Polavaram lake for its use within its territory without bearing any cost of storage and this use shall be out of the allocation agreed to for the State as in clause (VIII).

(F) The State of Madhya Pradesh can transport its forest or mineral produce through all navigational facilities/lock etc., which shall be provided by Andhra Pradesh at its own cost at Polavaram. These facilities will be available to the State of Madhya Pradesh at the Polavaram Project, at the rates applicable to the State of Andhra Pradesh for their own cargo at Polavaram. The State of Madhya Pradesh can develop and exploit pisciculture and boating facilities in its own territory.

IX. General Clauses :

(1) (a) The States of Madhya Pradesh and Maharashtra may vary the location of sites of projects using more than 1.5 TMC annually which have been specifically mentioned in the above paragraphs by informing the lower State/States. If as a result of shifting or alteration in the case of any such specified sites upto which a State has been permitted to use all the water more or less catchment area than what is indicated in above clauses is intercepted, a corresponding reduction/increase will be made in the catchment area of other specified sites, so that the total catchment area allowed for each State for interception of all the water is not exceeded.

(b) It is also agreed that with respect to projects as specified in clauses (III)(1)(B), (V)(1)(B) and (H), (V)(2)(B), (VI)(2)(B), (VII)(C), (VII)(E), (VIII)(A) and (VIII)(B) and if there is a marginal increase of utilisation over 1.5 TMC but not exceeding 2 TMC for each projects, such increase may be permitted by mutual consultation between the State concerned and the lower Riparian State/States, provided that the total utilisation as specified in each of the said clauses is not exceeded by the concerned State.

(2) In the above Agreement, wherever specified quantities of the water has been mentioned as permitted use by any State it is agreed that the use shall be measured in the manner indicated below :

Use	Measurement
(i) Irrigation use .	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use . .	100 percent of evaporation losses in the storage.
(iii) Domestic and Municipal water supply within the basin.	by 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	by 2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(3) It is agreed that in using the waters permitted to each State in the above Agreement no State can construct projects other than those already specifically agreed to, submerging the territory of another State/States, without the prior consent of that State for such submergence.

(4) It is agreed that all the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

(5) The sub-basin referred to in the Agreement are according to the division of Godavari Basin into sub-basins made in the Report of the Krishna Godavari Commission in Chapter III paragraph 4.27 at page 28.

(6) Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

(7) All the levels mentioned in the clauses above are with reference to the G.T.S. levels.

(8) This agreement is subject to ratification by the respective State Governments of Maharashtra, Madhya Pradesh and Andhra Pradesh.

Dated the 7th August, 1978.

Sd/-
(V. R. DEUSKAR)
Secretary, Irrigation Department,
Government of Maharashtra.

Sd/-
(R. K. TIKKU)
Secretary, Irrigation & Power Departments,
Government of Madhya Pradesh.

Sd/-
(M. GOPALA KRISHNAN)
Secretary, Department of Irrigation & Power,
Government of Andhra Pradesh.

ANNEXURE C

ANNEXURE I

GODAVARI

SUMMARY RECORD OF THE DISCUSSIONS OF THE MEETING HELD BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH AT BANGALORE ON 4TH AUGUST 1978

The following were present :—

KARNATAKA

1. Sri D. Devaraj Urs,
   Chief Minister
2. Sri N. Narasimha Rau,
   Chief Secretary
3. Sri J. C. Lynn,
   Secretary to
   Chief Minister
4. Sri B. C. Angadi,
   Special Secretary,
   P.W. & E Dept. (Irrigation)
5. Sri S. R. S. Sastry,
   Chief Engineer, W.R.D.O.
6. Sri B. Subramanyam,
   Chief Engineer,
   Bangalore Water Supply
   & Sewerage Board.

ANDHRA PRADESH

1. Dr. M. Chennareddy
   Chief Minister
2. Sri G. V. Sudhakara Rao,
   Irrigation Minister
3. Sri M. Gopalakrishnan,
   Secretary,
   Irrigation & Power
4. Sri B. Gopalakrishna Murthy
   Adviser,
   Irrigation & Power
5. Sri K. R. Chudamani,
   Adviser, Irrigation & Power
6. Sri M. Satvanarayana Singh,
   Special Officer,
   Water Resources.

After discussion, the following points were agreed to :—

Andhra Pradesh and Karnataka agree that Karnataka would, in addition to its existing utilisation above the proposed Singur project in the Manjra sub-basin and the utilisation for Karania and Chulkinala projects, as per the agreement of 17-9-1975 read with the agreement of 19-12-1975 utilise one TMC of water more for lift irrigation from the Manjra river.

2. In order to utilise this quantity or any other additional quantity that may be agreed to later, on the Manjra, Karnataka may put up such pondage as may be necessary and as may be agreed to between Andhra Pradesh and Karnataka to utilise one TMC or such additional agreed quantities as may become available for this purpose.

3. Andhra Pradesh and Karnataka agree that Karnataka may utilise 2.5 (two point five) TMC of water in the Manjra sub-basin in its territory in the catchment below Nizamsagar project.

4. Andhra Pradesh and Karnataka agree that Andhra Pradesh may go ahead with the construction of the Singur project, as proposed by Andhra Pradesh with the maximum capacity of 30 TMC of gross storage with FRL/MWL of plus 523.6 metres (1717.41 ft.) above MSL.

5. Karnataka will take necessary action to acquire any land or structure that may be submerged and/or affected under Singur project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of bridges and roads that may become necessary. Such acquisition and rehabilitation shall be as per the norms prevailing in Karnataka at the time of acquisition/rehabilitation. Karnataka also agrees to the submergence of the river bed and its stream-beds.

6. In the event of Andhra Pradesh developing hydro-electric power at Singur Project, Karnataka and Andhra Pradesh agree to share the cost and benefits of such power in such proportion as may be agreed upon.

7. (a) Subject to the clearance of Polavaram Project by the Central Water Commission for an FRL/MWL plus 150 ft. the State of Andhra Pradesh agrees that a quantity of 80 TMC at 75 per cent dependability of Godavari Waters from Polavaram project can be diverted into Krishna river above Vijayawada Anicut displacing the discharges from Nagarjunasagar Project for Krishna Delta, thus enabling the use of the said 80 TMC for projects upstream of Nagarjunasagar.

(b) The States of Andhra Pradesh and Karnataka agree that the said quantity of 80 TMC shall be shared in the proportion of Andhra Pradesh 45 TMC, Karnataka and Maharashtra together 35 TMC.

(c) Andhra Pradesh agrees to submit the Polavaram project report to Central Water Commission within three months of reaching an over-all agreement on Godavari waters among the five-party States.

(d) Andhra Pradesh agrees to bear the cost of diversion fully.

(e) Maharashtra and Karnataka are at liberty to utilise their share of 35 TMC mentioned in sub-para 7(b) above from the date of clearance of the Polavaram Project by Central Water Commission with FRL/MWL of plus 150 ft. irrespective of the actual diversion taking place.

(f) It is also agreed that if the diversion at 75 per cent dependability as stated in clause (a) above exceeds the said quantity of 80 TMC due to diversion of Godavari waters from the proposed Polavaram Project into Krishna river, further diminishing the releases from Nagarjunasagar project such excess quantity shall also be shared between the three States in the same proportion as in sub-clause (b) above.

MR. S. CHAUDHURY
of Counsel for the
State of Karnataka.

MR P. RAMACHANDRA REDDY
Advocate General for the
State of Andhra Pradesh.

ANNEXURE II

KRISHNA

SUMMARY RECORD OF THE MEETING HELD BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH AT BANGALORE ON 4TH AUGUST, 1978

The following were present:

KARNATAKA

1. Sri D. Devaraj Urs, Chief Minister.
2. Sri N. Narasimha Rau, Chief Secretary.
3. Sri J. C. Lynn, Secretary to Chief Minister.
4. Sri B. C. Angadi Special Secretary, P.W. & E. Dept. (Irrigation).
5. Sri S. R. S. Sastry, Chief Engineer, W.R.D.O.
6. Sri B. Subramanyam Chief Engineer, Bangalore Water Supply & Sewerage Board.

ANDHRA PRADESH

1. Dr. M. Chennareddy, Chief Minister.
2. Sri G. V. Sudhakara Rao, Irrigation Minister
3. Sri M. Gopalakrishnan, Secretary, Irrigation & Power.
4. Sri B. Gopalakrishna Murthy, Adviser, Irrigation & Power.
5. Sri K. R. Chudamani, Adviser, Irrigation & Power.
6. Sri M. Satyanarayana Singh, Special Officer Water Resources.

After discussion, the following points were agreed to :

Karnataka and Andhra Pradesh agree that Andhra Pradesh would go ahead with the proposed Jurala Project with FRL/MWL of plus 1045 feet above MSL in Krishna basin.

2. Karnataka will take necessary action to acquire any lands or structures that may be submerged and/or affected under Jurala Project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of bridges and roads and cost of protection or shifting of temples and other religious shrines that may become necessary, as decided by Karnataka. Such acquisition and rehabilitation shall be as per the norms prevailing in Karnataka at the time of acquisition/rehabilitation. Karnataka also agrees to the submergence of river bed and stream beds.

3. Karnataka and Andhra Pradesh also agree that in the event of Andhra Pradesh generating power from this project, the cost and benefits of hydro-power will be shared equally between the two States. The question of what would constitute the cost of hydro-power was not discussed and will be agreed upon separately.

Mr. S. CHAUDHURI
of Counsel for the State of Karnataka.

Mr. P. RAMACHANDRA REDDY
Advocate General for the State of Andhra Pradesh.

ANNEXURE D

GODAVARI

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF ANDHRA PRADSH AND ORISSA AT HYDERABAD ON THE 15TH OF DECEMBER, 1978

The following were present:—

ANDHRA PRADESH

1. Dr. M. Channa Reddi, Chief Minister.
2. Sri G. Rajaram, Minister for Finance and Power.
3. Sri G. V. Sudhakar Rao, Minister for Major Irrigation & Commercial Taxes.
4. Sri I. J. Naidu, IAS., Chief Secretary.
5. Sri S. R. Rama Murthy, IAS., Secretary to Chief Minister.
6. Sri P. Ramachandra Reddi, Advocate General.
7. Sri C. N. Shastry, IAS., Secretary, Irrigation & Power.
8. Sri M. Gopalakrishnan, IAS., Secretary, Primary & Secondary Education.
9. Dr. N. Tata Rao, Chairman, A.P.S.E.B.
10. Sri Satyanarayan Singh, Special Officer, Water Resources.
11. Sri D. V. Sastry, Advocate.

ORISSA

1. Sri Nilamani Routroy, Chief Minister.
2. Sri Pratap Chandra Mohanty, Minister for Revenue & Power.
3. Sri Prahllad Mallik, Minister for Irrigation.
4. Sri B. M. Patnaik, Advocate General.
5. Sri B. Ramadorai, IAS., Secretary, Irrigation & Power.
6. Sri A. K. Biswal, Secretary to Chief Minister.
7. Sri S. C. Tripathy, Chief Engineer, Irrigation.
8. Sri B. Mishra, Chief Engineer, Electricity.
9. Sri M. L. Lath, Executive Engineer, Irrigation.

After full discussions, the following agreement was reached:—

I. G-11 Indravati sub-basin:

The State of Orissa can utilise its share of water in G-11 Indravati sub-basin in terms of the Inter State agreement dated 19-12-1975 affirming the bilateral agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh.

II. G-12 Sabari sub-basin:

A. The State of Orissa can use all the water of the river Sabari (Kolab) upto the point (at near about Lat 18°-55'-04" N and Long 82°-14'53"E) where the river Sabari forms the common boundary between the State of Orissa and the State of Madhya Pradesh in terms of the Interstate Agreement dated 9-12-1975, Clause V.

B. The State of Orissa and Andhra Pradesh agree for utilisation of all waters upto the following project sites on the tributaries and sub-tributaries of the river Sabari (Kolab) by the State of Orissa.

(i) Govindapalle Project on :—

(a) Dharmgedda nalla site near Lingivanut village Lat. 18°-36'-07" N., and Long. 82°-16'-11" E.

(b) Jamnadi site near Govindpalli village Lat. 18°-36'-13" N., and Long. 82°-16'-48" E.

(c) Garia nadi site near Deraguda village. Lat. 18°-34'-03" N., and Long. 82°-17'-18" E.

(ii) Satiguda Project site on the tributary of Potteruvagu.
Lat. 18°-18'-57" N., and Long. 81°-56'-24" E.

(iii) Parasanapalle project site on the tributary of Sabari near village Parasanapalli.
Lat. 18°-16'-44" N., and Long 81°-36'-44" E.

(iv) Potteru project site on Potteruvagu near Surlikunta village.
Lat. 18°-12'-30" N., and Long. 82°-01'-30" E.

(C) The State of Orissa, in addition to the uses as specified in clauses II(A) and II(B) above, can use 40 Tmc., for its existing, under construction and proposed project schemes each using not more than 1.5 Tmc., annually.

(D) Downstream of the point where the Sabari forms the common boundary between the States of Orissa and Madhya Pradesh (at near about Lat. 18°-55'-04" N., and Long. 82°-14'-53" E.) and upto the confluence of the Sileru and the Sabari, the State of Orissa, can use not more than 27 tmc., for irrigation by withdrawals from the main river for its existing, under construction and proposed schemes/projects.

(E) The quantum of water to meet the evaporation losses of project under clause II D and power projects across the Sabari by the States of Madhya Pradesh and Orissa in terms of clause V of bilateral agreement dated 9-12-1975 between Orissa and Madhya Pradesh will be in addition to the quantum specified in clauses II A, B, C & D above and shall be shared in such proportion as the said two states may agree. However the share of Orissa in excess of 10 T.M.C. in the evaporation losses mentioned above shall be met from its quantum specified in clauses II A, B, C & D above.

(F) The State of Orissa and Andhra Pradesh shall utilise the Sileru river waters in terms of :—

(a) 1946 Agreement between the Governments of Madras and Orissa regarding development of Hydro-electric power at Dudma falls on the Machkund river.

(b) Final agreement between the Governments of Orissa and Andhra Pradesh in relation to the use of the waters of the Sileru river dated the 4th September, 1962.

(c) Any other subsequent agreement/agreements that the two States of Orissa and Andhra Pradesh may mutually conclude in future.

(d) All use of water for beneficial purpose by the States of Orissa and Andhra Pradesh for their existing, under construction and proposed schemes/projects upstream of Machkund Project the total utilisation under which shall not exceed 2 TMC by each State will be charged to their respective shares at Machkund correspondingly reducing their respective share of power at Machkund & Dudma falls. Similarly, use under Schemes/projects which shall not exceed 2 TMC by each state downstream of Machkund project and upstream of Balimela Dam, will be charged to their respective shares at Balimela dam project reducing their respective shares of water by the total quantity used both above Machkund project and between Machkund and Balimela Project. All such use should be intimated to the other Government.

(e) Notwithstanding any restriction imposed under the past agreements, the State of Orissa will be permitted to utilise not exceeding 2 TMC of Sileru water for beneficial use downstream of Balimela dam for its existing, under construction and future projects out of the yield of the catchment lying down-stream of Balimela dam project. This quantity will be out of 40 TMC as specified in Clause II(C) above.

(G) The State of Orissa agrees for the construction of Lower Sileru Irrigation scheme with FRL +235 ft. and MWL +262 ft. by the State of Andhra Pradesh, which involves some submergence in the State of Orissa. The State of Andhra Pradesh shall bear the cost of compensation for submergence of land and properties both of the Government as well as private parties that may be agreed to. The provision of rehabilitation of the oustees will be made as per the norms in vogue in the state of Orissa at the time of construction of the project.

(H) The State of Andhra Pradesh can subject to agreement dated 7-8-1978, use the remaining waters in the Sabari Sub-basin excluding Sileru river vide clause F above for the existing under construction and proposed schemes/projects after the uses by the State of Orissa for Projects/Schemes as specified in Clauses I and II A to E above.

(I) The States of Orissa and Andhra Pradesh agree for the construction of Polavaram Project of the State of Andhra Pradesh, so that the maximum submersion in the States of Orissa territory at Motu/Konta does not exceed R.L. +150 ft. due to all effects including back water effect. The Polavaram project shall be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above. For the submerged lands and properties both of the Government as well as private parties, the cost of compensation and rehabilitation on the basis of the norms in vogue in the State of Orissa at the time of the construction of the projects shall be charged to the project. Model villages with facilities/amenities etc. shall be constructed at the cost of the project before the submergence actually takes place.

The sovereignty over the land shall continue to vest with the respective States. The State of Orissa can lift 5 Tmc from the Polavaram lake, without bearing any cost of the storage for its use in their territory and this use shall be reckoned against the allocation made to that State as specified in clause II above. The State of Orissa can transport their forest or mineral produce through all navigational facilities/lock etc.; which shall be provided, by the State of Andhra Pradesh at its own cost at Polavaram. These facilities will be available to the State of Orissa at the Polavaram Project at the rates applicable to the State of Andhra Pradesh for their own cargo at Polavaram. The State of Orissa can develop and exploit pisciculture and boating facilities in their own territory. The States are agreeable to the level of RL+150 feet for Polavaram storage as defined above only on the express conditions that any of the provisions facilities and liberties given for utilisation of waters of the Godavari and its tributaries, to each other in this Agreement herein above or here under are not at all disturbed.

III. General clauses :

(1) (a) The State of Orissa may vary the location of sites of projects using more than 1.5 Tmc., annually which have been specifically mentioned in the above clauses by informing the lower State/States. If as a result of shifting or alteration in the case of any such specified sites upto which a State has been permitted to use all the water more or less catchment area than what is indicated in the above clauses is intercepted, a corresponding reduction/increase will be made in the catchment area of other specified sites, so that the total catchment area allowed for each State for interception of all the water is not exceeded.

(b) It is also agreed that with respect to projects as specified in clauses I & II above if there is a marginal increase of utilisation over 1.5 TMC., but not exceeding 2 TMC., for each Project, such increase may be permitted by mutual consultation between the States concerned and the lower Riparian State/States, provided that the total utilisation as specified in each of the said clauses is not exceeded by the concerned State.

(2) In the above agreement, wherever specified quantities of the water has been mentioned as permitted use by any States it is agreed the use shall be measured in the manner indicated below :

Use	Measurement
(i) Irrigation use .	100 percent of the quantity diverted or lifted from the river or any of the tributaries/ or from any reservoir, storage or canal and 100 percent of evaporation losses in these storages.
(ii) Power use . .	100 percent of evaporation losses in the storage.
(iii) Domestic and Municipal water supply within the basin.	By 20 percent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	By 2.5 percent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses out side the basin.	100 percent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(3) It is agreed that in using the waters permitted to each state in the above agreement no State can construct a project other than those already specifically agreed to submerging the territory of another State/ States, without prior consent and acceptance by mutual discussions by that State for such submergence.

(4) It is agreed that all the States can make use of underground water within their respective state territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

(5) The sub-basins referred to in this agreement are according to the division of Godavari basin into sub-basins made in the report of the Krishna Godavari Commission in Chapter-III paragraph 4.27 at page 28.

(6) Use shall include any use, made by any State of waters of the river Godavari and its tributaries or domestic, municipal irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

(7) All the levels mentioned in the clauses above are with reference to G.T.S. levels.

Sd/-

(DR. M. CHANNA REDDI)
Chief Minister,
Andhra Pradesh.

Sd/-

(NILAMANI ROUTROY)
Chief Minister,
Orissa.

ANNEXURE E

ANNEXURE I

B. C. ANGADI,
Special Secretary to
Government
Irrigation Department.
D.O. No. PWD 25 BRA 78

VIDHAN SOUDHA, BANGALORE,
Dated 29th January, 1979

Dear Shri Deuskar,

SUB.—Agreement between Maharashtra and Karnataka regarding Godavari waters distribution.

In confirmation of our telephonic talks during the last week, I have to state that we agree that :

(a) 35 TMC of water in Krishna, which is the share of Karnataka and Maharashtra out of 80 TMC of Godavari diversion by the State of Andhra Pradesh from Polavaram Barrage, shall be shared between Karnataka and Maharashtra as under:

Karnataka	——	21 TMC
Maharashtra	——	14 TMC

(b) Karantaka had requested for at least 1 TMC of Manjra waters upstream of Nizamsagar from the share allocated to Maharashtra. Maharashtra had expressed its inability to spare this water. Karnataka accepts that position in the interest of arriving at an agreement.

(c) A copy of this letter with your confirmation to it may be filed before the Godavari Tribunal on 2-2-1979.

Kindly confirm the above points as agreed on telephone.

Yours sincerely,

Sd/-

29-1-1979
(B. C. ANGADI)

Shri V. R. Deuskar,
Secretary to Government,
Irrigation Department,
Government of Maharashtra,
Mantralaya,
BOMBAY-400 032.

ANNEXURE II

V. R. DEUSKAR.
Secretary to Government.

IRRIGATION DEPARTMENT,
MANTRALAYA, BOMBAY-400 032,
CAMP : NEW DELHI.
Dated the 30th January, 1979.

D.O No. ISW 5179-KG

SUB.—Agreement between Maharashtra and Karnataka regarding Godavari waters distribution.

REF.—Your D.O. letter No. PWD 25 BRA 78 dated 29th January, 1979.

Dear Shri Angadi,

In confirmation of our telephonic talk during the last week and with reference to your above D.O. letter, the points as agreed between the two States mentioned in your letter are hereby confirmed subject to the following understanding :—

The present ratio of sharing of 35 TMC viz. 14 to Maharashtra and 21 to Karnataka shall not be applicable to any additional water that would become available by virtue of Andhra Pradesh diverting water in excess of 80 TMC.

We may authorise our Counsel before Godavari Water Disputes Tribunal to draw up an agreement in a proper form in terms of our understanding reached between the two States and file it before the Godavari Tribunal.

Yours sincerely,

Sd/-
(V. R. DEUSKAR)

Shri B. C. Angadi,
Special Secretary,
Irrigation Department,
Government of Karnataka,
BANGALORE.

ANNEXURE III

B. C. ANGADI,
Special Secretary to the Government,
Irrigation Department.

D.O. No. PWD 25 BRA 78

VIDHAN SOUDHA, BANGALORE,
Dated 31-1-1979

Dear Shri Deuskar,

SUB.—Agreement between Maharashtra and Karnataka regarding Godavari waters distribution.

I received your D.O. letter No. ISW 5179-KG, dated 30-1-1979 through telex, confirming our telephonic talk and points agreed between the two States as mentioned in my D.O. letter No. PWD 25 BRA 78, dated 29th January, 1979.

2. I further agree that the following condition mentioned in your above letter, namely that—

"The present ratio of sharing 35 TMC *viz.* 14 to Maharashtra and 21 to Karnataka shall not be applicable to any additional water that would become available, by virtue of Andhra Pradesh diverting water in excess of 80 TMC."

should form part of the agreement which should be drawn up and filed before the Tribunal.

Yours Sincerely,

Sd/-
(B. C. ANGADI)

Shri V. R. Deuskar,
Secretary to Government,
Irrigation Department,
Government of Maharashtra,
Mantralaya,
BOMBAY-400 032.

ANNEXURE II

AGREEMENT ENTERED INTO BETWEEN THE STATES OF ORISSA & MADHYA PRADESH

After full discussions, the following agreement was reached at Bhopal on 11th July, 1979 :—

G-11 Indravati Sub-basin :

1. Orissa :

(a) The State of Orissa can use all the waters upto Upper Indravati Project site comprising:

(i) Indravati dam site (Lat 19°-16′ N & Long 82°-50′E).

(ii) Podaga dam site (Lat 19°-14′ N and 82°-49′E).

(iii) Kapur dam site (Lat 19°-06′ N and Long 82°-47′E).

(iv) Muran dam site (Lat 19°-06′ N and Long 82°-46′ E).

(b) Out of the balance flows available below the Upper Indravati Project within its territory, the state of Orissa shall ensure forty five (45) tmc of water to flow down at the Orissa-Madhya Pradesh border in the Indravati Sub-basin. In the years, when the diversion of water outside the Godavari basin at the Upper Indravati Project is less than eighty five (85) tmc. (exclusive of evaporation losses) this quantum of forty five (45) tmc at the Orissa-Madhya Pradesh border in the Indravati Sub-basin will be reduced in the same proportion as the reduction in the quantum of eighty five (85) tmc. The State of Orissa can use all the balance water thus left within its territory for its existing, under construction & proposed projects/ schemes.

(c) (i) The States of Orissa and Madhya Pradesh agree to measure this quantum of forty five (45) tmc at Jagdalpur gauge site across Indravati river, which is maintained at present by the Central Water Commission, subject to adjustment as mentioned in sub-paragraph (c) (ii).

(ii) The catchment area of the State of Orissa contributing to the flow in Indravati river below Jagdalpur gauge site is about two hundred and thirty eight (238) square miles, while the catchment area of the State of Madhya Pradesh upto the gauge site is about one hundred and ninety eight (198) square miles. The seventy five (75) per cent dependable yield from this area of forty (238 minus 198 equal to 40) square miles may be taken as two point eight (2.8) tmc. This quantum of two point eight (2.8) tmc will be added to the observed flow at Jagdalpur gauge site for estimating the flows available at the Orissa-Madhya Pradesh border specified in sub-paragraph 1(b). The quantum of two point eight (2.8) tmc will be reduced proportionately in the lean years in the same proportion to the reduction of seventy five (75) per cent dependable yield of eighty-nine point five (89.5) tmc at Upper Indravati Project site as cleared by Planning Commission.

(iii) At any time if the Central Water Commission closes Jagdalpur gauge site, the two States shall maintain the gauge site jointly or any other site(s) as may be mutually agreed upon for the purpose.

2. Madhya Pradesh :

(a) The State of Madhya Pradesh can use two hundred and seventy three (273) tmc of water for its various existing, under construction and proposed projects/schemes, subject to the agreed uses in paragraph (1) upto the Bhopalpatnam-I Hydro-electric project site (Lat 19°-03′-45″N and Long 80°-19′-05°E) across Indravati river—a joint project between the States of Madhya Pradesh and Maharashtra. This quantum includes the share of evaporation loss of the State of Madhya Pradesh at the Bhopalpatnam-I reservoir.

(b) The State of Madhya Pradesh in addition to the uses as agreed to in paragraph 2(a) can use all the waters upto the following project sites on the tributaries joining the Indravati downstream of Bhopalpatnam-I Hydro-electric project site :—

(i) Chintavagu dam site on Chintavagu near village Pavrel (Lat 18°-41′-25″N and Long 80°-40′-47″E).

(ii) Jallavagu dam site on Jallavagu near village Chillamarka (Lat 18°-56′-34″N and Long 80°-21′-34″E).

(iii) Kothapalli Integrated Project across tributary of Chintavagu comprising :—

(1) Kothapalli dam site :
(Lat 80°-40′-54″N and Long 80°-34′-54″E).

(2) Minur dam site :
(Lat 18°-45′-24″N and Long 80°-28′-13″E).

(c) The State of Madhya Pradesh can use an additional quantity of nineteen (19) tmc of water downstream of the project sites specified in paragraphs 2(a) and 2(b) for its existing, under construction and proposed projects/schemes each using not more than one point five (1.5) tmc annually.

G-12 Sabari Sub-basin :

3. Orissa :

(a) The State of Orissa can use all the waters of Sabari (Kolab) river upto a point near about Lat 18°-55′-04″N and Long 82°-14′-53″E where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh.

(b) In addition to the above, the State of Orissa can use all the waters upto the following project sites on the tributaries of Sabari (Kolab) river :—

(i) Govindpalli Project site comprising :

1. Dharamgedda nalla near Lingivanut village (Lat 18°-36′-07″N and Long 82°-16′-11″E).

2. Jamnadi near Govindpalle village (Lat 18°-36′-13″N and Long 82°-16′-48″E).

3. Garia nadi near Doraguda village (Lat 18°-34′-03″N and Long 82°-17′-18″E).

(ii) Satiguda project site on the tributary of Potteruvagu (Lat 18°-18′-57″N and Long 81°-56′-24″E).

(iii) Parasanapalle project site on the tributary of Sabari river near village Parasananalle (Lat 18°-16′-44″N and Long 81°-36′-44″E).

(iv) Potteru project on Potteruvagu near Surlinkunta village (Lat 18°-12′-30″N and Long 82°-01′-30″E).

(c) The State of Orissa can use an additional quantity of forty (40) tmc of water down-stream of Projects specified in paragraphs 3(a) and 3(b) for its existing, under construction and proposed project/schemes each using not more than one point five (1.5) tmc annually.

(d) Downstream of the point where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh (near about Lat 18°-55′-04″N and Long 82°-14′-53″E) and upto the confluence of Sileru and Sabari rivers, the State of Orissa in

addition to the use specified in paragraphs 3(a) to 3(c) can use not more than twenty seven (27) tmc of water for irrigation by withdrawals from the main river for its existing, under construction and proposed projects/schemes.

(e) The State of Orissa agrees to exploit Sabari (Kolab) river waters by joint projects on the main Sabari river with the State of Madhya Pradesh from a point on Sabari (Kolab) river near about Lat 18°-55'-04"N and Long 82°-14'-53"E where it forms the common boundary between the two States upto the confluence with Sileru river on the basis of agreement(s) to be drawn up at appropriate time, except for use as mentioned in sub-paragraph 3(d). At present Lower Kolab and Konta Projects are under investigation and the sites of these projects will be decided mutually by the two State Governments. The hydel power and the cost debitable to generation of such power will be shared equally between the two States in these or such other projects. The cost and benefit of irrigation, if any from these projects will also be equitably shared between the two States.

(f) The share of evaporation losses for the projects specified in paragraph 3(e) for the State of Orissa to the extent of ten (10) tmc will be in addition to the quantum specified in paragraphs 3(a) to 3(d) and excess if any, will be met from the use specified in paragraphs 3(a) to 3(d).

(g) The use specified for the State of Orissa in paragraphs 3(a) to 3(d) and 3(f) is exclusive of the use in Sileru river as per the agreement dated 15-12-1978 between the States of Orissa and Andhra Pradesh.

4. Madhya Pradesh :

(a) The State of Madhya Pradesh can use all the waters of the tributaries of Sabari river downstream of a point where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh near about Lat 18°-55'-04"N and Long 82°-14'-53"E and upto the following project sites :—

(i) Baru Nadi Integrated Project Comprising :

1. Barunadi site across Baru river near village Tankavada (Lat 18°-45'-33"N and Long 81°-48'-50"E).
2. Bhimsen storage site across Bhimsen river near village Bodavada (Lat 18°-45'-0"N and Long 81°-55'-46"E).
3. Kudripal Pick-up weir site across Baru river near village Kudripal (Lat 18°-40'-42"N and Long 81°-51'-30"E).

(ii) Munari project site across Munari (Jaimer) river near village Jaimer (Lat 18°-42'-30"N and Long 81°-45'-0"E).

(iii) Gorali Nadi Project comprising :

1. Gorali dam site across Gorali nadi near village Kanjipani (Lat 18°-32'-50"N and Long 81°-40'-55"E).
2. Andumpal dam site across Pulnadi near village Andumpal (Lat 18°-34'-43" N and Long 81°-42'-04"E).

(iv) Sailervagu Integrated project comprising :

1. Mankapal dam site across Malengar river near village Mankapal (Lat 18°-32'-06"N and Long 81°-29'-26"E).
2. Sailervagu dam site across Sailervagu near village Paila (Lat 18°-26'-12"N and Long 81°-31'-38"E).

(v) Ordeltong Integrated Project comprising :

1. Ordeltong dam site across tributary of Tinarayavagu near village Ordeltong (Lat 18°-13'-24"N and Long 81°-24'-06"E).
2. Tinarayavagu dam site across Tinarayavagu near village Korrapal (Lat 18°-11'-0" and Long 81°-18'-56"E).

(vi) Janavagu Integrated Project comprising :

1. Janavagu dam site across Janavagu near village Gorkha (Lat 17°-57'-24"N and Long 81°-20'-15"E).
2. Elammaduguvagu dam site across Elammaduguvagu near Jarnut village (Lat 18°-03'-42"N and Long 81°-18'-09"E).

(b) The State of Madhya Pradesh can use an additional quantity of eighteen (18) tmc of water downstream of the project sites specified in paragraph 4(a) for its existing, under construction and proposed projects/schemes each using not more than one point five (1.5) tmc. annually.

(c) (i) The share of evaporation losses of the power projects across Sabari river specified in paragraph 3(e) for the State of Madhya Pradesh to the extent of ten (10) tmc will be in addition to the quantum specified in paragraphs 4(a) and 4(b) and excess, if any, shall be borne by the State of Madhya Pradesh out of its share specified in paragraphs 4(a) & 4(b).

(ii) The quantum of water for the use by the State of Madhya Pradesh in the joint projects specified in paragraph 3(e) would be met with from the use specified for the State in paragraph 4(a).

(iii) Further, the quantum of water to meet the evaporation losses of the joint projects/schemes specified in the paragraph 3(e) shall be shared equally between States of Orissa and Madhya Pradesh.

Sd./-

(B. RAMADORAI)
Secretary,
Irrigation & Power Department,
Government of Orissa.

Sd./-

(DR. ISHWAR DASS)
Secretary,
Irrigation & Power Department,
Government of Madhya Pradesh.

THE GODAVARI WATER DISPUTES TRIBUNAL

REPORT

OF

THE GODAVARI WATER DISPUTES TRIBUNAL

VOLUME II

NEW DELHI
1979

PRINTED IN INDIA BY THE MANAGER, GOVERNMENT OF INDIA PRESS, NASIK-422 006 AND
PUBLISHED BY THE CONTROLLER OF PUBLICATIONS, CIVIL LINES, DELHI-110 054
1980

GODAVARI WATER DISPUTES TRIBUNAL

THE REPORT
OF
THE GODAVARI WATER DISPUTES TRIBUNAL
WITH THE DECISION
IN THE MATTER OF A WATER DISPUTE REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THERE OF

BETWEEN

1. THE STATE OF MAHARASHTRA
2. THE STATE OF KARNATAKA
3. THE STATE OF ANDHRA PRADESH
4. THE STATE OF MADHYA PRADESH
5. THE STATE OF ORISSA

VOLUME II

NEW DELHI
1979

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Part II

GODAVARI WATER DISPUTES TRIBUNAL

THE REPORT
OF
THE GODAVARI WATER DISPUTES TRIBUNAL
WITH THE DECISION

VOLUME II

PART I

NEW DELHI
1979

CONVERSION TABLE

1 Linear	
1 inch	= 25.40 millimetres
1 foot	= 12 inches = 304.80 millimetres
1 mile	= 5, 280 feet = 1,609.344 metres = 1.6093 kilometres
100 millimetres	= 3.9370 inches
1 metre	= 3.2808 feet = 1.0936 yards
1 kilometre	= 0.6214 mile
2. Area	
1 sq. foot	= 0.0929 square metre
1 acre	= 4, 840 square yards = 0.4047 hectare
1 square mile	= 640 acres = 258.999 hectares
1 sq. metre	= 10.7636 square feet = 1.1960 square yards
1 hectare	= 2.4711 acres = 0.003861 sq. mile
1 sq. km.	= 0.3861 square mile
3. Volume	
1 cubic foot	= 0.0283 cubic metre = 6.2288 gallons
1 million cubic feet	= 11.5741 cusec-days = 22.9568 acre-feet = 28, 316.8 cubic metres = 6.2288 million gallons
1 thousand million cubic feet	= 28.3168 million cubic metres = 22,956.84 acre-feet = 6,228.8 milliongallons
1 acre feet	= 0.1233 Hectare metre
1 million acre-feet	= 43.5600 thousand million cubic feet = 1.2335 milliard cubic metres
1 cusec-day	= 0.0864 million cubic feet = 1.9835 acre-feet = 2,446.5715 cubic metres = 0.5382 million gallons
1 gallon	= 4.5461 litres
1 million gallons	= 160,544 cubic feet = 4,546.09 cubic metres
1 cubic metre	= 3 5.3147 cubic feet = 219.969 gallons = 1,000 litres.

1 million cubic metres	= 35.3147 million cubic feet = 810.71 acre feet
1 milliard cubic metres	= 0.8107.million acre feet
1 cubic metre per second for 1 day	= 0.0864 million cubic metres = 70.0453 acre feet = 3.0512 milion cubic feet
1 hectare metre	= 8.1071 acre feet = 0.3531 million cubic feet

4. Rates of Flow

1 cubic foot per second	= 1.9835 acre feet per day = 0.028317 cubic metre per second = 28.3168 litres per second = 6.2288 gallons per second = 22,423.68 gallons per hour = 0.5382 million gallons per day.
1 million gallons per day	= 1.8581 cusecs days = 0.0526 cubic metres per second per day
1 cubic metre per second	= 35.3147 cusecs = 219.968 gallons per second
1 milliard cubic metres per day	= 0.4087 million cusecs per day = 0.8107 million acre-feet per day
1 litre per second	= 0.03531 cusecs = 791.8892 gallons per hour
1 milliard	= 1,000 million = 1,000,000,000

APPENDIX I

ABBREVIATIONS

(1) **Technical terms**

T.M.C.	...	thousand million cubic feet
M.A.F.	...	million acre feet
M.Cft.	...	million cubic feet
Cft.	...	cubic foot or feet
ft.	...	foot or feet
in.	...	inch or inches
Co	...	Centigrade temperature
Fo	...	Fahrenheit temperature
lat.	...	Latitude
long.	...	longitude
M.D.D.L.	...	minimum draw down level
R.L.	...	reduced level
F.R.L.	...	full reservoir level
M.W.L.	...	maximum water level
G.T.S. level	...	Great Trignometric Survey level

(2) **Other terms**

AP	...	Andhra Pradesh
MR	...	Maharashtra
KR	...	Karnataka
MY	...	Mysore
MP	...	Madhya Pradesh
OR	...	Orissa
G	...	Godavari
G-1 to G-12	..	sub-basins of Godavari basin
K	...	Krishna
K-1 to K-12	...	sub-basins of Krishna basin
pp.	...	pages
Ann.	...	Annexure
Ed.	...	Edition
Art.	...	Article
U.N.	...	United Nations
U.S.A.	...	United States of America
K.G.C.R.	...	Krishna-Godavari Commission Report
I.M.D.	...	India Meteorological Department
C.W. & P.C.	...	Central Water & Power Commission
C.W.C.	...	Central Water Commission
P.C.	...	Planning Commission

Certain volumes containing records of the Godavari case have been marked in an abbreviated form thus:

MRG	...	Volume containing the pleadings filed in the Godavari case by the State of Maharashtra.
APG	...	Volume containing the pleadings filed in the Godavari case by the State of Andhra Pradesh.
KRG	...	Volume containing the pleadings filed in the Godavari case by the State of Karnataka.
MPG	...	Volume containing the pleadings filed in the Godavari case by the State of Madhya Pradesh.
ORG	...	Volume containing the pleadings filed in the Godavari case by the State of Orissa.
MRDG	...	Volume containing relevant documents filed in the Godavari case by the State of Maharashtra.
APDG	...	Volume containing relevant documents filed in the Godavari case by the State of Andhra Pradesh.
KRDG	...	Volume containing relevant documents filed in the Godavari case by the State of Karnataka.
MPDG	...	Volume containing relevant documents filed in the Godavari case by the State of Madhya Pradesh.
ORDG	...	Volume containing relevant documents filed in the Godavari case by the State of Orissa.
MRPG	...	Volume containing Project Reports or Notes filed in the Godavari case by the State of Maharashtra.
APPG	...	Volume containing Project Reports or Notes filed in the Godavari case by the State of Andhra Pradesh.
KRPG	..	Volume containing Project Reports or Notes filed in the Godavari case by the State of Karnataka.
MPPG	...	Volume containing Project Reports or Notes filed in the Godavari case by the State of Madhya Pradesh.
ORPG	...	Volume containing Project Reports or Notes filed in the Godavari case by the State of Orissa.
CWPC(G)	...	Volume containing relevant documents obtained in the Godavari case from the Central Water and Power Commission.
SP	...	Volume containing Supplemental Pleadings.

APPENDIX C

GODAVARI : *19th April, 1971*

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

The parties have jointly handed over agreed minutes of the order (Annexure A) signed by Counsel for the States of Andhra Pradesh, Maharashtra, Mysore, Madhya Pradesh and Orissa. There will be an order in terms of the agreed minutes.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(Shamsher Bahadur)
Member

Sd/-
(D.M. Bhandari)
Member

New Delhi :
Dated: April 19, 1971.

ANNEXURE 'A'

IN THE GODAVARI RIVER DISPUTE

1. Each of the States concerned will be at liberty to divert any part of the share of the Godavari waters allocated to it by this Honourable Tribunal from the Godavari basin to any other basin.
2. In view of the pleadings and the statements of the States concerned, none of the States asks for a mandatory order for diversion of the Godavari waters into the Krishna basin.
3. The Krishna case will be decided separately from the Godavari case.

Sd/- P. Rama Chandra Reddy,
for the State of Andhra Pradesh
19-4-71

Sd/- T. Krishna Rao,
for the State of Mysore
19-4-71

Sd/- H. M. Seervai,
for the State of Maharashtra
19-4-1971

Sd/- K.A. Chitale,
for the State of Madhya Pradesh
19-4-1971

Sd/- L.M. Singhvi,
19-4-1971

Sd/- M.L. Lath
19-4-1971
for the State of Orissa

17th July, 1971

GODAVARI :

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF—

ORDER

There will be an order in terms of the agreed minutes (Annexure 'A') which have been signed by Counsel for all the parties and have been jointly handed over to the Tribunal.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(Shamsher Bahadur)
Member

Sd/-
(D.M. Bhandari)
Member

New Delhi:
Dated: July 27, 1971

ANNEXURE 'A'

GODAVARI WATER DISPUTES TRIBUNAL

By consent of the parties Clause (1) of Annexure 'A' to the Order dated 19th April, 1971, is amended by inserting the words "which may be" between the word 'waters' and the word 'allocated' so that the amended Clause (1) will now read as follows :

"Each of the States concerned will be at liberty to divert any part of the share of the Godavari waters which may be allocated to it by this Honourable Tribunal from the Godavari basin to any other basin."

Sd/- T. Krishna Rao
for the State of Mysore
27-7-1971

Sd/- Santosh Chatterjee,
Advocate for the State of Orissa
27-7-1971

Sd/- P. Ramachandra Reddy
for the State of Andhra Pradesh
27-7-1971

Sd/- H.M. Seervai
for the State of Maharashtra
27-7-1971

Sd/- K.A. Chitale
for the State of Madhya Pradesh
27-7-1971

APPENDIX D

GODAVARI WATER DISPUTES TRIBUNAL

Particulars of visits by the Godavari Water Disputes Tribunal to various works and sites in the Godavari Basin in the States of Maharashtra, Karnataka, Andhra Pradesh, Orissa and Madhya Pradesh

Date		Distance travelled (by road) Kms.	Works and sites visited
November, 1976			
20th to 21st			Assembled at Nagpur.
22nd	Halt at Nagpur	305	Visit to Itiadoh dam and inspection of command areas of Kanhan Diversion Schemes, Pench Irrigation Project, Dhapewada Diversion Scheme and Wainganga Integrated Project.
23rd	Halt at Nagpur	175	Visit to Pench Hydro-electric Project at Totladoh and inspection of the works in progress at the dam site and approach tunnel to the underground power house. Inspection of command areas of Pench Irrigation Project *en route*.
24th	Halt at Nagpur	403	Inspection of Kanhan, Wunna, Penganga and Tulana command areas.
25th	Halt at Nagpur	152	Visit to Pench Irrigation Storage-cum-Diversion Project and works in progress. Inspection of the Right and Left Bank canals and areas under their command.
26th	Nagpur to Aurangabad	425	Inspection of commands of Kanhan Diversion Scheme, Lower Wunna, Lower Wardha, Bambla, Aran, Lower Pus and Purna Projects and visit to Sidheswar dam *en route*.
27th	Halt at Aurangabad		Review of the tour in Vidarbha region of Maharashtra.
28th	Halt at Aurangabad	212	Visit to Khelna Project and its command area. Inspection of the water-shed between Godavari and Tapi rivers *en route*.
29th	Aurangabad to Parli	327	Visit to Jayakwadi Project and inspection of the dam, spillway, Right and Left Bank canals and command areas.
30th	Parli to Bidar	205	Inspection of the ridge between the Upper Godavari and Manjra sub-basins.
		50	Inspection of the command area of Karanja and Manjra Projects and visit to Karanja Project works under construction.
	Bidar to Hyderabad	140	Inspection of the command area of the Karanja Project *en route*.
December, 1976			
1st	Halt at Hyderabad	390	Visit to Nizamsagar dam across river Manjra, its spillway and sluices and Right Bank canal. Held discussions regarding heavy silting of its reservoir. Inspection of its command area *en route*.
2nd	Halt at Hyderabad		Discussions and review of the tour in Maharashtra and Karnataka States.

Date		Distance travelled (by road) Kms.	Works and sites visited
3rd	Hyderabad to Warangal	160	Visit to Ramappa lake, inspection of irrigation sluices and channels and its command area.
4th	Halt at Warangal		Inspection of the model of Inchampalli Project showing the lake and areas to be submerged. Aerial inspection by helicopter of the sites of the proposed Inchampalli dam on the river Godavari and the proposed Bhopalpatnam dam on the river Indravati in Andhra Pradesh and Madhya Pradesh respectively.
5th	Warangal to Kothagudam	220	Halt overnight. Inspection of the watershed between the Krishna and Godavari rivers *en route.*
6th	Kothagudam to Dowlaishwaram	260	Inspection of command areas of Polavaram Right Bank canal and Eluru canal *en route.* Visit to Godavari Eastern delta and inspection of areas under irrigation of the Godavari Eastern delta canal.
7th	Halt at Dowlaishwaram	90	Visit to Polavaram Project site, inspection of plans and discussions with the State engineers about the various aspects of the project. Visit to Godavari anicut and inspection of restoration work in progress. Visit to Godavari Central delta.
8th	Dowlaishwaram to Visakhaptanam	210	Visit to Pampa reservoir *en route.*
9th	Visakhapatnam to Bhubaneswar	450	Journey.
10th 11th	Halt at Bhubaneswar		Discussions and review of the tour in Andhra Pradesh.
12th	Bhubaneswar to Bhavanipatna	423	Overnight halt.
13th	Bhavanipatna to Koraput (Sunabeda)	320	Visit to Upper Indravati Power House site and inspection of the model of the project and the penstock line as marked at site as also the ayacut of this project. Inspection of the watershed between the Mahanadi and Indravati rivers. Visit to the Upper Kolab Hydro-electric-cum-Irrigation Project site and inspection of model of the project and the penstock line as marked at site. Inspection of the project ayacut *en route.*
14th	Sunabeda to Jagdalpur	136	Inspection of the Upper Kolab Project ayacut and of the watershed between the Indravati and Sabari rivers on way to Jagdalpur. Visit to Chitrakot Hydel Project site on the river Indravati where the river falls about 100 feet in several separate streams. Inspection of a few medium and minor schemes including Matkot and Mander integrated projects.
15th	Halt at Jagdalpur	311	Visit to Bodhghat dam site on the river Indravati and inspection of the axis of the dam and its drawings. Inspection of the command areas of a few schemes like Basanipur and Dantewara Schemes.

Date		Distance travelled (by road) Kms.	Works and sites visited
16th	Jagdalpur to Bhilai	353	Visit to Central Water Commission Gauge and Discharge site on the Indravati river near Jagdalpur town and held discussions about the method adopted for measuring river flows. Inspection of Ravishankar Sagar Project site on the Mahanad its model and drawings. Inspection of the watershed between the Mahanadi and Godavari rivers *en route.*
17th	Halt at Bhilai		Discussions and local visits.
18th	Bhilai to Kanha	209	Inspection of the watershed near Chilpi separating the Mahanadi basin from the Narmada basin. Halt overnight at Kanha.
19th	Kanha to Balaghat	116	Inspection of the watershed between the Narmada and the Godavari basin near Baihar and the command areas of Gangulpara Tank *en route.*
20th	Halt at Balaghat	237	Visit to Pujaritola pick-up weir and Sirpur dam across river Bagh. Inspection of spillway and the device for measurement of water discharged from the gates. Inspection of commands of Upper Wainganga Project, Deo-Am, Wara Main, Son, Bagh and Kharadi Projects.
21st	Balaghat to Seoni	216	Visit to the site of diversion of Sarathi river into the Wainganga and inspection of the syphon taking Wainganga canal flow below the river Sarathi and the aquaduct of the Wainganga canal over the river. Visit to the Dhuty pick-up weir on the Wainganga river and inspection of the command areas of the Sarathi, Chawarpani, Moorum and Bori Schemes.
22nd	Halt at Seoni	114	Visit to Upper Wainganga Project site and inspection of the model and dam site. Inspection of the Wainganga command *en route*
23rd	Seoni to Pachmarhi	210	Inspection of the command areas of the Pench Diversion Scheme, Pench river, Gangiwara Project, Bichhua Project *en route.*
24th	Halt at Pachmarhi		Discussions and general review of the tour in Madhya Pradesh.
25th	Pachmarhi to Bhopal	215	Inspection of the Tawa river right bank command *en-route.*
26th	Halt at Bhopal		The Tribunal held a formal meeting to consider the petitions filed on behalf of the States of Maharashtra, Andhra Pradesh, Orissa and Madhya Pradesh. General review of the entire tour.
27th	Bhopal to Delhi.		

NOTES BY THE CENTRAL WATER AND POWER COMMISSION ON THE UTILISATION OF SUPPLIES TO GODAVARI RIVER BASIN

AVERAGE ANNUAL RUNOFF AND DEPENDABLE YIELD

The river Godavari has been regularly gauged at Dowlaishwaram Anicut in Madras Delta. Statement attached gives actual annual runoff from 1881 to 1946 i.e., for a period of 66 years, Average annual runoff comes to 3433 T.M. Cft. But this figure was actually exceeded only in 35 years out of 66, and hence cannot be taken as dependable. Runoff of 300 T.M. Cft. taken by Madras is available in 45 years, that of 2500 and 2250 T.M. Cft. in 56 and 59 years respectively. For 4 years out of 66, suyply falls below 1000 T.M Cft. As "carry over" is not possible in this basin except at a very high cost, dependable supply available may be taken as 2250 T.M. Cft. This is in addition to the present actual utilisation which is of the order of 500 T.M. Cft. This gives total dependable supply of 2750 T.M. Cft.

Projects already under operation

		T.M. Cft.
Bombay	Godavari Canals Parwara Canals Minor Works	50
Hyderabad	Nizam Sagar dam Munair dam Minor Works	153.1
Madras	Delta Irrigation	300
	TOTAL	503.1
	or say	503

Projects under construction

		T.M. Cft
Bombay	Gangapur Canal near Nasik	7.0
Hyderabad	Godavari North Canal Bendusura Project	53.0
	Bendusura Project	1.0
	TOTAL	61.6
	or say	62

Projects under investigation or contemplation

		T.M. Cft.	
Bombay	(Assumed)	10	
Hyderabad	Purna dam on Purna river	36	
	Devnur dam on Manjira river	27	
	Upper Godavari dam at Khustapuram	227	(280—53 Godavari North canal).
	Penganga dam	53	
	Lower Munair dam	32	
	Prabitta dam	32	
	Lower Goddari dam at Inchampally	32	
	Medium and minor projects	60	
	Minor works	18	
	TOTAL	517	

Madhya Pradesh	Wainganga North of Khapa	12
	Penganga at Amti	75
	Wardha river east of Morai	19
	Indra Vati—Chitrakoti Barsur Bhopal Patnam	20
	Sabari at Guma	172
	Wainganga Reservoir Projects	160
	Absorption and evaporation losses	22
	TOTAL	480
Madras	Ramapada Sagar dam	1035

Sabari (115 T. M. Cft.) not taken into account as it will not be necessary if Ramapada Sagar Dam materialises Total 10+517+480+1035=2042 T. M. Cft.

Total utilization of supplies in this river basin for projects both in operation and proposed, therefore, is of the order of (503+62+2042) 2607 or say 2600 T. M. Cft against 2750 T, M. Cft. available. The supplies available are, therefore, just sufficient to meet the total requirements of all the projects which can be foreseen at present.

Next point to be considered is whether supplies are available at the sites proposed. Unfortunately discharge observations are available for any site above Dowlaishwaram in Madras. It is, however, evident that ample supplies are available for Bombay, Madhya Pradesh and Madras Projects. As regards Hyderabad that State has given some calculations for the various sites which show that water will be available. The only site where there is likely to be some difficulty is Khushtapuram on the Godavari but here also supplies appear to be just sufficient.

Financial aspects of the proposed Projects

The only projects which seem to have been surveyed in detail are Purna, Devnor, Godavari and Penganga in Hyderabad and Ramapada Sagar in Madras.

The Hyderabad Projects are also shown to be productive. But as detailed estimates have not been made available, no check has been possible.

As regards Ramapada Sagar project in Madras, it is unproductive. But the Madras Government proposed to levy annual betterment fee in the form of acreage rate on the land to be benefited just sufficient to make up the loss.

A Statement of actual annual runoff of River Godavari at Dowlaishwaram, Madras.

Year	T.M. Cft.	Runoff	M. acre ft.
1881	3,404,806	..	78.2
2	3,700	..	85
3	5,580	..	128
4	5,171	..	119
5	4,412	..	101.5
6	4,221	..	97
7	5,274	..	121
8	2,554	..	87.7
9	2,459	..	87.2
1890	4,731	..	118.7
1	4,076	..	93.8
2	4,271	..	98.2
3	5,794	..	133
4	4,295	..	98.7
5	3,203	..	73.6
6	3,393	..	78.0
7	3,425	..	79.0
8	2,880	..	66.2
9	459	..	10.5

Year	T.M. Cft.	Runoff	M. acre ft.
1900	3,425	..	78.8
1	2,309	..	53.0
2	1,480	..	34.0
3	4,003	..	93.5
4	1,893	..	43.5
5	2,254	..	51.8
6	3,068	..	70.5
7	5,359	..	135.0
8	3,955	..	91.0
9	2,371	..	54.5
1910	4,425	..	101.5
1	2,490	..	57.3
2	2,955	..	68.0
3	2,663	..	61.3
4	5,298	..	121.5
5	3,771	..	86.7
6	4,432	..	102.0
7	5,441	..	125.0
8	2,736	..	62.9
9	3,938	..	90.5
1920	958	..	22.0
1	3,077	..	70.7
2	2,954	..	68.0
3	2,515	..	58.5
1924	2,484	..	57.2
5	3,282	..	74.6
6	..	..	..
7	3,700	..	85.1
8	3,243	..	74.6
9	2,943	..	67.7
1930	286	..	6.6
1	4,778	..	110.0
2	3,775	..	86.7
3	4,745	..	109.0
4	4,647	..	107.0
5	3,535	..	81.5
6	4,158	..	95.7
7	400	..	9.02
8	4,853	..	112.0
9	2,459	..	56.5
940	4,181	..	96.2
1	1,422	..	32.7
2	4,228	..	27.4
3	3,802	..	87.5
4	4,279	..	98.5
5	4,220	..	97.8
6	3,559	..	82.7

Statement by projects of the quantum of proposed utilization, power, installed and proposed irrigation

Name of Project	Total demand T.M. Cft.	Proposed irrigation in acres	Proposed power installed. K.W.
BOMBAY			
Godavari Canals *Parwara Canals* Minor Works	50	Not known	Not known
Gangapur Canal	7	50,000	..
Future Minor Projects	10	50,000	..
HYDERABAD			
Nizam Sagar dam	58.0	2,75,000	..
Munair dam	3.4	17,250	..
Minor Works	91.7	4,53,963	..
Godavari North Canal	53.0	2,27,000	..
Bendsura Project	1.6	8,200	..
Purna	36.0	1,50,000	16,000
Devnoor	27.0	50,000	40,000
Godavari	227.0	9,33,000	1,75,000
Penganga	53.0	1,50,000	40,000
Lower Munair	32.0	1,00,000	..
Pranhitta	32.0	1,00,000	..
Lower Godavari	32.0	1,00,000	1,50,000
Minor and medium Projects and works	78.0	2,94,000	..
MADHYA PRADESH			
Wainganga North of Khapa		50,000	1,800
Penganga at Amti	75	3,00,000	13,400
Wardha	19	75,000	4,370
Indravati Chitarkoti Barsur	20	80,000	27,000
Bhopalapatnam	..	..	35,002
Wainganga Reservoir Project	160	10,00,000	6,20,000
Sabari at Guma	172	6,90,000	11,400
Absorption losses etc.	22	..	..
	480		
MADRAS			
Dowlaiswaram Anicut	300.00	12,50,000	..
Rampada Sagar Dam	300.00	27,46,000	1,50,000

Note : Projects in operation or under construction are underlined.

Summary record of discussions at the Inter-State Conference on the utilisation of Krishna and Godavari Waters held in the Committee Room of the Planning Commission, New Delhi, on 27th and 28th July, 1951.

Planning Commission

Shri V.T. Krishnamachari, Member—Chairman

Shri G.R. Garg, Chief of Natural Resources Division.

Shri K. S. S. Murthy Asstt. Executive Engineer, Natural Resources Division.

Hon'ble Shri N. V. Gadgil, Minister for Works, Production and Supply, attended by invitation.

BOMBAY

Hon'ble Dr. Jivraj Mehta, Minister, P. W. D.

Hon'ble Shri Naik Nimbalkar, Development Minister.

Shri G. V. Bedekar, I. C. S., Secretary , P. W.D.

Shri Mirchandani, Chief Engineer, Electricity.

Shri Champhekar, I. S. E., Chief Engineer, Irrigation.

MADRAS

Hon'ble Shri M. Bhakthavatsalam, Minister, P. W. D.

Shri T. M. S. Mani, I. C. S., Secretary, P. W. D.

Shri A. R. Venkatacharya, I. S. E., Chief Engineer, Irrigation.

Shri N. Padmanabha Iyer, I. S. E., Superintending Engineer.

Shri M. D. Narasimhachari, Deputy Chief Engineer.

HYDERABAD

Hon'ble Shri M. K. Vellodi, Chief Minister.

Hon'bie Nawab Zain Yar Jung, Minister, P. W. D.

Shri Papaiah, Chief Engineer.

Mr. Jaffar Ali, Superintending Engineer.

MADHYA PRADESH

Hon'ble Shri R. Agnibhoj, Minister, P. W. D.

MYSORE

Hon'ble K. C. Ready, Chief Minister (attended on 27th only).

CENTRAL WATER AND POWER COMMISSION

Shri A. N. Khosla, Chairman.

Shri Gadkary, Member.

Shri (Dr.) K. L. Rao, Director.

Shri C. S. Parthasarathy, Asstt. Engineer.

Opening the dicussion Shri V. T. Krishnamachari stated the broad principles on which schemes for irrigation and power development should be selected for inclusion in the plan. He mentioned that only projects, which had been thoroughly investigated and found technically, economically and financially justifiable, should be included in our Five Year Plan.

The object of the Conference was to discuss the utilization of supplies in the Krishna and Godavari river basins so that an assessment could be made of the relative merits of projects proposed for inclusion in the second part of the Five Year Plan. He referred to the technical paper already circulated showing the supplies available in these rivers. In considering the issues placed before the meeting, two points of view should be reconciled. The first was the need from an all-India point of view for increasing available food supplies within the shortest possible time and on

the most economic basis. The Irrigation Commission reporting over 50 years ago emphasised the need regarding irrigation development as a national-all-India-question. This was even more important now than it was in the past. India's food problem can be solved only on such a basis. The shortage of power in the Bombay City and surrounding areas should also be regarded as an urgent problem. On the other hand, regional development was important, especially the development of backward regions, and could not be ignored. He was confident that an agreement could be reached reconciling these two considerations in a practical manner which would be equitable to all areas concerned.

2. G.R. Garg, Chief of Natural Resources Division, then gave a brief review of the existing utilization of supplies in these river basins and the contemplated utilization based on the technical note circulated by the Planning Commission.

Shri Venkatacharya, Chief Engineer, Madras, stated that the discharge figures of Krishna River, which had been worked out in the note, were under-estimated by about 8%. Shri Champhekar, Chief Engineer, Bombay, stated that the regeneration supplies in the river basin had not been taken into account. He thought that nearly 25% to 40% of the waters would perhaps be available as regeneration supplies. These points were noted.

3. Hon'ble Shri N. V. Gadgil drew attention to the extremely backward condition of certain districts of Bombay State, Poona, Sholapur, Bijapur, etc. He specially stressed the needs of the Karnatic areas. The development of these regions depended on the availability of power and irrigation and should have high priority. Their needs should be provided for.

Shri M. K. Vellodi, Chief Minister of Hyderabad, desired that certain broad principles of priority should be laid down by the Conference, so that details could be worked out later on.

4. Shri V. T. Krishnamachari mentioned that apart from power supply projects in the Plan to meet existing deficits, irrigation had been given priority over power projects. The Planning Commission in their draft Five Year Plan has suggested a Committee for selecting projects for inclusion in the second part of the Plan, and set out the principles which should regulate the inclusion of projects in the Plan. No doubt certain States had some initial advantages—trained staffs and long experience of irrigation works but the interests of other regions could not be neglected.

Hon'ble Shri K. C. Reddy, Chief Minister of Mysore, stated that so far as the Krishna River basin was concerned, Mysore had certain agreement with Madras and Hyderabad and the new agreement, that might be arrived at, should take note of the existing agreement.

5. Shri Rameswar Agnibjoj referred to the Wainganga Project of Madhya Pradesh. It was suggested to him that his Government should request the Central Water and Power Commission to complete the investigations so that negotiations might be undertaken with the adjoining States for utilising the power proposed to be generated.

6. Shri T. M. S. Mani of Madras suggested that the waters of the river basins should be distributed to the various States on a percentage basis, so that everyone would be affected equally in good or bad year.

7. Thereupon the Conference adjourned to enable the engineers to arrive at an agreement about the waters of Krishna.

8. The Conference reassembled at 4 P.M. The engineers reported a tentative agreement regarding the waters the Krishna. Hon'ble Shri N. V. Gadgil suggested that the percentage adopted by the engineers for Bombay should be increased. After discussion it was agreed that in the case of the Krishna waters, a different set of proportions should be assumed for discharges above 1,000 T. M. Cft.

Saturday the 28th July, 1951.

9. The engineers met at 10 A.M. to discuss the distribution of waters in the Godavari Basin and arrived at a tentative set of proportions.

10. The Conference assembled at 11.30 A.M. It considered proposals made by the engineers regarding the Godavari. The engineers were requested to prepare a memorandum of agreement and the Conference adjourned till 3.30 P.M.

11. The Conference reassembled at 3.30 P.M. and proceeded to consider the draft memorandum sentence by sentence. As regards Section I, Hon'ble Shri N. V. Gadgil stated that the proportions for the Krishna Waters worked out on the previous day were not equitable as they would prejudice the development of the economically backward areas he mentioned and these areas were entitled to a larger share. After some discussion in which the representatives of Madras, Hyderabad and Bombay took part, the conference agreed to a modification of the proportions of distribution for the Krishna waters—Bombay's share being increased by 4%, 2% being surrendered by Hyderabad and 2% by Madras.

12. The basis of distribution for the Krishna and the Godavari waters agreed to at the conference is shown in the annexed memorandum of agreement as finally agreed to by the conference.

MEMORANDUM OF AGREEMENT

I—THE KRISHNA

The dependable annual flow in the Krishna basin based on the recorded gaugings at Vijayawada is accepted as 1,715 T.M.C.ft. This figure may have to be increased to allow for any omissions in respect of existing utilizations in any State.

Shri Venkatachari's statement that the actual flow will be in excess of the recorded gauged flow by 8% is noted.

2. The existing utilizations (subject to corrections mentioned in para I) plus flows required for projects under construction in the concerned States, as stated below, are hereby allocated to the respective States :—

	T.M.C.ft.
Bombay	176
Hyderabad	180
Mysore	98.5
Madras	290
	744.5

3. The balance of flow for new projects, after meeting the above allocations works out to 970.5 T.M.C.ft. For purposes of allocation, this has been taken as 1,000 T.M.C.ft. For this balance upto 1,000 T.M.C.ft. the allocations are made as hereunder :—

	Per Cent	T.M.C.ft.
Bombay	24	240
Hyderabad	28	280
Mysore	1 (Provisional)	10
Madras	47	470

For balance flow in excess of 1,000 T.M.C.ft. mentioned above, the allocations will be as follows :—

	Per cent
Bombay	30
Hyderabad	30
Mysore	1 (Provisional)
Madras	39

The allocation to Mysore may have to be slightly adjusted to the extent of additional 1% as a result of further engineering scrutiny. This addition will come out of the share of Madras.

4. The above allocations are subject to the condition that the diversion of supplies across the western ghats for the Koyna Project will be limited to 67.5 T.M.C.ft.

II—THE GODAVARI

The dependable annual flow in the Godavari basin based on the recorded gaugings at Dauleshwaram is taken as 2,500 T.M.C.ft.

2. The existing utilizations plus supplies required for projects under construction in the concerned States as stated below are hereby allocated to the respective States :—

	T.M.C.ft.
Bombay	57
Hyderabad	208
Madhya Pradesh	30
Madras	300
Total	595

3. Of the balance flow of 1,905 T.M.C.ft. (say 1,900) which remains available after meeting the allocations in para 2, the allocations to the various States will be as below :—

	Per cent	T.M.C.ft.
Bombay	3	57
Hyderabad	26	494
Madhya Pradesh	24	456
Madras	47	893
		1,900

These percentages will apply whether the supplies are in excess or short of the dependable flow assumed above.

III—GENERAL

The allocations in the case of the Krishna and the Godavari have been made on an annual basis. The new utilizations have to be so adjusted as not to interfere with the existing daily utilization for existing works and agreed utilization for new works.

2. The use of water passed by one State for her use downstream, out of the share allocated to her and passing through the reservoir of another State may be used by the latter State, solely for power purposes, provided that such quantities are not impounded in their passage through the reservoir for more than the period agreed upon between the Governments concerned, which agreement shall not be unreasonably withheld.

3. The allocations made under parts I and II shall be reviewed after 25 years.

4. No major project shall be undertaken for construction by any State unless it has been fully investigated and necessary detailed estimates have been prepared, and duly examined.

Replies received from State Governments

Copy of Letter No. MS 3433, dated the 17th August, 1951 from the Secretary to the Government of Madras, Public Works Department, to the Secretary, Planning Commission, New Delhi.

Subject : Utilization of the supplies in Krishna and Godavari River Basins by the State Governments—conclusions arrived at the Conference convened by the Planning Commission—ratification.

With reference to your letter No. PC(V)95/51, dated 31-7-1951, I am directed to state that the Madras Government ratify the agreement arrived at on the above subject at the conference held at New Delhi on 27th and 28th July, 1951, a copy of which was forwarded with your letter cited.

Copy of letter No. C.M. NI 1051 J., dated 30th August, 1951, from the Deputy Secretary to the Government of Bombay, Public Works Department, to the Deputy Secretary, Planning Commission, New Delhi.

Subject : Utilization of supplies in the Krishna and Godavari river basins.

With reference to your letter No. PC(V)95/51, dated the 31st July, 1951, forwarding (a) a summary record of discussions at the Inter-State Conference held in the Planning Commission, New Delhi, on the 27th and 28th July, 1951 on the above subject and (b) a copy of the agreement reached at the Conference regarding the allocation of the supplies in the Krishna and Godavari River Basins, I am directed to convey the ratification of the agreement by this Government as requested therein

Copy of letter No. GVA-16/GV/51-3148, dated 23rd August, 1951, from the Secretary to the Government of Hyderabad, Public Works Department, to the Deputy Secretary, Planning Commission, New Delhi.

Subject : Utilization of supplies in the Krishna and Godavari River Basins—Ratification of Agreement.

Reference : Your letter No. PC(V)95/51, dated the 31st July, 1951.

With reference to the above communication, I am directed to inform you that the Government of Hyderabad hereby ratifies the agreement arrived at in the Inter-State Conference held at Delhi on the 27th and 28th of July, 1951.

Copy of letter No. 429-F/W 251, dated 8th September, 1951, from the Secretary to the Government of Madhya Pradesh, Public Works Department, Nagpur to the Secretary Planning Commission, New Delhi.

Subject : Utilization of supplies in the Krishna and Godavari River Basins.

With reference to your letter No. PC(V)95/51, dated the 31st July, 1951, I am directed to state that the State Government ratify the agreement arrived at the Inter-State Conference on the utilisation of supplies in the Godavari and Krishna River Basins, held on the 27th and 28th July, 1951.

APPENDIX F

6-1-1970

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

*** *** *** ***

ADMISSION MADE BY ALL PARTIES

It is conceded by all parties that Orissa is not bound in any way by the agreement of 1951.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(Shamsher Bahadur)
Member

Sd/-
(D.M. Bhandari)
Member

New Delhi :
Dated this the 6th day of
January, 1970.

APPENDIX G

GODAVARI

12th July 1976

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF.

ORDER

Learned Advocate General of the State of Andhra Pradesh, on behalf of the State of Andhra Pradesh, has made the statement as in Annexure 'A'. Let the statement be recorded.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(D.M. Bhandari)
Member

Sd/-
(D.M. Sen)
Member

NEW DELHI
Dated : July 12, 1976.

ANNEXURE A

GODAVARI

12th July, 1976

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTES AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

It was provided in the Inter-State Agreement dated the 27th/28th July, 1951, in Part III General, Clause 3, that "the allocations made under Parts I and II shall be reviewed after 25 years." and so the agreement will expire by 27/28th July, 1976. Further on 19-12-1975 another Inter-State agreement was entered into between all the five Riparian States for partial allocation of the waters of the River Godavari and its Tributaries.

In view of the above circumstances, I on behalf of the State of Andhra Pradesh, state that issue No. I need not be answered by this Hon'ble Tribunal.

Sd/-
(P. Ramachandra Reddy)
Advocate General

New Delhi
Dated : July 12, 1976.

APPENDIX H

Extracts of para 8.5.3 of Chapter VIII of the Rejoinder of Andhra Pradesh to the Statement of case of Maharashtra (APG. Vol.III)—Suddavagu Project.

8.5.3 Suddavagu Project—Suddavagu is a tributary of the Godavari having its source in Maharashtra State and joining Godavari river in Andhra Pradesh. A scheme across the stream was contemplated by the former Hyderabad State, and was provided for in the 1951 Agreement. The reservoir scheme originally contemplated has been dropped. The scheme as now proposed by Andhra Pradesh State involves no submersion in Maharashtra territory.

APPENDIX G

GODAVARI

12th July 1976

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF.

ORDER

Learned Advocate General of the State of Andhra Pradesh, on behalf of the State of Andhra Pradesh, has made the statement as in Annexure 'A'. Let the statement be recorded.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(D.M. Bhandari)
Member

Sd/-
(D.M. Sen)
Member

NEW DELHI
Dated : July 12, 1976.

ANNEXURE A

GODAVARI *12th July, 1976*

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTES AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

It was provided in the Inter-State Agreement dated the 27th/28th July, 1951, in Part III General, Clause 3, that "the allocations made under Parts I and II shall be reviewed after 25 years." and so the agreement will expire by 27/28th July, 1976. Further on 19-12-1975 another Inter-State agreement was entered into between all the five Riparian States for partial allocation of the waters of the River Godavari and its Tributaries.

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New Delhi
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APPENDIX I

THIS AGREEMENT made this Thirty First day of January One Thousand Nine Hundred and Seventy Five between the Governor of Maharashtra (hereinafter referred to as "Government of Maharashtra") of the one part and THE GOVERNOR OF ANDHRA PRADESH (hereinafter referred to as 'Government of Andhra Pradesh') of the other part.

WHEREAS the representatives of the Maharashtra Government led by the Secretary to the Government of Maharashtra, Irrigation and Power Department, Shri B. A. Kulkarni, and the representatives of the Government of Andhra Pradesh led by the Secretary to the Government of Andhra Pradesh, Public Works Department, Shri B.C. Gangopadhyay met in a conference at Bombay on the 17th June, 1972 to discuss proposals regarding the Swarna Irrigation Project of Andhra Pradesh (hereinafter referred to as "the said Project").

AND WHEREAS, at the said conference certain proposals concerning the said project were formulated and agreed upon between the said representatives, subject to the same being confirmed by Government of Maharashtra and the Government of Andhra Pradesh.

AND WHEREAS, the proposals regarding the said project as now finally agreed upon between the Government of Maharashtra and Government of Andhra Pradesh are as set out in the schedule hereunder written.

AND WHEREAS the parties are desirous of entering into a formal agreement in connection therewith; NOW THIS AGREEMENT WITNESSETH that the Government of Maharashtra and the Government of Andhra Pradesh hereby mutually confirm and agree to the proposals set out in the schedule hereunder written in connection with the said project, and the parties hereto covenant with each other that they shall duly observe and perform the conditions and provisions to be observed and performed respectively by them under or in, the said proposals set out in the schedule hereunder.

THE SCHEDULE

The Governments of Andhra Pradesh and Maharashtra agreed to the completion of the Swarna Project of Andhra Pradesh subject to the following conditions :

(i) The availability of water at the Jawali Dam site of Swarna Project on the basis of 75% dependability is 2137 Mcft., 70 Mcft., which is existing user and 230 Mcft., for future projects i.e. in all 300 Mcft., should be reserved for the Upper State i.e. for use in Maharashtra catchment area. In respect of future projects for which 230 Mcft., should be reserved the Government of Maharashtra will intimate the Government of Andhra Pradesh about the particulars of acreage, cropping pattern and also the quantity of water required for each project, as and when a project is taken on hand.

(ii) The height of the Dam may have to be adjusted to the upstream use in Maharashtra as mentioned in clause No. (i) above and subject to the reservation for upstream user mentioned in clause (i) above. The Government of Maharashtra has no objection to the decision of Government of Andhra Pradesh that the height of the dam at the F. R. L. should be 1183. Acquisition for submergence area and rehabilitation of the affected people would be entirely at the cost of the Andhra Pradesh Government.

(iii) On the basis of F. R. L. 1183, the submergence in Maharashtra will be to the extent of 400 acres of which about 80 acres are Government lands and about 320 acres belong to private parties. The number of families of farmers who would be affected would be about 80. The number of families of farmers who would lose major portion of the holdings and hence need rehabilitation would be approximately 40. Each of the affected families which loses a major portion of its holding has to be rehabilitated and should be given five acres of land out of which one half should be wet and one half should be dry, on payment of usual occupancy price for Government waste lands. The preference indicated by the affected persons is for allotment of lands in the following villages :

1. Koutla
2. Sarangapur

3. Jam Busrug
4. Chincholi
5. Borgaon
6. Jawali
7. Alur
8. Dheni

The Government of Andhra Pradesh may consider giving preference to the lands available in these villages or as near to the original village as possible. It is not necessary that all the people needing rehabilitation should be rehabilitated in the same compact block.

(iv) The villagers from Maharashtra will be allowed to lift water by pumps from the Swarna lake to irrigate their lands to the maximum extent of 150 acres. For this water supply the irrigators in Maharashtra will be charged the water rates by the Government of Andhra Pradesh in the same manner; and at the same rates as are applicable to the irrigators in Andhra Pradesh. Government of Maharashtra undertakes to restrict such lift irrigation within the agreed limit of 150 acres. The Government of Maharashtra also undertakes to recover and pay water charges to the Government of Andhra Pradesh in the event of the water rates not being paid by any of the irrigators of Maharashtra. The water so utilised by irrigators in Maharashtra will be accounted for against the upstream reservation being made for Maharashtra as in clause (i) above. The officials of the Government of Andhra Pradesh will be permitted and afforded all facilities by the Government of Maharashtra for inspecting the pumping installations set up in, and the irrgation arrangements made for, the lands in Maharashtra State, to lift water by pumping from the part of the Swarna Reservoir located in the Maharashtra State.

(v) The project authorities will construct submergible bridge at the cost of the project in time to restore the communications from the village site of Apparaopeth to fields on the other side of the river. Further two or three suitable culvert crossings will be provided by the Government of Andhra Pradesh on Nallas. The existing cart track from Apparaopeth to Jawali from where there is a road to Nirmal, will get submerged by the reservoir. The State of Andhra Pradesh will acquire lands and provide equivalent communication system between Apparaopeth and Jawali.

In witness whereof the Secretary to the Government of Maharashtra, Irrigation and Power Department has for and on behalf of the Governor of Maharashtra hereto set his hand and affixed the seal of his office and the Secretary to the Government of Andhra Pradesh, Public Works Department has for and on behalf of the Governor of Andhra Pradesh, hereto set his hand and affixed the seal of his office, to the day and year first herein above written. Signed, Sealed and Delivered by Shri V. R. Deuskar, Secretary to Government of Maharashtra, Irrigation and Power Department for and on behalf of the Government of Maharashtra in the presence of

(1) Sd/- K.S. Shankar Rao
Dy. Secy. to the Government of Maharashtra
I & P. D., Bombay

&

(2) Sd/- V.A. Joshi
Under Secy. to the Govt. of Maharashtra,
I. & P. D., Bombay

SIGNED, SEALED AND DELIVERED
By Shri Sd/- M. Gopalakrishnan
Secretary to Government of Andhra Pradesh
Public Works Department for and on behalf of the Governor of Andhra Pradesh in the presence of

(1) Sd/- G. Hanumantha Reddy,
Dy. Secy. to Govt. (Works)
Public Works Department.

&

(2) Sd/- C.S. Sarvanam
Assistant Secretary to Govt.
Public Works Department.

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No. 17(7)/76-*GWDT*,
Dated 12*th July* 1976

The State of Maharashtra . . . . . Petitioner

To

The Honourable Justice Mr. R. S. Bachawat,
Chairman of the Tribunal and the other
Honourable Members of the Tribunal.

The Humble Petition of the Petitioner above named.

MOST RESPECTFULLY SHEWETH :

The States of Maharashtra, Karnataka, Madhya Pradesh, Orissa and Andhra Pradesh have entered into an agreement on 19th December 1975 at New Delhi regarding sanction and clearance of projects for the utilisation of Godavari river and its tributaries.

The State of Maharashtra hereby file a copy of the said agreement together with the Annexures and respectfully prays that this Honourable Tribunal may be pleased to :

(a) take this agreement together with Annexures on record and mark it an exhibit.

(b) pass such other appropriate orders as may be deemed necessary.

Dated this 12th day of July 1976.
Petition drawn by
Shri P.C. Bhartari.

Sd/-
(S. J. JOSHI)
Under Secretary to the Government of Maharashtra, Irrigation Department.

Sd/-
(P. C. Bhartari)
Counsel for the State of Maharashtra.

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No. 17(8)/76-*GWDT*
Dated 12-7-1976

The State of Andhra Pradesh . . . . . Petitioner

To

The Honourable Mr. Justice R. S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof.

The Humble Petition of the Petitioner Above Named.

MOST RESPECTFULLY SHEWETH:

The State of Maharashtra, Karnataka, Madhya Pradesh, Orissa and Andhra Pradesh have entered into an agreement dated 19-12-1975 at New Delhi under the auspices of the Honourable Union Minister of Agriculture and Irrigation.

A copy of the said Agreement entered into by the States of Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh and Orissa together with its Annexures I to IV is filed herewith.

The State of Andhra Pradesh prays that this Honourable Tribunal may be pleased to take the Agreement dated 19-12-75 entered into by all the parties together with its Annexures I to IV on record and mark it as an Exhibit and pass such other order or orders as the Honourable Tribunal may deem fit.

New Delhi-49
Dated 12-7-1976.

Sd/-
(B. GOPALAKRISHNA MURTHY)
Special Officer : Water Resources Irrigation
& Power Department, Government of
Andhra Pradesh

GODAVARI

12th July, 1976

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

XX XX XX

32. *C.M.P. No.* 17(7)/76-*GWDT*

Petition dated the 12th July, 1976, on behalf of the State of Maharashtra praying that the copy of the agreement dated the 19th December, 1975 entered into by the States of Maharashtra, Karnataka, Madhya Pradesh, Orissa and Andhra Pradesh regarding sanction and clearance of projects for the utilisation of Godavari river and their tributaries together with the Annexures thereto be taken on record and marked as exhibits.

AND

33. *C.M.P. No.* 17(8)/76-*GWDT*

Petition dated the 12th July, 1976, on behalf of the State of Andhra Pradesh praying that the copy of t he agreement dated the 19th December, 1975, entered into by the States of Maharashtra, Karnataka, Madhya Pradesh, Orissa and Andhra Pradesh regarding sanction and clearance of projects for the utilisation of Godavari river and their tributaries together with the Annexures thereto be taken on record and marked as exhibits.

The copies of the agreement dated the 19th December, 1975 together with all the annexures filed with C.M.Ps. are received in evidence. Let these be marked as exhibits. The C.M.Ps. are disposed of accordingly.

Sd/-
(R. S. Bachawat)
Chairman

Sd/-
(D.M. Bhandari)
Member

Sd/-
(D. M. Sen)
Member

New Delhi
Dated : July 12, 1976.

APPENDIX K

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No. 17(14)/78-*GWDT*
Dated 8-8-1978

The State of Maharashtra
The State of Madhya Pradesh
The State of Andhra Pradesh . . . . . Petitioners

To

The Honourable Shri Justice R. S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof.

The humble petition of the petitioners above-named.

MOST RESPECTFULLY SHEWETH:

In pursuance of the discussions held between the Representatives of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh regarding the sub-basin wise allocations of Waters of the Godavari below Pochampad and its tributaries downstream of Pochampad Dam in the State of Andhra Pradesh, the projects therein and all allied matters, the allocations already agreed to under the Inter-State Agreement, dated the 19th December, 1975 were taken into consideration. In furtherance of the said Inter-State Agreement, an agreement has been reached for final allocation of all the waters of the various sub-basins between the Representatives of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh on the 7th August, 1978.

2. The said agreement of 7-8-1978 covers all outstanding matters between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, regarding the sub-basin wise allocations of the waters of the Godavari and its tributaries downstream of the Pochampad Dam in the State of Andhra Pradesh. The said agreement of 7-8-1978 covers the allocations for the sub-basins G-5 (Part); G-6; G-7; G-8; G-9; G-10; G-11 and G-12 concerning the three States of Maharashtra, Madhya Pradesh and Andhra Pradesh. Accordingly, the said disputes between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh have ceased to exist.

3. The petitioner States of Maharashtra, Madhya Pradesh and Andhra Pradesh further state that the said agreement of 7-8-1978 embodies the agreement reached between the said States, on issues I to IV of the dispute.

4. The States of Maharashtra, Madhya Pradesh and Andhra Pradesh further submit that in view of the said agreement of 7-8-1978, it would not be necessary for this Hon'ble Tribunal to adjudicate upon the levels for the Inchampalli Project which is to be a joint project of all the three States as per the agreement of 19-12-1975. Accordingly, the said dispute has ceased to exist.

5. The States of Maharashtra, Madhya Pradesh and Andhra Pradesh respectfully submit that the aforesaid agreement, dated 7-8-1978 annexed to this CMP may be taken on the record of this Hon'ble Tribunal and appropriate directions with regard thereto may be issued.

PRAYER

The States of Maharashtra, Madhya Pradesh and Andhra Pradesh respectfully pray that this Hon'ble Tribunal may be pleased to :

(i) receive the Agreement, dated 7-8-1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh on record of the present proceedings;

(ii) issue appropriate directions with regard thereto; and

(iii) pass such other orders as may be deemed just and proper.

Settled by :

Sd/-
P.C. Bhartari,
Advocate for the State of
Maharashtra.

Sd/-
C. R. Somasekharan,
Advocate for the State of
Madhya Pradesh.

Sd/-
D. V. Sastry,
Advocate for the State of
Andhra Pradesh.

New Delhi ;
Dated, the 8th August, 1978.

Submitted by :

Sd/-
Representative of the State of
Maharashtra.

Sd/-
Representative of the State of
Madhya Pradesh.

Sd/-
Representative of the State of
Andhra Pradesh.

GODAVARI

8th August, 1978.

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

C.M.P. No. 17(14)/78-*GWDT*

Petition, dated the 8th August, 1978, on behalf of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, filing, therewith an Agreement, dated the 7th August, 1978, concluded by them and praying that the same be taken on record of the present proceedings.

By consent of the parties, the C.M.P. is treated as placed in today's list. The Agreement annexed to the C.M.P together with the C.M.P., is received in evidence and taken on record. Let it be marked as an exhibit on behalf of the State of Maharashtra.

Be it recorded that Counsel for the States of Karnataka and Orissa have stated that they do not admit the correctness of any of the statements or submissions made in the C.M.P. or in the Agreement annexed thereto.

The C.M.P. is disposed of accordingly.

Sd/-
(R. S. Bachawat)
Chairman.

Sd/-
(D. M. Bhandari)
Member.

Sd/-
(D. M. Sen)
Member.

New Delhi ;
Dated: August 8, 1978.

6 M of A & I/79—5

APPENDIX L

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTER REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No. 17(15)/78-GWDT *D/18-10-1978*

The State of Andhra Pradesh
The State of Karnataka . } Petitioners

To

The Hon'ble Shri Justice R.S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof.

The humble petition of the petitioners above named

MOST RESPECTFULLY SHEWETH :

Discussions were held between the Chief Ministers of the States of Karnataka and Andhra Pradesh on 4th August, 1978 at Bangalore, (a) for the allocation of waters in the Manjra sub-basin of River Godavari, for construction of Singur Project, for diversion of Godavari waters from Polavaram Project into Krishna river, and (b) for construction of Jurala project as proposed by the State of Andhra Pradesh on the river Krishna. A Summary record of discussions held at Bangalore on 4-8-78 was prepared. True copy of the said Summary record signed by Counsel for the two States is hereto annexed. It is submitted that the same may be taken on the record of this Honourable Tribunal and that appropriate directions may be issued.

PRAYER

The States of Karnataka and Andhra Pradesh respectfully pray that this Honourable Tribunal may be pleased to

(i) receive the Summary record of discussions held between the Chief Ministers of Karnataka and Andhra Pradesh on 4-8-1978;

(ii) issue appropriate directions with regard thereto; and

(iii) pass such other orders as may be deemed just and proper.

Sd/-
Representative of the State of Karnataka

Sd/-
Representative of the State of Andhra Pradesh

New Delhi,
Dated : 18-10-78

GODAVARI 18*th October*, 1978

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

C.M.P. No. 17(15)/78-*GWDT*

Petition dated the 18th October, 1978, jointly filed by the States of Karnataka and Andhra Pradesh praying that the summary record of discussions held between the Chief Ministers of Karnataka and Andhra Pradesh on the 4th August, 1978 be received in evidence.

Let this C.M.P. be treated as placed in today's list of business by consent of all the party-States.

The summary record of discussions in the Annexures I and II filed with the above petition is received in evidence on behalf of the States of Karnataka and Andhra Pradesh. Let these be marked as exhibits of the State of Karnataka.

The C.M.P. is disposed of accordingly.

Sd/-
(R. S. Bachawat)
Chairman

Sd/-
(D. M. Bhandari)
Member

Sd/-
(D. M. Sen)
Member

New Delhi,
Dated : October 18, 1978.

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No. 17(1)/79-*GWDT* *Dated*: 2-1-1979

The State of Orissa
&
The State of Andhra Pradesh } Petitioners

To

The Honourable Shri Justice R. S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof.

The humble petition of the petitioners above named.

MOST RESPECTFULLY SHEWETH:

In pursuance of discussions held between the representatives of the States of Orissa and Andhra Pradesh regarding the sub-basin wise allocation of waters below Pochampad Dam in the Godavari river and its tributaries in the States of Andhra Pradesh and Orissa, the projects therein and all allied matters and the allocations already agreed to under the Inter-state Agreement dated the 19th December, 1975, an agreement has been reached between the Chief Ministers of Orissa and Andhra Pradesh on 15th December, 1978 for final allocation of all the waters below Pochampad Dam.

2. The said agreement of 15th December, 1978 annexed to the C.M.P. covers all outstanding matters between the States of Orissa and Andhra Pradesh regarding the sub-basin wise allocation of the waters of the Godavari and its tributaries downstream of Pochampad Dam.

3. The petitioner States of Orissa and Andhra Pradesh further state that the said agreement of 15-12-1978 embodies the agreement reached between the said States, on issues (i) to (iv) of the dispute and it may be taken on record of this Hon'ble Tribunal and appropriate direction with regard to this may be issued.

4. In the circumstances stated above the States of Orissa and Andhra Pradesh respectfully pray that the Hon'ble Tribunal may be pleased to :

(i) Receive the agreement dated 15-12-78 between the States of Orissa and Andhra Pradesh on record of the present proceedings ;

(ii) issue appropriate direction with regard thereto ; and

(iii) pass such other order as may be deemed just and proper.

Sd/-
Representative of State of Orissa

Sd/-
Representative of State of Andhra Pradesh

New Delhi,
Dated : January 2, 1979

GODAVARI *2nd January*, 1979

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

C.M.P.No. 17(1)/79-*GWDT*

Petition dated the 2nd January, 1979 filed jointly by the States of Orissa and Andhra Pradesh praying that the Agreement dated 15-12-1978 annexed thereto be taken on record of the present proceedings and appropriate directions issued in regard thereto.

By consent of the party States, the C.M.P. is treated as placed in today's list of business. The C.M.P. together with the Agreement dated the 15th December, 1978 annexed thereto, is received in evidence. Let it be marked as an exhibit of the State of Andhra Pradesh.

** ** **

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(D. M. Bhandari)
Member

Sd/-
(D. M. Sen)
Member

New Delhi,
Dated : January 2, 1979.

APPENDIX N

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

C.M.P. No 17(2)/79-GWDT dated 2-2-1979

The State of Karnataka
The State of Maharashtra } Petitioners

To

The Honourable Shri Justice R.S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof.

The humble Petition
of the petitioners
above named.

MOST RESPECTFULLY SHEWETH :

Discussions were held between the Chief Ministers of the States of Karnataka and Maharashtra on the 25th December 1978 at Bombay. Further discussions between the representatives of the two States were also held resulting in an agreement as evidenced by the letters exchanged between the parties. These letters are filed as Annexures I, II and III.

PRAYER

It is prayed that Annexures I, II and III be taken on record and received in evidence of both the parties and marked as exhibits.

Sd/-
S.S. JAVALI
Representative of the
State of Karnataka

Sd/-
K.S. SHANKER RAO
Representative of the
State of Maharashtra.

NEW DELHI.
Dated : 2nd February, 1979.

GODAVARI

2nd February 1979

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF

ORDER

C.M.P.No. 17(2)/79-GWDT.

Petition dated the 2nd February, 1979, filed by the States of Karnataka and Maharashtra, praying that the documents annexed thereto containing an agreement between the two States, be taken on record and marked as exhibits.

By consent of all the parties, C.M.P. 17(2)/79-GWDT is treated as placed in today's list. Counsel for the States of Karnataka and Maharashtra have jointly filed the agreement consisting of the documents annexed to the C.M.P The documents are received in evidence and collectively marked as exhibit of the State of Karnataka.

The C.M.P. is disposed of accordingly.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(D.M. Bhandari)
Member

Sd/-
(D.M. Sen)
Member

NEW DELHI :
Dated : February 2, 1979.

APPENDIX O

BEFORE THE GODAVARI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER-VALLEY THEREOF.

C.M.P. No. 17(4)79/-GWDT dated 16-7-1979

The State of Orissa
&
The State of Madhya Pradesh } Petitioners

To

The Honourable Shri Justice R.S. Bachawat,
Chairman of the Tribunal and other
Honourable Members thereof

The humble petition of the petitioners above named.

MOST RESPECTFULLY SHEWETH :

In pursuance to discussions held between the representatives of the States of Orissa and Madhya Pradesh regarding the sub-basin wise allocation of waters below Pochampad Dam on the Godavari river and its tributaries in the State of Orissa and Madhya Pradesh, the projects therein and all allied matters and the allocations already agreed to under the Inter-State Agreement dated 19th December, 1975, an agreement has been reached between the Government of Orissa and Madhya Pradesh on 11th July, 1979, the final allocation of all the waters below Pochampad Dam and other matters mentioned in the said Agreement.

2. The said Agreement of 11th July, 1979, annexed to the C.M.P. covers all outstanding matters between the States of Orissa and Madhya Pradesh regarding the sub-basin wise allocation of the water of the Godavari and its tributaries downstream of Pochampad Dam.

3. The petitioner States of Orissa & Madhya Pradesh further state that the said Agreement of 11-7-79 embodies the Agreement reached between the said States on issues (i) to (iv) of the dispute and it may be taken on record of this Hon'ble Tribunal and appropriate direction(s) with regard to this may be issued.

4. In the circumstances stated above the States of Orissa & Madhya Pradesh respectfully pray that the Hon'ble Tribunal may be pleased to :

(i) Receive the Agreement dt. 11-7-79 between the States of Orissa and Madhya Pradesh on record of the present proceedings.

(ii) Issue appropriate direction(s) with regard thereto and

(iii) Pass such other order(s) as may be deemed just and proper.

Sd/-
(S.C. Tripathi)
REPRESENTATIVE OF STATE OF ORISSA

NEW DELHI
Dated : 16-7-1979.

Sd/-
(A.S. Dhagat)
REPRESENTATIVE OF STATE OF MADHYA PRADESH

GODAVARI *16th July, 1979*

BEFORE THE GODAVRI WATER DISPUTES TRIBUNAL

IN THE MATTER OF A WATER DISPUTE AND CONNECTED MATTERS REGARDING THE INTER-STATE RIVER GODAVARI AND THE RIVER VALLEY THEREOF.

ORDER

C.M.P. No. 17(4)/79-GWDT.

Petition dated the 16th July, 1979 filed by the States of Orissa and Madhya Pradesh, praying that the agreement dated the 11th July, 1979 between them be taken on record.

By consent of all the parties, C.M.P.No.17(4)/79-GWDT is treated as placed in today's list.

We direct that C.M.P. No. 17(4)/79-GWDT and the agreement annexed thereto be received in evidence and marked as an exhibit of the State of Orissa.

The C.M.P. is disposed of accordingly.

Sd/-
(R.S. Bachawat)
Chairman

Sd/-
(D.M. Bhandari)
Member

Sd/-
(D.M. Sen)
Member

NEW DELHI :
Dated : July 16, 1979.

GODAVARI WATER DISPUTES TRIBUNAL

THE REPORT
OF
THE GODAVARI WATER DISPUTES TRIBUNAL WITH THE DECISION

VOLUME II

PART II

MAP OF THE GODAVARI BASIN

NEW DELHI
1979

PRINTED BY THE MANAGER, GOVT. OF INDIA PRESS, RING ROAD, NEW DELHI-110064
AND PUBLISHED BY THE CONTROLLER OF PUBLICATIONS, DELHI-110054, 1980

GODAVARI WATER DISPUTES TRIBUNAL

FURTHER REPORT

OF

THE GODAVARI WATER DISPUTES TRIBUNAL UNDER SECTION 5(3) OF THE INTER-STATE WATER DISPUTES ACT, 1956

GOVERNMENT OF INDIA
MINISTRY OF ENERGY AND IRRIGATION
DEPARTMENT OF IRRIGATION
NEW DELHI
1980

GODAVARI WATER DISPUTES TRIBUNAL

FURTHER REPORT

OF

THE GODAVARI WATER DISPUTES TRIBUNAL UNDER SECTION 5(3) OF THE INTER-STATE WATER DISPUTES ACT, 1956

NEW DELHI
1980

COMPOSITION OF THE GODAVARI WATER DISPUTES TRIBUNAL

(During the hearing of the references under section 5(3) of the Inter-State Water Disputes Act, 1956)

Chairman
SHRI R. S. BACHAWAT

Members
SHRI D. M. BHANDARI
SHRI D. M. SEN

COMPOSITION OF THE GODAVARI WATER DISPUTES TRIBUNAL

(During the hearing of the references under section 5(3) of the Inter-State Water Disputes Act, 1956)

Chairman

SHRI R. S. BACHAWAT

Members

SHRI D. M. BHANDARI

SHRI D. M. SEN

CONTENTS

GODAVARI WATER DISPUTES TRIBUNAL

D-27, New Delhi South Extension, Part-II,

New Delhi-110049

No. 19(1)/80-GWDT. Dated the 7th July, 1980

To

The Secretary to the Government of India,
Ministry of Irrigation,
New Delhi.

Sir,

The Godavari Water Disputes Tribunal investigated the matters referred to it under section 5(1) of the Inter-State Water Disputes Act, 1956 and forwarded its unanimous Report and decision under section 5(2) of the said Act to the Government of India on the 27th November, 1979.

Within three months of the aforesaid decision, the Government of India and the States of Maharashtra, Andhra Pradesh and Madhya Pradesh filed four separate references before the Tribunal under section 5(3) of the said Act.

The Tribunal has prepared its further Report giving such explanations or guidance as it has deemed fit on the matters referred to it under section 5(3) of the said Act.

The unanimous further Report of the Tribunal is forwarded herewith.

Yours faithfully,

(R. S. BACHAWAT)
Chairman

(D. M. BHANDARI)
Member

(D. M. SEN)
Member

Encl : Report as above.

Representatives of the Government of India and the State Governments before the Godavari Water Disputes Tribunal at the hearing of the references under section 5(3) of the Inter-State Water Disputes Act, 1956

I. *For the Government of India*

Shri M. C. Bhandare, Senior Advocate.

II. *For the State of Maharashtra*

Advocates

1. Shri M. N. Phadke, Senior Advocate.
2. Shri P. C. Bhartari, Advocate.

Other representatives

1. Shri M. A. Chitale, Chief Engineer and Joint Secretary.
2. Shri K. S. Shankar Rao, Deputy Secretary.
3. Shri N. M. Jog, Deputy Secretary.
4. Shri P. B. Shinde, Under Secretary.
5. Shri V. N. Chandratreya, Under Secretary.
6. Shri S. K. Guha, Special Commissioner (Local Representative).

III. *For the State of Karnataka*

Advocates

1. Shri Sachindra Chaudhuri, Senior Advocate.
2. Shri S. S. Javali, Advocate.

Other representatives

1. Shri B. Subramanyam, Special Secretary, P.W.D. (Irrigation) and Special Officer (Retd.).
2. Shri R. A. Rao, Chief Engineer.
3. Shri T. C. Ramachandra Rao, Executive Engineer.

IV. *For the State of Andhra Pradesh*

Advocates

1. Shri P. Ramachandra Reddy, Advocate General.
2. Shri Anwarullah Pasha, Advocate.
3. Shri D. V. Sastri, Advocate.

Other representatives

1. Shri Satnarayan Singh, Additional Secretary, Irrigation & Power.
2. Shri Md. Ikramuddin Wahaj, Superintending Engineer.
3. Shri Md. Viquaruddin Ahmed, Deputy Director (Tribunal).

V. *For the State of Madhya Pradesh*

Advocates

1. Shri Y. S. Chitale, Senior Advocate.
2. Shri M. K. Ramamurthy, Senior Advocate.
3. Shri C. R. Somesekharan, Advocate.
4. Shri Shekhar Bhargava, Advocate.

Other representatives

1. Dr. Ishwar Das, Secretary, Irrigation Department.
2. Shri K. L. Handa, Irrigation Adviser.
3. Shri H. V. Mahajani, Chief Engineer.
4. Shri D. V. Sahasrabudhe, Superintending Engineer.
5. Shri B. G. Rochalani, Executive Engineer.

VI. *For the State of Orissa*

Advocates

1. Shri B. M. Patnaik, Advocate General.
2. Shri Govind Dass, Senior Advocate.
3. Smt. Sunanda Bhandare, Advocate.
4. Shri Ananga Patnaik, Advocate.

Other representatives

1. Shri B. Ramadorai, Secretary, Irrigation and Power Department.
2. Shri S. C. Tripathy, Chief Engineer (Irrigation) and Additional Secretary, Irrigation and Power.
3. Shri B. Misra, Chief Engineer (Electricity).
4. Shri B. Nayak, Superintending Engineer.
5. Shri M. L. Lath, Executive Engineer.

CHAPTER I

PRELIMINARY CHAPTER

In this Report, unless otherwise mentioned, the expression "Report", "Original Report" or "our Report" means the Report of this Tribunal under section 5(2) of the Inter-State Water Disputes Act, 1956.

The expression "this Report" or "this further Report" means the Report of this Tribunal under section 5(3) of the said Act.

The Godavari Water Disputes Tribunal investigated the matters referred to it under section 5(1) of the Inter-State Water Disputes Act, 1956 and forwarded its unanimous decision and Report to the Government of India on the 27th November, 1979. The Government of India and the States of Andhra Pradesh, Madhya Pradesh and Maharashtra filed references under section 5(3) of the said Act by the 26th February, 1980.

The Government of India filed its reference on the 25th February, 1980 and replies thereto were filed by the States of Andhra Pradesh, Maharashtra, Karnataka, Orissa and Madhya Pradesh.

The State of Andhra Pradesh filed its reference on the 25th February, 1980 and replies thereto were filed by the States of Maharashtra, Karnataka, Orissa and Madhya Pradesh.

The State of Madhya Pradesh filed its reference on the 25th February, 1980 and replies thereto were filed by the States of Andhra Pradesh, Maharashtra, Karnataka and Orissa.

The State of Maharashtra filed its reference on the 26th February, 1980 and replies thereto were filed by the States of Karnataka, Orissa and Madhya Pradesh.

The Government of India did not file any replies on the references made by the States of Andhra Pradesh, Madhya Pradesh and Maharashtra but reserved its right to make appropriate oral submissions on those references.

The States of Karnataka and Orissa did not file any separate references on their part. Their cases are stated in the replies filed by them.

The hearing of the aforesaid references started on the 19th March, 1980 and concluded on the 3rd April, 1980.

The main subject matter of all the references and replies filed by the Government of India and the party States, as mentioned above, relates to the decision of the Tribunal on the Polavaram Project of the State of Andhra Pradesh. Looking to the importance of this matter, we propose to deal with the contentions raised by the party States and the Government of India regarding the Polavaram Project in the next Chapter. Thereafter, in the subsequent Chapters the contentions of the Government of India and the party States on matters other than the Polavaram Project are dealt with.

As a result of our decisions on all the contentions raised in the references, we have amended our Final Order as contained in the Original Report. Our decision on the water disputes referred to the Tribunal for adjudication regarding the inter-State river Godavari and the river valley thereof is embodied in the Final Order in Chapter VII.

CHAPTER II

POLAVARAM PROJECT

Before we take into consideration the contentions raised by the Government of India and the party States in their references and replies filed thereto, it will be useful to recall what we have said in our Report about the nature of the controversy between the party States with regard to this project.

The State of Andhra Pradesh proposes to construct the Polavaram Project for the purpose of—

(1) irrigating large tracts of land in its territory by a canal taking off on the right up to Krishna river and the other canal on the left up to Visakhapatnam and also by lift canals on both sides;

(2) making available water for domestic and industrial purposes in its territory;

(3) production of power; and

(4) diverting water of the river Godavari into the Krishna river so that the water thus made available may be used for irrigating lands in the Krishna Delta and as a consequence more water may be available upstream of Nagarjunasagar to be utilised by the three States namely, Andhra Pradesh, Karnataka and Maharashtra.

Before the Tribunal, the State of Andhra Pradesh submitted Polavaram Project Report Vol. I, May 1978 (Exhibit APG-306) for its consideration. Anther project report called the Polavaram Project Stage I of March 1978 (Exhibit No. APG-364) was submitted by the State of Andhra Pradesh to the Central Water Commission for securing clearance. This has also been filed before the Tribunal. Under these Reports a dam is to be constructed at Polavaram to store and divert the water.

Some basic features of the Project as presented in the Report (March 1978) are given below :—

(a) FRL : +150.00.

(b) Spillway crest level : +94.00.

(c) Height of gates : 42 feet i.e. from El. 94.00 to El. 136.00.

(d) Breast wall from El. 136 to El. 150 and above.

(e) Number of gates : 50 of size 50 feet × 42 feet.

(f) MDDL : +145.00.

(g) Live storage of the reservoir : 28.31 T.M.C. between El. +145.00 and +150.00.

(h) Two canals, one on the right bank and the other on the left bank, each with a full supply capacity of 10,000 cusecs.

The States of Maharashtra and Karnataka had been agitating for utilisation of more waters of the Krishna river by diversion of Godavari water into the Krishna. To resolve this dispute, Andhra Pradesh entered into the Agreement (Annexure "C" to the Final Order) with Karnataka on the 4th August, 1978. To this Agreement Maharashtra is also a party.

Clause 7 of the Agreement provides as follows :

"(a) Subject to the clearance of Polavaram Project by the Central Water Commission for FRL/MWL plus 150 feet the State of Andhra Pradesh agrees that a quantity of 80 T.M.C. at 75 per cent dependability of Godavrai waters from Polavaram Project can be diverted into Krishna river above Vijayawada Anicut displacing the discharges from Nagarjunasagar Project for Krishna Delta, thus enabling the use of the said 80 T.M.C. for projects upstream of Nagarjunasagar.

(b) The States of Andhra Pradesh and Karnataka agree that the said quantity of 80 T.M.C. shall be shared in the proportion of Andhra Pradesh 45 T.M.C., Karnataka and Maharashtra together 35 T.M.C.

(c) Andhra Pradesh agrees to submit the Polavaram Project report to Central Water Commission within three months of reaching an overall agreement on Godavari waters among the five party States.

(d) Andhra Pradesh agrees to bear the cost of diversion fully.

(e) Maharashtra and Karnataka are at liberty to utilise their share of 35 T.M.C. mentioned in sub-para 7(b) above from the date of clearance of the Polavaram Project by Central Water Commission with FRL/MWL of plus 150 feet irrespective of the actual diversion taking place.

(f) It is also agreed that if the diversion at 75 per cent dependability as stated in clause (a) above exceeds the said quantity of 80 T.M.C. due to diversion of Godavari waters from the proposed Polavaram Project into Krishna river, further diminishing the releases from Nagarjunasagar Project such excess quantity shall also be shared between the three States in the same proportion as in sub-clause (b) above."

Under this Agreement the clearance of the Polavaram Project for FRL/MWL +150 feet by the Central Water Commission assumed importance not only from the point of view of the State of Andhra Pradesh but also from the point of view of the States of Maharashtra and Karnataka.

The construction of the Polavaram Dam at FRL/MWL +150 feet involved submergence of lands of three States namely, Andhra Pradesh, Madhya Pradesh and Orissa. On the 7th August, 1978 the State of Andhra Pradesh entered into an Agreement (Annexure "B" to the Final Order) with the State of Madhya Pradesh which permitted submergence of the lands of the State of Madhya Pradesh at Konta due to all effects including backwater effect of the Polavaram Project up to R.L. +150 feet but not beyond that limit. The Polavaram Project is to be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above. A similar Agreement (Annexure "D" to the Final Order) was entered into by the State of Andhra Pradesh with the State of Orissa on the 15th December, 1978 under which submergence in the State of Orissa at Motu/Konta is not to exceed R.L. +150 feet due to all effects including backwater effect and the Polavaram Project is to be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed that limit of submergence.

In its Original Report, the Tribunal examined all these Agreements and it appeared that there was some difficulty in regard to maintaining FRL/MWL at +150 feet at the dam site and at the same time ensuring that the maximum submergence in the States of Orissa and Madhya Pradesh at Motu/Konta should not exceed R.L. +150 feet due to all effects including backwater effect of the Polavaram Project.

The Tribunal took the view that this difficulty was capable of solution by taking proper safeguards to avoid excess submergence of the lands in the States of Madhya Pradesh and Orissa due to the construction of the Polavaram Dam.

The State of Andhra Pradesh of its own accord showed willingness to adopt and observe the following safeguards with regard to Polavaram Project :—

(i) the design of the Polavaram Dam including spillway, number and size of the gates, crest level, etc. be left to the Central Water Commission, but the Central Water Commission shall keep the FRL/MWL as +150 feet;

(ii) the Central Water Commission may determine the places and height of the embankments to be constructed in the States of Madhya Pradesh and Orissa to avoid submergence higher than +150 feet at Konta/Motu due to backwater effect on account of the construction of Polavaram Dam;

(iii) the State of Andhra Pradesh shall pay and bear the cost of construction and maintenance of all necessary protective embankments;

(iv) Andhra Pradesh is prepared to lower the full supply level of the canals on both sides of the dam by two feet; and

(v) the pond level of Polavaram Dam will be so regulated that there is no aggravation in the submergence of land of the two States due to the backwater effect of the Polavaram Dam.

The Tribunal further indicated the following other safeguards for the consideration of the Central Water Commission :—

(1) if the Central Water Commission considers it necessary that during the monsoon period from 1st June to 30th September the reservoir level of Polavaram Dam be kept below the level to be determined by it, the State of Andhra Pradesh shall not exceed such limit and if the reservoir level rises above that level, it should be brought down to the lower level as soon as possible;

(2) the flood disposal capacity of the spillways at Polavaram shall be in conformity with the direction of the Central Water Commission to ensure that flood conditions at Konta/Motu are not aggravated due to backwater effect; and

(3) that flood warning stations shall be established in consultation with the Central Water Commission on the main river and its major tributaries before starting operation of the Polavaram Dam. These stations will be provided with wireless equipments.

The Tribunal then observed that "While giving clearance of the Polavaram Project, the Central Water Commission may impose all or any of the safeguards mentioned above or such other safeguards as it may consider proper in the circumstances of the case. We direct that such safeguards shall be observed by the State of Andhra Pradesh".

Observation of such safeguards by the State of Andhra Pradesh as it may be directed to do by the Central Water Commission is made obligatory by the Tribunal by Clause VI of the Final Order which runs as follows :

> "Regarding Polavaram Project, the State of Andhra Pradesh shall observe such safeguards as it may be directed to do so by the Central Water Commission."

The clearance of the Polavaram Project was in the hands of the Central Water Commission. The parties had themselves left the matter to the Central Water Commission. At that stage, the Tribunal could not issue a directive to the Central Water Commission for clearance of the Project as the Government of India or the Central Water Commission, which is a Department of the Government of India, was not a party to the references then pending before the Tribunal and it was not known at that stage whether the Polavaram Project as submitted by the State of Andhra Pradesh was technically feasible. The Tribunal, therefore, left the matter for the clearance of the Project to the Central Water Commission after making the following observations :—

> "The Central Water Commission will naturally keep all these points in view while clearing the Polavaram Project in consultation with the concerned parties, after giving due consideration to achieve the objectives mentioned in the Project Reports of Andhra Pradesh. The Tribunal, however, on its part does not find any difficulty for clearing the Polavaram Project at FRL/MWL +150 feet."

The Tribunal then considered the matter from the standpoint that the Central Water Commission may take the view that inspite of making provision for observing the safeguards, the excess submergence due to backwater effect could not reasonably be controlled except by lowering the FRL/MWL of the Polavaram Project. Under such circumstances, there were two alternatives before the Tribunal. One was not to permit excess submergence in Madhya Pradesh and Orissa and amend the Agreement dated the 4th August, 1978 in such a manner that the benefit granted to the States of Maharashtra and Karnataka remained intact. The other was to permit

excess submergence of the lands of the States of Madhya Pradesh and Orissa and keep Clause 7 of the said Agreement as it was. For reasons given in the Report, the Tribunal thought fit to choose the first alternative.

Considering all the aspects of the matter, the Tribunal directed that the Agreement of the 4th August, 1978 between the States of Karnataka and Andhra Pradesh be modified as follows :—

"(i) In Clause 7(a), after the words "FRL/MWL plus 150 feet" and in Clause 7(e), after the words "FRL/MWL of plus 150 feet" the following words be added :—

"or such other FRL/MWL as the Central Water Commission may find necessary and technically feasible keeping in view that as far as possible (i) all the areas of the State of Andhra Pradesh mentioned in the Polavaram Project Report of May, 1978 and Polavaram Project Stage I of March, 1978 are brought under irrigation, (ii) the other benefits mentioned in the said Reports of the State of Andhra Pradesh are realised, and (iii) water to the extent of 80 T.M.C. or more is diverted to the river Krishna."

"(ii) After Clause 7(a), the following proviso be added :

"Provided that the excess submergence over and above the natural submergence due to all effects including backwater effect on account of the construction of the Polavaram Dam does not exceed the limits mentioned in the Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh and the Agreement dated the 15th December, 1978 between the States of Andhra Pradesh and Orissa or in any other agreement that may be entered into hereafter."

Now, we come to the contentions raised in the references filed by the Government of India and the States of Andhra Pradesh, Maharashtra and Madhya Pradesh and to the replies to such references by the party States.

We may mention even at this stage that during the concluding part of the arguments, the case on the point of the Polavaram Project took a turn which makes it unnecessary to state in detail the contentions raised by the Government of India and the party States in their references and the replies filed thereto. We content ourselves by mentioning cardinal points raised in these references and replies.

Case of the Government of India regarding Polavaram Project in its reference.

In clarification No. 3 of the reference filed by the Government of India, it is stated that :

(i) the Polavaram reservoir will be a terminal reservoir in the Godavari basin and that taking into account the overall national interest and submergence upstream, the Central Water Commission considers that FRL and MWL should be fixed at R.L. 150 feet at the dam site;

(ii) the normal practice is to stipulate the FRL and MWL of a project at headworks and not to link it up with specified submergence levels upstream;

(iii) the submergence in Orissa and Madhya Pradesh territories due to backwater and other effects of the Polavaram Dam over and above the submergence due to natural floods before the Polavaram Dam comes into existence, should be kept to the minimum possible; and

(iv) the safeguards that may be necessary in this regard may be left to be formulated by the Government of Andhra Pradesh in consultation with the Central Water Commission.

During the course of arguments, learned Counsel for the Government of India stated in writing that Polavaram Dam with FRL/MWL+150 feet at the dam site proposed by the State of Andhra Pradesh is technically feasible. This was recorded in our Order dated the 26th March, 1980.

The Government of India, however, stated that taking into account the data and the particulars furnished by the Government of Andhra Pradesh, the submissions made by the State of Maharashtra and the Tribunal's observations (at pages 102-115 of the Report), the finalisation of the Polavaram Project with the stipulation of submersion level at Konta/Motu may not be practicable.

It prayed that the Tribunal may consider the above submission for modifying their Final Order suitably.

Case of the State of Andhra Pradesh in its reference and in the replies filed by it.

The reference of the State of Andhra Pradesh is confined to the Polavaram Project only.

The contentions of the State of Andhra Pradesh may be summarised as follows :—

(1) the Agreements dated the 7th August, 1978 and 15th December, 1978 were concluded without knowing the true situation about the levels that would obtain at Motu/Konta under natural conditions even without the Polavaram Project and were the result of mutual mistake of fact on the part of all the parties to these Agreements;

(2) even without the Polavaram Project, the natural levels for certain high discharges are above R.L. +150 feet at Motu/Konta and as such Clause VIII(E) of the Agreement dated the 7th August, 1978 (Annexure "B" to the Final Order) and Clause II(I) of the Agreement dated the 15th December, 1978 (Annexure "D" to the Final Order) will have to be amended as otherwise the Polavaram Project cannot be constructed;

(3) if the agreement is to be construed so as to avoid the excess submergence because of the backwater effect of the Polavaram Project, the two Clauses relating to the level of R.L. +150 feet at Motu/Konta will be impossible of compliance for the natural water level for certain high discharges without the Project itself will be higher than that level;

(4) the State of Andhra Pradesh is ready to pay compensation for the entire area that may be submerged even up to R.L. +174.22 feet, the level which will be obtained for a maximum discharge of 36 lakh cusecs. It also undertakes to rehabilitate the displaced population;

(5) during the course of discussions that had taken place between the States, the State of Andhra Pradesh had agreed that it would design the Polavaram Project in such a way as to discharge the maximum flood of 36 lakh cusecs keeping down the pond level at Polavaram at R.L. +140 feet during floods and it would build up the level up to R.L. +150 feet during the receding floods only to minimise the submergence in the States of Orissa and Madhya Pradesh to the extent possible;

(6) this pond level of R.L. +140 feet is absolutely necessary to allow at least partial discharges into the canals for meeting the needs of the crops as well as for the continuous supply of water to the towns along the canal and particularly to Visakhapatnam;

(7) if the excess submergence is permitted any loss and inconvenience caused to the upper States of Madhya Pradesh and Orissa will be purely temporary and very marginal as both the States have already agreed for permanent submersion up to R.L. +150 feet.

In this connection, the State of Andhra Pradesh has filed three Tables :—

(i) the first Table shows the water levels for different discharges at various pond levels with and without the Polavaram Dam based on the computerised study made by it;

(ii) the second Table shows the number of years in a cycle of 95 years in which various flood discharges over 15 lakh cusecs occurred and the duration of such discharges; and

(iii) the third Table shows the areas of submergence, number of villages and population likely to be affected in the States of Madhya Pradesh and Orissa;

(8) (i) in a cycle of 95 years, a flood of 15 lakh cusecs occurs in 22 years or say once in 5 years with a maximum duration of 9 days, a flood of 20 lakh cusecs occurs in 9 years or say once in 11 years with a maximum duration of 6 days, a flood of 25 lakh cusecs occurs in 2 years i.e. once in 48 years with a maximum duration of only 3 days, and a flood of 30 lakh cusecs has occurred only once in the last 95 years and the duration of the flood was less than 24 hours;

(ii) with the maximum flood of 36 lakh cusecs, the level at Konta/Motu even without the Polavaram Dam will be R.L. +166.10 feet according to the computerised studies, that with the Polavaram Dam level at R.L. +140 feet the increase over and above the natural flood level will be only 4.65 feet, and that this marginal excess submersion of 4.65 feet will result in an excess submergence of 23.45 acres of river bed and 403.26 acres of bank area in Madhya Pradesh and 12.8 acres of river bed and 504.5 acres of bank area in the State of Orissa and as a last resort these areas can be protected by construction of embankments; and

(9) the cardinal principles of equitable distribution of waters of a river basin are that :—

(a) there should be an equitable apportionment of the benefits of the river; and

(b) needless waste of water should be prevented and efficient utilisation encouraged.

With regard to (a), it is submitted that the State of Andhra Pradesh had conceded the entire demand of the States of Madhya Pradesh and Orissa by the Agreements dated the 7th August, 1978 and 15th December, 1978 in order that the proposed Polavaram Project with a marginal storage up to R.L. +150 feet be constructed. With regard to (b), it is submitted that any reduction in FRL/MWL will only result in wastage of water which will be a loss not only to the State of Andhra Pradesh but to the entire nation and will also rule out the possibility of diversion of the Godavari waters into the Krishna river for the benefit of all the three States of Andhra Pradesh, Karnataka and Maharashtra. If the condition of FRL/MWL +150 feet at the dam site is changed, there can be no question of the diversion of Godavari waters into the Krishna river at all. The State of Andhra Pradesh, therefore, prays that—

> "this Honourable Tribunal may be pleased to delete the amendments made to Clauses 7(a) and 7(e) of the Agreement dated the 4th August, 1978 between the States of Andhra Pradesh and Karnataka (Annexure "C") and delete the words 'subject to the modifications in Clauses 7(a) and 7(e) of this Agreement as contained in Chapter IV' from sub-Clause C of Clause V of the Final Order of this Honourable Tribunal at page 146 of the Report and amend Clause VIII(E) of the Agreement dated the 7th August, 1978 between the States of Andhra Pradesh, Madhya Pradesh and Maharashtra (Annexure "B") and Clause II(I) of the Agreement dated the 15th December, 1978 between the States of Andhra Pradesh and Orissa (Annexure "D") by substituting for 'R.L. +150 feet' wherever it occurs in the said Clauses the words and figures 'R.L. +175 feet'."

It further added that—

> "The second amendment suggested above is only by way of abundant caution to provide for maximum contingency that may occur due to any cause like failure of communications or sudden floods etc. However, as Clause VI of the Final Order of this Honourable Tribunal at page 147 of the Report states 'Regarding Polavaram Project, the State of Andhra Pradesh shall observe such safeguards as it may be directed to do so by the Central Water Commission', the interests of the upper States will not be affected in any way as the design and the working of the Polavaram Project will be as settled by the Central Water Commission in accordance with any directions that may be given by this Honourable Tribunal."

Case of the State of Maharashtra in its reference and in the replies filed by it.

The reference of the State of Maharashtra is confined to the Polavaram Project only and broadly runs on the same lines as that of the State of Andhra Pradesh. The State of Maharashtra submitted that the Tribunal had no jurisdiction to amend the Agreements arrived at between the party States. Without prejudice to such contention, it submitted that in the interest of equity and justice the Agreements entered into by the State of Andhra Pradesh with the States of Orissa and Madhya Pradesh be modified in the following manner :—

> "The States of Orissa (Madhya Pradesh) and Andhra Pradesh agree for the construction of Polavaram Project of the State of Andhra Pradesh for an FRL/MWL +150, so that the maximum occasional submergence in the State of Orissa (Madhya Pradesh) territory at Motu (Konta) above R.L. +150 due to construction of Polavaram Dam to FRL/MWL +150 and all effects including backwater effect during floods in Sabari/Godavari over and above the occasional submergence at these places without the construction of Polavaram Dam is kept to a minimum. The Polavaram Project shall be planned for the maximum probable flood by the State of Andhra Pradesh to meet this objective. The Central Water Commission while clearing Polavaram Project for FRL/MWL + 150 may impose any or all of the following safeguards and the State of Andhra Pradesh shall be bound to carry them out.
>
> (i) The design of Polavaram Dam including spillway, number and size of gates, crest level etc. be left to the Central Water Commission, but the Central Water Commission shall keep the FRL/MWL at Polavaram Dam as +150 feet.
>
> (ii) The Central Water Commission may determine the places and height of the embankments to be constructed in the States of Orissa and Madhya Pradesh to minimise the extent of occasional submergence, higher than what would have occurred during natural floods at Konta/Motu without Polavaram Dam, due to backwater effect on account of the construction of Polavaram Dam to FRL/MWL +150.
>
> (iii) The State of Andhra Pradesh shall pay and bear the cost of construction and maintenance of all necessary protective embankments in Madhya Pradesh/Orissa.
>
> (iv) Andhra Pradesh will maintain the pond level of Polavaram Dam and will so regulate that aggravation due to additional occasional submergence in the two States due to backwater effect of the Polavaram Dam is kept to a minimum as directed by Central Water Commission."

In the end the substantial prayer is that a positive order for the clearance of Polavaram Project by the Central Water Commission for FRL/MWL +150 feet be passed.

Case of the State of Karnataka

The State of Karnataka has not filed any reference. In reply to the references filed by the Government of India and the States of Andhra Pradesh, Madhya Pradesh and Maharashtra, the State of Karnataka has submitted that the opinion of the Central Water Commission that taking into account the overall national interest and submergence upstream, the FRL and MWL should be fixed at R.L. +150 feet at the dam site and communication of this view of the Central Water Commission by the Government of India in its reference for fixing the FRL/MWL of the Polavaram Project at +150 feet at the dam site is tantamount to the clearance of the level at +150 feet at the dam site. Thus it may be taken that the Central Water Commission has cleared the Project for FRL/MWL of +150 feet. It has further stated that clearance of the Project for FRL/MWL +150 feet is not a condition for diversion of 80 T.M.C. or more of the Godavari waters into the Krishna river. The State of Karnataka also submitted that the amendments suggested by the State of Andhra Pradesh to Clause VIII(E) of the Agreement dated the 7th August, 1978 entered into between the State of Andhra Pradesh, Madhya Pradesh and Maharashtra (Annexure "B" to the Final Order) and Clause II(I) of the Agreement dated the 15th December, 1978 between the States of Andhra Pradesh and Orissa (Annexure "D" to the

Final Order) would also bring about harmony in the Agreements between the parties dated the 4th August, 1978, 7th August, 1978 and 15th December, 1978 and achieve the object underlying these Agreements.

The case of the State of Madhya Pradesh in its reference and in the replies filed by it.

The State of Madhya Pradesh has raised a preliminary objection in its replies to the references of the Government of India and the States of Andhra Pradesh and Maharashtra that they are seeking to have rehearing of the whole matter and a fresh adjudication which is not permissible in a reference under section 5(3) of the Inter-State Water Disputes Act, 1956.

The State of Madhya Pradesh in reply to the reference filed by the State of Andhra Pradesh submitted that the reasons which promoted the State of Andhra Pradesh to agree to the inclusion of "FRL/MWL +150 feet" in Clauses 7(a) and 7(e) of the Agreement dated the 4th August, 1978 inspite of having finalised the negotiations with the States of Madhya Pradesh and Maharashtra for limiting the submergence only up to R.L. +150 feet at Konta due to backwater effect including all effects and subsequently entering into the Agreements dated the 7th August, 1978 and 15th December, 1978 limiting the submergence at Konta/Motu to R.L. +150 feet show that the State of Andhra Pradesh by providing adequate spillway capacity and maintaining the pond level low at Polavaram Barrage during the monsoon season could confidently limit the submergence at Konta/Motu at R.L. +150 feet.

The State of Madhya Pradesh further submitted that the State of Andhra Pradesh is mixing the aspects of natural submergence due to flood without the Polavaram Dam and submergence due to backwater effect after construction of Polavaram Dam. The State of Madhya Pradesh has entered into an Agreement for limiting submergence due to the backwater effect after construction of Polavaram Dam, otherwise for the natural submergence without the Polavaram Dam no agreement with the State of Andhra Pradesh was necessary.

It submitted that the State of Andhra Pradesh has shown its preparedness to pay the compensation for the entire area that may be submerged even up to R.L. +174.22 feet, the level which is alleged to be obtained for the maximum discharge with the pond level of 150 feet at Polavaram, but the ability to pay compensation for submergence is no justification for effecting submergence.

The State of Madhya Pradesh also submitted that it is possible to limit the submergence at Konta/Motu up to R.L. +150 feet as the floods and their magnitude would get substantially reduced due to construction of many dams upstream of Polavaram Dam and by observing proper safeguards.

The State of Madhya Pradesh further stated that when it is possible to maintain the Polavaram FRL at +150 feet after the flood season the provision of "FRL" as incorporated in the Agreement would be fulfilled. As regards the condition for MWL being 150 feet, the State of Madhya Pradesh submitted that this level is the maximum water level elevation in the reservoir and can be maintained at R.L. +150 feet by keeping the pond level lower during the rainy season and subsequently on the intimation of flood warnings, this could be further lowered so that water surface elevation in the reservoir does not exceed R.L. +150 feet. The necessary safeguards which have to be adopted would limit the submergence at Konta/Motu up to R.L. +150 feet due to all effects including backwater effect. The State of Madhya Pradesh submits that the Central Water Commission can clear Polavaram Project by ensuring proper safeguards and the diversion of the Godavari water into the Krishna could thus be achieved.

The State is opposed to any amendment in the Agreements dated the 7th August, 1978 and 15th December, 1978.

In the end the State of Madhya Pradesh submitted that FRL at +150 feet at Polavaram is feasible after the flood season and that no further guidance in this respect is necessary.

Case of the State of Orissa

The State of Orissa in reply to the references of the States of Andhra Pradesh and Maharashtra questioned the correctness of the data and conclusions drawn therefrom as stated in the letter dated the 3rd July, 1979 from Shri M. G. Padhye, Member (P&P), Central Water Commission, to Additional Secretary to Government, Irrigation & Power Department, Andhra Pradesh and submitted that the recorded levels were higher by 6.84 feet from the actual levels. A similar contention was also raised by the State of Madhya Pradesh.

The State of Orissa submitted that there was no necessity to amend the Agreements dated the 7th August, 1978 and 15th December, 1978 inasmuch as protective measures contemplated in the Report for abnormal floods could meet the situation apprehended and assumed by the State of Andhra Pradesh.

In the end it submitted that the State of Orissa would have no objection if by appropriate design of the Polavaram Project and proper regulaton of the flows, the water level at Motu/Konta is not allowed to exceed R.L. +150 feet due to all effects including backwater effect for a flood discharge of 20 lakh cusecs and less at Polavaram. Of course, as directed by the Tribunal, the State of Andhra Pradesh will have to provide necessary protective measures including embankments to prevent submersion of all the areas lying above R.L. +150 feet in the States of Orissa and Madhya Pradesh.

The reply of the State of Orissa to the reference of the Government of India runs on the same lines. With regard to fixing the level of submergence upstream, it submitted that the level of submersion in the territories of Madhya Pradesh and Orissa had to be defined because these States cannot control the planning, design and operation of Polavaram Project to reduce submergence in their territories commensurate with its benefits. As such the only safeguard they had was to specify the limits of submersion in their territories. Besides, the Polavaram Project has certain peculiar features which are normally not found in other projects. It provides for a small live storage compared to a huge storage at MDDL and as a matter of fact the FRL could be reached from MDDL only in a matter of few hours right at the commencement of the rainy season itself with disastrous consequences for the States of Orissa and Madhya Pradesh. As such, Polavaram Project has been rightly linked up with specified levels upstream.

It further submitted that the design and operation of Inchampalli joint project should provide for flood moderation so that a flood of 20 lakh cusecs is not exceeded at Polavaram. National interest demands that the Inchampalli Project, Projects on the Sabari, Balimela Project and Polavaram Project are planned, designed and operated in a coordinated manner to reduce the risk of floods to the maximum extent possible. The State of Orissa also submitted that the State of Andhra Pradesh is to formulate feasible protection measures for all areas above R.L. +150 feet lying in Orissa/Madhya Pradesh and not 'for important areas' as suggested.

In the end the State of Orissa submitted that taking into account the overall national interest, the submergence upstream and the solemn Agreements between States, the FRL and the MWL should not be fixed at R.L. +150 feet at the dam site.

The case was argued by learned Counsel of the parties with considerable force and remarkable ability. However, the contentions raised in the references and the replies and the arguments addressed before the Tribunal only go to show that the gap between the parties on the construction of Polavaram Project with FRL/MWL at +150 feet had considerably narrowed down.

It is in the national interest that the Polavaram Dam be constructed with FRL/MWL +150 feet. It is also considered by the Government of India that this is technically feasible. The only thing that remains to be worked out is how to design the dam and fix its operation schedule so that, as far as possible, the excess submergence of the areas of the States of Madhya Pradesh and Orissa does not exceed R.L. +150 feet due to all effects including backwater effect.

Besides the safeguards agreed upon by the State of Andhra Pradesh, one important safeguard that was suggested by the Tribunal is that during the monsoon period from 1st June to 30th

September the reservoir level of Polavaram Dam be kept below the level to be determined by the Central Water Commission and it be made obligatory for the State of Andhra Pradesh not to exceed such limit and if the reservoir level rises above that level, it is to be brought down to the lower level as soon as possible. The other safegard suggested was that the flood disposal capacity of the spillways at Polavaram shall be in conformity with the directions of the Central Water Commission to ensure that flood conditions at Konta/Motu are not aggravated due to backwater effect. A further safeguard suggested was that the flood warning stations shall be established in consultation with the Central Water Commission on the main river and its major tributaries before starting operation of the Polavaram Dam.

It is a happy feature of this case that the States of Andhra Pradesh, Madhya Pradesh and Orissa took note of these suggestions as also of other relevant matters and entered into an Agreement on the 2nd April, 1980 regarding the design and operation of the Polavaram Project. This Agreement was filed before the Tribunal on the 3rd April, 1980 and marked as Exhibit No. APG-365. The States of Maharashtra and Karnataka welcome this Agreement between the three States. We make this Agreement a part of our Final Order and it is annexed thereto and marked Annexure "G". This Agreement provides *inter-alia* that :—

(1) the Polavaram Project spillway shall be designed for a flood discharging capacity of 36 lakh cusecs at pond level of R.L.+140 feet and not less than 20 lakh cusecs at pond level of R.L.+130 feet;

(2) the pond level shall not be kept higher than R.L. +145 feet in the month of June if the inflow into the Polavaram reservoir exceeds 3 lakh cusecs;

(3) on receipt of flood warning from the upper sites and/or due to anticipated inflows into the reservoir requiring regulation, the pond level shall be regulated as provided in the Agreement;

(4) protective embankments with adequate drainage sluices shall be constructed and maintained at the cost of the Polavaram Project in order to protect the land and properties above R.L.+150 feet in the territory of the State of Orissa due to the construction of the Polavaram Project or at its option for the payment of compensation; and

(5) payment of compensation by the State of Andhra Pradesh in respect of properties in the territory of the State of Madhya Pradesh likely to be affected above R.L. +150 feet because of the construction of the Polavaram Project and rehabilitation of oustees or construction and maintenance at the cost of the State of Andhra Pradesh the necessary protective embankments with adequate pumping arrangements and/or drainage sluices. The option for either of the above alternatives will be exercised by the State of Madhya Pradesh at the time of construction of the Polavaram Project.

Thus, by this Agreement the parties have settled the controversy with regard to the submergence of the territories of the States of Orissa and Madhya Pradesh on account of the construction of the Polavaram Project.

In the light of what has happened, the objection raised by the State of Maharashtra with regard to the jurisdiction of the Tribunal and the objection of the State of Madhya Pradesh with regard to the scope of section 5(3) of the Inter-State Water Disputes Act, 1956 lose their significance.

The other contentions raised in the references and in the replies thereto which go counter to the Agreement dated the 2nd April, 1980 may also be taken to have been abandoned.

Now remains the question of clearance of this Project by the Central Water Commission for FRL/MWL+150 feet as Clause 7 of the Agreement between the States of Andhra Pradesh and Karnataka dated the 4th August, 1978 envisages the clearance of the Polavaram Project at FRL/MWL+150 feet by the Central Water Commission.

The Tribunal had definitely indicated in the Report that the Project could be cleared for FRL/MWL+150 feet if water could be stored at that level for some part of the year and that by undertaking proper safeguards excess submergence could be avoided. The attention of learned Counsel of the Government of India was drawn to the Agreement dated the 2nd April, 1980 filed by the States of Andhra Pradesh, Madhya Pradesh and Orissa and also to the aforesaid observations made by the Tribunal in the Report and he was directed to place the views of the Central Water Commission for clearance of the Polavaram Project before the Tribunal after taking all the circumstances into account.

It is a matter of great satisfaction that on the 3rd April, 1980 after due consideration Counsel for the Government of India submitted the following statement :

> "The Government of India in the Ministry of Energy & Irrigation (Department of Irrigation) and the Central Water Commission are willing to submit to the following Order by the Tribunal :
>
> The Polavaram Project shall be cleared by the Central Water Commission as expeditiously as possible for FRL/MWL+150 feet.
>
> The matter of design of the dam and its operation schedule shall be left to the Central Water Commission, which they shall decide keeping in view all the Agreements between the parties, including the Agreement of 2nd April, 1980 filed today, as far as practicable.
>
> If there is to be any change in the operation schedule as indicated in the Agreement of 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."

All the parties stated that there was no objection to this statement being taken on record. the Tribunal, therefore, passed an Order that this statement be marked as an exhibit of the Government of India. This has accordingly been marked as Exhibit No. GOI-1. With this statement the last hurdle in resolving the controversy regarding the Polavaram Project and giving effect to the Agreement dated the 4th August, 1978 (Annexure "C" to the Final Order), 7th August, 1978 (Annexure "B" to the Final Order) and 15th December, 1978 (Annexure "D" to the Final Order) is crossed, as the Central Water Commission has agreed to the clearance of the Polavaram Project for FRL/MWL+150 feet as expeditiously as possible.

We are thankful to the parties and to the Government of India for assisting us in resolving this controversy in this manner.

In the light of the aforesaid discussions, we amend Clauses V and VI of our Final Order in the Original Report as mentioned below :—

(1) the words "subject to the modifications in Clauses 7(a) and 7(e) of this Agreement as contained in Chapter IV" appearing in Clause V.C. of the Final Order in the Original Report be deleted;

(2) the following be added at the end of existing Clause V of the Final Order in the Report :—

> "G. Agreement dated the 2nd April, 1980 between the States of Andhra Pradesh, Madhya Pradesh and Orissa annexed hereto and marked Annexure "G".; and

(3) in place of the existing Clause VI of the Final Order, the following Clause shall be substituted :—

> "(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—
>
> (i) the Polavaram Project shall be cleared by the Central Water Commission as expeditiously as possible for FRL/MWL+150 feet;

(ii) 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

(iii) 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."

The effect of these amendments is that the Order of the Tribunal amending Clauses 7(a) and 7(e) of the Agreement between the States of Andhra Pradesh and Karnataka dated the 4th August, 1978 and the observations in respect thereof in Chapter IV of the Report are hereby superseded.

The Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh as also the Agreement dated the 15th December, 1978 between the States of Orissa and Andhra Pradesh must now be read subject to the Agreement dated the 2nd April, 1980 between the States of Andhra Pradesh, Madhya Pradesh and Orissa. We direct that the following be added at the end of the existing sub-Clauses V.B. and V.D. of the Final Order :—

", subject to the provisions of the Agreement dated the 2nd April, 1980 mentioned below".

All the contentious raised in the references filed by the parties and replies thereto relating to the Polavaram Project are decided as aforesaid.

CHAPTER III

REFERENCE OF THE GOVERNMENT OF INDIA RELATING TO MATTERS OTHER THAN THE POLAVARAM PROJECT

This reference bears No. 1/3/79-WD, Government of India, Ministry of Energy and Irrigation, Department of Irrigation, and was filed on the 25th February, 1980. In this reference, the Government of India seeks explanation and guidance on the points mentioned and dealt with below.

Clarification No. 1

The Government of India has submitted as follows:—

> Some of the Agreements between the parties refer to utilisations through existing/ sanctioned or cleared schemes. However, neither the particulars of the existing/sanctioned or cleared schemes have been given nor the utilisations through them have been quantified anywhere in the Final Order. For assessing the availability of water for future projects, it is necessary to have the details of the utilisations of the existing/ sanctioned or cleared projects including those of the minor projects, on the dates of the Agreements and the utilisations proposed in the projects sanctioned subsequently. The Tribunal may consider the desirability of incorporating such details in its Final Order.

The State of Andhra Pradesh broadly agrees to the clarification prayed for by the Government of India. Karnataka also supports the Government of India. The other three States namely, Maharashtra, Madhya Pradesh and Orissa have opposed it.

The decision of the Tribunal is based on the Agreements of the parties annexed to the Final Order. None of the parties pleaded before the Tribunal that these Agreements should be so modified as to include particulars of the existing/sanctioned or cleared schemes or the utilisations thereunder.

All the concerned parties have proceeded on the basis that his informaion is not necessary to resolve the matters under dispute between them. If such details are to be given at this stage, the whole matter shall have to be investigated and verified and the Agreements of the parties modified for the purpose of the decision of the Tribunal. All this is not necessary for the purpose of our decision.

If such information is required by the Central Water Commission for assessing the availability of water for future projects, it is expected that the parties would supply such information to it.

Clarification No. 2(*a*)

The Government of India has submitted that in the Final Order the sub-basins of the Godavari basin have not been defined and that this is necessary in order to make the Final Order comprehensive.

In Clause VIII of the Final Order at page 147 of the Original Report, the following sub-Clause be added :

> "(c) The sub-basins of the Godavari basin mean the sub-basins described in the statement annexed hereto and marked Annexure "I"."

The clarification is disposed of accordingly.

Clarification No. 2(*b*)

The Government of India has submitted that in the Final Order, Clause V.C. at Page 146 of the Report, reference is made to the modifications in Clause 7(a) and Clause 7(e) of the Agreement dated the 4th August, 1978 as contained in Chapter IV but these modifications have not been specified in the Final Order and they may be now specified to make the Final Order self-contained.

As already mentioned in Chapter II of the Report, the modifications to Clause 7(a) and Clause 7(e) of the Agreement dated the 4th August, 1978 as contained in Chapter IV of the Original Report have been deleted.

Clarification No. 3

This clarification relates to the Polavaram Project of the State of Andhra Pradesh. It has been dealt with and disposed of in Chapter II of this Report.

Clarification No. 4

The Government of India has submitted that :

> "With a view to ensuring that the States, mainly the upper States, do not exceed the stipulated allocations it may be necessary to obtain data regarding storages and utilisations from one another each year. Also it would be desirable to provide for inspection of sites in a basin State by the other basin States. The Tribunal may kindly consider the desirability of providing some enabling clause in their Final Order to this effect so that there is no difficulty at a later stage for any State to obtain the data from the other State when the latter shows reluctance to do so."

Maharashtra has opposed any clarification on this point. Andhra Pradesh has broadly supported it. Karnataka and Madhya Pradesh have also supported it while Orissa has not submitted any reply.

As supply of such data by one State to another is not incorporated in the Agreements, we do not think we should do it now at this stage.

It is expected that there will be mutual cooperation between the States and each State will supply such data to the other State as and when required.

Clarification No. 5

The Government of India has submitted that :

> "The Final Order of the Tribunal, on pages 144-148, does not stipulate any review after a specified period as has been directed by the Krishna and Narmada Water Disputes Tribunals. Keeping in view the need for optimum utilisation of the available water which, with the passage of time, may become a scarce resource, its all time allocation may not be desirable. The Hon'ble Tribunal may be pleased to consider the question of stipulating any period after which the decision could be reviewed."

Karnataka has supported the Government of India on this point while the other party States have opposed it.

The decision of the Tribunal is based on the Agreements between the parties and there is no stipulation in the Agreements for the review of the decision. As such, we do not find it necessary to amend the Final Order in this respect.

CHAPTER IV

SECTION I—REFERENCE OF THE STATE OF MADHYA PRADESH RELATING TO MATTERS OTHER THAN THE POLAVARAM PROJECT

In this reference, the State of Madhya Pradesh has sought clarifications and guidance on the points mentioned and dealt with below.

Clarification No. 1

The State of Madhya Pradesh has submitted that :

> With reference to the second paragraph at page 9 of Volume I of the Report, it had not made any request to the Central Government under section 3 of the Inter-State Water Disputes Act, 1956 to refer any dispute to a Tribunal.
>
> It has prayed that the Tribunal may issue a clarification to the effect that the State Government of Madhya Pradesh did not make any application to the Central Government for referring the dispute to the Tribunal.

We find that in the Notification No. S. O. 1421, dated the 10th April, 1969 issued by the Government of India, Ministry of Irrigation and Power, it has been stated in the second paragraph thereof :—

> "AND WHEREAS requests have also been received under that section from the Governments of Orissa and Madhya Pradesh to refer the water dispute regarding the inter-State river, Godavari, and river valley thereof, to a Tribunal for adjudication;"

In the face of this Notification, we see no need for altering our Report on this point.

Clarification No. 2

The State of Madhya Pradesh has submitted that :

> Though the name of the inter-State stream 'Chandra Vanka' appears on the map of the Godavari basin incorporated in Part II, Volume II of the Report of the Godavari Water Disputes Tribunal, the line showing this stream has not been shown therein.
>
> The State of Madhya Pradesh has prayed for issue of directions for incorporation of the said stream in the map of the Godavari basin.

We agree with the submission of the State of Madhya Pradesh.

We have already passed an Order on the 26th March, 1980 that the line showing the inter-State stream 'Chandra Vanka' be marked on the map of the Godavari basin in Part II of Volume II of our Report, submitted to the Central Government on the 27th November, 1979 as also on the signed copy of the Report kept in the Tribunal's office. Our direction was carried out and the line mentioned above has been shown in the map.

No further directions are required to be issued.

Clarification No. 3

> The State of Madhya Pradesh has referred to the observatons made by the Trbunal at pages 89-90 of the Report that "After all, the State of Orissa contributes enough water to the river Godavari and it has the capacity to use the water allocated to it. It is also an economically backward State. In our opinion, the water that has been allocated to the State of Orissa in the Sabari sub-basin is according to its equitable share."
>
> It has submitted that the Tribunal may be pleased to make it clear that the observations made by the Tribunal for the State of Orissa also apply to the State of Madhya Pradesh.

The aforesaid observations made by the Tribunal with regard to Orissa were made in the context that even without any agreement the State of Orissa was entitled to the allocation of water of the river Sabari in accordance with the Agreement dated the 15th December, 1978. We are, therefore, of the opinion that there is no need to alter our Report on this point. We would like to make it clear that our observations with regard to Orissa do not in any way imply that similar situations do not exist in parts of the other States.

Clarification No. 4

The State of Madhya Pradesh has submitted that :

> "the Honourable Tribunal may be pleased to issue directions to incorporate at page 135 of the Report, Volume I, (1979) that the surveys, planning and execution of the Inchampalli Multipurpose Project would also be carried out in addition to its operation and maintenance, under the guidance and directions of a duly constituted Tripartite Inter-State Control Board for Inchampalli Project."

At pages 134-135 of Volume I of our Report, we had made the following observation :

> "In the Agreement dated the 7th August, 1978 between the State of Maharashtra, Madhya Pradesh and Andhra Pradesh, the three States have agreed to set up a duly constituted Tripartite Inter-State Control Board for Inchampalli Project *inter-alia* for its operation and maintenance."

This observation made by us was with reference to sub-issue (8) of Issue No. III which states :

> "What machinery, if any, should be set up to make available and regulate the allocations of waters, if any, to the States concerned or otherwise to implement the decision of the Tribunal ?"

The expression "*inter-alia*" conveys the sense that besides operation and maintenance, other things are also referred to in the Agreement. Moreover, the aforesaid Agreement dated the 7th August, 1978 which defines the functions of the Tripartite Inter-State Inchampalli Control Board has been annexed to and forms part of the Final Order.

We see no reason to give any further clarification.

Clarification No. 5

The State of Madhya Pradesh has submitted as follows :

> "The Honourable Tribunal in the Report, Volume I (1979), Final Order, Chapter VII have incorporated the following Clause IX, at page 148 :
>
> > "Nothing contained herein shall prevent the alteration, amendment, or modification of all or any of the foregoing Clauses by agreement between the parties or by legislation by Parliament."
>
> The State of Madhya Pradesh has contended "that some of the Agreements on which the decision is based are bilateral/tripartite Agreements. The Agreements have been accepted by the other basin States and no question has been raised as to the rights of the States concerned to enter into such Agreements. In view of this, the party States to the bilateral/tripartite Agreements should be free to alter, amend or modify all or any of the clauses in these Agreement(s), and it should not be necessary to seek concurrence of all the five basin States to such alteration, amendment or modification which concern only two States or at the most three States. The State of Madhya Pradesh, therefore, submits for the consideration and clarification of the Honourable Tribunal that the word "concerned" may be inserted between the words "parties" and "or" in Clause IX of the Final Order."
>
> Similar clarification is also sought for on precisely the same observation made by the Tribunal at page 130 of the Report, Volume I, (1979) and it is prayed that the Tribunal may be pleased to direct inclusion of the word "concerned" between the words "parties" and "or" at pages 130 and 148 of the Report.

The State of Andhra Pradesh has agreed to the amendment prayed for by the State of Madhya Pradesh. The State of Orissa while supporting the submissions made by the State of Madhya Pradesh, has submitted that the words "or by legislation by Parliament" in Clause IX are also not necessary. The States of Maharashtra and Karnataka have not agreed with the submissions made by the State of Madhya Pradesh.

The various Agreements entered into by the parties with regard to the allocation of waters of the river Godavari and its tributaries are appended to the Final Order and are a part of it. An agreement which is annexed to and made part of the Final Order is binding upon all the five States who are parties to the water dispute. In our opinion any amendment of the Final Order should be made by all the party States. However, an amendment of an agreement to which all the States are not parties may be valid in law if it does not prejudicially affect a State which is not a party to it and is otherwise in consonance with the provisions of the Final Order. This will depend on the nature of the amendment.

In the circumstances, we decline to make any amendment in the Final Order in our Report on the lines submitted by the State of Madhya Pradesh. No alteration on pages 130 and 148 of our Report is called for.

Clarification No. 6

The State of Madhya Pradesh has submitted that in the absence of a comprehensive Godavari Agreement, certain matters require to be included in the Final Order of the Tribunal for the implementation of the various bilateral/tripartite Agreements properly. These are dealt with below :—

Clarification No. 6(*i*)

The State of Madhya Pradesh has submitted that a clause be added in the Final Order giving description of the 12 sub-basins of the Godavari Basin.

This matter has already been dealt with in Clarification No. 2(a) of the reference made by the Government of India. No further direction is necessary.

Clarification No. 6(*ii*)

The State of Madhya Pradesh has submitted that the following be incorporated in the Final Order of the Tribunal :

"The expression 'T.M.C.' or 'tmc' means 1,000 cubic feet of water."

The expression is of common use and has already been defined in Appendix B in Volume II (Part I) of the Report. It is, therefore, not necessary to include this in the Final Order.

Clarification No. 6(*iii*)

The State of Madhya Pradesh has submitted that the following be incorporated in the Final Order :

> "Use of quantities of water specified in the Agreements is for a water year commencing on 1st June and ending on 31st May."

The States of Andhra Pradesh, Maharashtra and Orissa have no objection to the incorporation of the aforesaid Clause in the Final Order. The State of Karnataka has given no reply on this point.

We direct that the following sub-Clause (d) be added at the end of Clause VIII of the Final Order :—

> "(d) Use of quantities of water specified in the Agreements is for a water year commencing on 1st June and ending on 31st May."

Clarification No. 6(*iv*)

The State of Madhya Pradesh has submitted that the following be incorporated in the Final Order :

> "All the levels mentioned in the Agreements are with reference to the Great Trignometrical Survey (GTS) levels established by the Survey of India."

It is common practice to determine the levels with reference to the G.T.S. datum established by the Survey of India. As such, we do not consider it necessary to incorporate it in our Final Order.

Clarification No. 6(v)

The State of Madhya Pradesh has submitted that the following be added in the Final Order :

"The location of sites defined by latitude and longitude in the Agreements is based on the Survey of India toposheets and is indicative only."

We do not think it necessary to incorporate this in our Final Order.

Clarifications Nos. 6(vi), (vii) and (viii)

The State of Madhya Pradesh has submitted that the following be added in the Final Order :

(i) "Except as provided in the various Agreements all use shall be measured by the extent of depletion of the water of the river Godavari in any manner whatsoever including losses of water by evaporation and other natural causes from man-made reservoirs and other works without deducting in the case of use for irrigation the quantity of water that may return after such use to the river.

The water stored in any reservoir across any stream of the Godavari river system shall not of itself be reckoned as depletion of the water of the stream except to the extent of the losses of water from evaporation and other natural causes from such reservoir. The water diverted from such reservoir by any State for its own use in any water year shall be reckoned as use by that State in that water year."

(ii) "If in any water year any State is not able to use any portion of the water allocated to it during that year on account of the non-development of its projects or damage to any of its projects or does not use it for any reason whatsoever, that State will not be entitled to claim the unutilised water in any subsequent water year."

(iii) "Failure of any State to make use of any portion of the water allocated to it during any water year shall not constitute forfeiture or abandonment of its share of water in any subsequent water year nor shall it increase the share of any other State in any subsequent water year even if such State may have used such water."

The States of Andhra Pradesh, Maharashtra and Orissa have no objection to the incorporation of these clauses in the Final Order. Karnataka has submitted no reply.

In our opinion the existing Clause III of the Final Order be renumbered as sub-Clause (A) of Clause III and the following sub-Clause be added at the end :

"(B). Except as provided in sub-Clause (A) or in the Agreements between the parties a use shall be measured by the extent of depletion of the waters of the river Godavari in any manner whatsoever including losses of water by evaporation and other natural causes from man-made reservoirs and other works without deducting in the case of use for irrigation the quantity of water that may return after such use to the river."

In order to remove any ambiguity in the matter of the use of water, we are of the opinion that the following be also added as sub-Clauses (C), (D) and (E) of Clause III of the Final Order :—

"(C). The water stored in any reservoir across any stream of the Godavari river system shall not of itself be reckoned as depletion of the water of the stream except to the extent of the losses of water from evaporation and other natural causes from such reservoir. The water diverted from such reservoir by any State for its own use in any water year shall be reckoned as use by that State in that water year."

"(D). If in any water year any State is not able to use any portion of the water allocated to it during that year on account of the non-development of its projects or damage to any of its projects or does not use it for any reason whatsoever, that State will not be entitled to claim the unutilised water in any subsequent water year."

"(E). Failure of any State to make use of any portion of the water allocated to it during any water year shall not constitute forfeiture or abandonment of its share of water in any subsequent water year nor shall it increase the share of any other State in any subsequent water year even if such State may have used such water."

Clarification No. 7

The State of Madhya Pradesh has submitted that the following be incorporated in Final Order :

"All States may vary the location of sites of projects/schemes using more than one point five (1.5) TMC annually specifically mentioned in the Agreements by informing the lower State(s). If as a result of shifting or alteration in the case of any such specified sites upto which a State has been permitted to use all the water, there is reduction/increase in the intercepted catchment area, a corresponding increase/reduction will be made in the catchment area of other specified site(s) so that the total catchment area allowed for each State for interception of all the water is not exceeded.

With respect to projects wherein the use is limited to 1.5 TMC, if there is a marginal increase of utilisation over one point five (1.5) TMC but not exceeding two (2) TMC for each project, such increase may be permitted by mutual consultation between the States concerned and the lower riparian State(s), provided that the total utilisation as specified in each of the paragraphs is not exceeded by the concerned State."

It is submitted by the State of Madhya Pradesh that in the Tripartite Agreement dated the 7th August, 1978 and in the bilateral Agreement dated the 15th December, 1978 there are provisions to this effect. But there is no such provision in the bilateral Agreement dated the 11th July, 1979 between the States of Orissa and Madhya Pradesh and it is submitted that this is an obvious omission.

It has prayed that a general clause applicable to all the States may be incorporated in the Final Order of the Tribunal.

The State of Maharashtra has opposed this submission.

We are of the opinion that it is not necessary to incorporate a general clause of this nature in the Final Order. So far as the bilateral Agreement dated the 11th July, 1979 between the States of Orissa and Madhya Pradesh is concerned, let it be noted that the State of Orissa has no objection to the submission made by the State of Madhya Pradesh.

Clarification No. 8

The State of Madhya Pradesh while referring to the observation made by the Tribunal at pages 137-138 of Volume I of the Report has submitted that the Tribunal may be pleased to issue directions for incorporation of the following in its Final Order :—

"In using the waters permitted to each State in these Agreements no State can construct a project(s) submerging the territory of another State(s) without prior consent and acceptance by mutual discussions between the concerned States, except as specifically agreed to under any of these Agreements."

All cases of submergence including the submergence of the territories of the States of Madhya Pradesh and Orissa, as a result of the Polavaram Project of Andhra Pradesh, have already been settled by the party States in the various Agreements filed by them before us. At this stage, we do not think it necessary to incorporate such a general clause in our Final Order.

Clarification No. 9

The State of Madhya Pradesh has submitted as follows :

"The Honourable Tribunal have ordered in the Report at page 145, Clause (V) that the various inter-State bilateral/tripartite Agreements be observed and carried out. In these bilateral/tripartite Agreements which are at pages 149 to 227 of the Report, references to other bilateral Agreements entered into between the concerned States earlier, from time to time also appear, but those earlier Agreements are not incorporated in the Report."

In order, therefore, to make the Godavari Final Order a comprehensive document by itself, all other Agreements entered into between the States for Godavari basin projects may also be incorporated in the Final Order.

These agreements are available to all the parties even without their incorporation in the Final Order. The parties have already referred to the relevant clauses of such agreements in the Agreements filed before us.

We do not consider it necessary to incorporate all the earlier agreements in our Final Order.

Clarification No. 10

The State of Madhya Pradesh has submitted that the provisions relating to the following matters be incorporated in the Final Order :

(a) Regulation regarding gauging and gauging sites in the Godavari river system.

(b) Preparation of data for each water year of uses made by each party State.

(c) Inspection of records of gauging maintained by the Central Water Commission and the party States and uses referred to in (a) and (b) above by all the party States.

We are of the opinion that the incorporation of these provisions is not required for our decision. The parties and the Government of India may take such appropriate steps in connection with these matters as they may deem fit and proper.

SECTION II—CERTAIN CORRECTIONS

The State of Madhya Pradesh has asked, in paragraphs 1, 3, 7, 8 and 9 of its reference for correction of certain clerical errors in the Original Report. We direct that the following corrections be made in our Report :

(i) At page 5 of Vol. I of the Report—
line 8 *add* ", Madhya Pradesh" *after* "Mysore".

(ii) At page 14 of Vol. I of the Report—
line 19, *substitute* "484.576" *for* "478.276".

(iii) At page 137 of Vol. I of the Report—
line 13, *substitute* "Andhra Pradesh" *for* "Madhya Pradesh".

(iv) At page 137 of Vol. I of the Report—
line 20, *substitute* "24th September, 1976" *for* "24th August, 1978"

(v) At page 167 of Vol. I of the Report—
line 11, *substitute* "78°-15′ E" *for* "75°-15′ E".

(vi) At page 179 of Vol. I of the Report—
line 11, *substitute* "80°-10′-05 "E" *for* "85°-10′-05 "E".

In the reply filed by the State of Karnataka to the reference by the State of Madhya Pradesh, it has suggested certain factual errors for correction. We hereby direct that the following corrections be made in our Report :

(i) At page 2 of Vol. I of the Report—
line, 22 *delete* ", Mysore" *after* "Hyderabad".

(ii) At page 60 of Vol. I of the Report—
in the Statement under the Heading "KARNATAKA STATE", "Hyderabad" appearing in Col. 3 *be replaced* by "Hyderabad- Karnataka".

(iii) At page 109 of Vol. I of the Report—
line 17, *substitute* "generally" *for* "emphatically".

(iv) At page 121 of Vol. I of the Report—
line 16, *substitute* "KRG-86" *for* "MRG-86".

Some other minor clerical errors have also come to our notice which need to be corrected. We direct that the following corrections be made in our Report :

(i) At page 52 of Vol. I of the Report—
line 9, *substitute* "fall" *for* "falls".

(ii) At page 114 of Vol. I of the Report—
line 7, *substitute* "the" *for* "The".

(iii) At page 114 of Vol. I of the Report—
last line, *substitute* ";" *for* "." at the end.

(iv) At page 115 of Vol. I of the Report—
line 1, *substitute* "the" *for* "The".

(v) At page 115 of Vol. I of the Report—
line 7, *add* "and" *after* ";".

(vi) At page 120 of Vol. I of the Report—
line 8, *substitute* "follows" *for* "follow".

(vii) At page 145 of Vol. I of the Report—
line 6 from bottom, *delete* "The" *before* "Agreement".

(viii) At page 163 of Vol. I of the Report—
line 15, *substitute* "proportion" *for* "proporation".

(ix) At page 174 of Vol. I of the Report—
last but one line, *delete* "per".

(x) At page 193 of Vol. I of the Report—
line 6, *substitute* "(F)" *for* "(B)".

(xi) At page 195 of Vol. I of the Report—
line 4 from bottom, *substitute* "sub-basins" *for* "sub-basin"

(xii) At page 205 of Vol. I of the Report—
line 1, *substitute* "Doraguda" *for* "Deraguda".

(xiii) At page 221 of Vol. I of the Report—
line 20, *substitute* "paragraphs" *for* "pagraphs".

(xiv) At page 226 of Vol. I of the Report—
line 5, *substitute* "Ordeltong" *for* "Odeltong".

During arguments on the 3rd April, 1980 learned Advocate General of Andhra Pradesh and Counsel for the State of Karnataka prayed that the word "an" between the words "Central Water Commission for" and "FRL/MWL" appearing in line 2 of sub-Clause (a) of Clause 7 of the Summary Record of the Discussions of the meeting held between the Chief Ministers of Karnataka and Andhra Pradesh at Bangalore on the 4th August, 1978 regarding the river Godavari, be *deleted*. By an Order made on the 3rd April, 1980, the Tribunal directed the *deletion* of the word "an" as prayed for.

We further direct that wherever there is any conflict between this Report and the Original Report, the observations in this Report will override and prevail over the observations in the Original Report.

CHAPTER V

DIRECTIONS FOR COSTS

Directions for costs with regard to the reference under section 5(1) of the Inter-State Water Disputes Act, 1956 were given at page 130 of Volume I of the Original Report. We propose to give similar directions for costs with regard to the references under section 5(3) of the said Act. For this purpose, Clause X of the Final Order at page 148 of Volume I of the Report shall have to be amended as follows :

(a) "A" be added at the beginning of the first line of Clause X so that the existing Clause X will become sub-Clause (A) of Clause X.

(b) In the second sentence of sub-Clause (A) of Clause X, the word "States" be substituted by the word "Governments".

(c) At the end of sub-Clause (A) of Clause X, the following sentence be added :— "These directions relate to the reference under section 5(1) of the Inter-State Water Disputes Act, 1956."

(d) After sub-Clause (A) of Clause X, the following sub-Clause (B) be added :— "(B). The Government of India and the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal in the references under section 5(3) of the said Act. The expenses of the Tribunal in respect of the aforesaid references shall be apportioned and paid by the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares."

2. In the Final Order in Chapter VII, the amended Clause X regarding costs will read as follows :—

"(A). The Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal. The expenses of the Tribunal shall be apportioned and paid by the Government of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares. These directions relate to the reference under section 5(1) of the Inter-State Water Disputes Act, 1956.

(B). The Government of India and the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal in the references under section 5(3) of the said Act. The expenses of the Tribunal in respect of the aforesaid references shall be apportioned and paid by the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares,"

CHAPTER VI

CONCLUDING OBSERVATIONS

Before parting with the case finally, we place on record our appreciation of the persistent efforts of the party States to arrive at a settlement on all the points of disputes arising in the matter of sharing the waters of the inter-State river Godavari and the river valley thereof. In retrospect it becomes manifest that the foundation of such a settlement was laid by the Agreement dated the 19th December, 1975 when by showing examplary spirit of accommodation, the parties took the momentous decision of settling an important part of the dispute. Thereafter, the parties took slow but sure steps to reach the ultimate destination of a full and final settlement of the entire dispute. This task was not easy and the parties took their own time to arrive at a settlement on the remaining matters.

At times, to break the stalemate in the negotiations, the case was listed for arguments. But every time the parties evinced an earnest desire to settle the entire controversy in a most amicable manner. As the stakes were high, the negotiations for settlement took a long time specially when the parties devoted themselves to a thorough examination of all the areas in which waters of the river Godavari and its tributaries could be beneficially utilised. For this, they had to take into consideration all the small and big rivers flowing in their territories and contributing water to the river Godavari and also to examine the possibilities for undertaking joint projects.

It gave the Tribunal immense satisfaction when the parties filed the Agreements annexed to our Final Order in the Original Report. But still, inspite of best efforts, the parties could not reach a satisfactory settlement of the question of diversion of the waters of the river Godavari into the Krishna through the Polavaram Dam. At this stage we took this matter in our hands and decided the case as mentioned in the Original Report.

The Government of India and some of the party States filed references under section 5(3) of the Inter-State Water Disputes Act, 1956. During the course of the hearing of these references, the Government of India came to our assistance in resolving this dispute to the satisfaction of all the party States by making the statement annexed to the Final Order and marked Annexure "H". We are sincerely thankful to the Government of India for this.

We need not reiterate what we have already said in the Original Report about the devoted services rendered by the Assessors and the Secretary of the Tribunal and other members of the staff. We record our appreciation of their services.

To the inhabitants of the Godavari basin and to those beyond the basin who would be utilising the waters of the river Godavari, we wish all happiness and prosperity. It is our earnest hope that while making its use they will take all possible steps to prevent wastage and pollution of the waters of this holy river. We are confident that the party States will take appropriate and effective steps in this direction.

The Godavari basin is rich in forests. It is our sincere desire that the party States should preserve this national wealth with utmost care so that its usefulness and beauty remain unspoilt.

CHAPTER VII

The Final Order set forth in Chapter VII of Vol. I of the Original Report as modified in accordance with the explanations given by the Tribunal under section 5(3) of the Inter-State Water Disputes Act, 1956 is given below.

FINAL ORDER OF THE TRIBUNAL

The Tribunal hereby passes the following Order :—

Clause I

All the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

Clause II

Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

Clause III

(A). The uses of water mentioned in column (1) below shall be measured in the manner indicated in column (2) :

Use	*Measurement*
(1)	(2)
(i) Irrigation use	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use	100 per cent of evaporation losses in the storage.
(iii) Domestic and municipal water supply within the basin	20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin	2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(v) All uses outside the basin	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(B). Except as provided in sub-Clause (A) or in the Agreements between the parties a use shall be measured by the extent of depletion of the waters of the river Godavari in any manner whatsoever including losses of water by evaporation and other natural causes from man made reservoirs and other works without deducting in the case of use for irrigation the quantity of water that may return after such use to the river.

(C). The water stored in any reservoir across any stream of the Godavari river system shall not of itself be reckoned as depletion of the water of the stream except to the extent of the losses of water from evaporation and other natural causes from such reservoir. The water diverted from

such reservoir by any State for its own use in any water year shall be reckoned as use by that State in that water year.

(D). If in any water year any State is not able to use any portion of the water allocated to it during that year on account of the non-development of its projects or damage to any of its projects or does not use it for any reason whatsoever, that State will not be entitled to claim the unutilised water in any subsequent water year.

(E). Failure of any State to make use of any portion of the water allocated to it during any water year shall not constitute forfeiture or abandonment of its share of water in any subsequent water year nor shall it increase the share of any other State in any subsequent water year even if such State may have used such water.

Clause IV

Each of the States concerned will be at liberty to divert any part of the share of the Godavari waters allocated to it from the Godavari basin to any other basin.

Clause V

The following Agreements so far as they relate to the Godavari river and Godavari river basin be observed and carried out :—

A. Agreement dated the 19th December, 1975 between the States of Karnataka, Maharashtra, Madhya Pradesh, Orissa and Andhra Pradesh annexed hereto and marked Annexure "A" agreeing to the clearance of projects for the utilisation of waters of the Godavari river and its tributaries in accordance with :—

(a) Agreement between the States of Karnataka and Andhra Pradesh on the 17th September, 1975—Annexure I.

(b) Agreement between the States of Maharashtra and Andhra Pradesh on the 6th October, 1975—Annexure II.

(c) Agreement between the States of Madhya Pradesh and Andhra Pradesh on the 7th November, 1975—Annexure III.

(d) Agreement between the States of Orissa and Madhya Pradesh on the 9th December, 1975—Annexure IV.

B. Agreement dated the 7th August, 1978 between the States of Maharashtra, Madhya Pradesh and Andhra Pradesh annexed hereto and marked Annexure "B", subject to the provisions of the Agreement dated the 2nd April, 1980 mentioned below.

(C) Agreement dated the 4th August, 1978 between the States of Andhra Pradesh and Karnataka annexed hereto and marked Annexure "C".

(D) Agreement dated the 15th December, 1978 between the States of Orissa and Andhra Pradesh annexed hereto and marked Annexure "D", subject to the provisions of the Agreement dated the 2nd April, 1980 mentioned below.

(E) Agreement between the States of Karnataka and Maharashtra evidenced by letters dated the 29th January, 1979, 30th January, 1979 and 31st January, 1979 annexed hereto and marked Annexure "E".

F. Agreement dated the 11th July, 1979 between the States of Orissa and Madhya Pradesh annexed hereto and marked Annexure "F".

(G) Agreement dated the 2nd April, 1980 between the States of Andhra Pradesh, Madhya Pradesh and Orissa annexed hereto and marked Annexure "G".

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—

(i) the Polavaram Project shall be cleared by the Central Water Commission as expeditiously as possible for FRL/MWL +150 feet;

(ii) 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

(iii) 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.

Clause VII

Nothing in the Order of this Tribunal shall impair the right or power or authority of any State to regulate within its boundaries the use of water or to enjoy the benefit of waters within that State in a manner not inconsistent with the Order of this Tribunal.

Clause VIII

In this Order :

(a) Use of the water of the river Godavari by any person or entity of any nature whatsoever within the territories of a State shall be reckoned as use by that State.

(b) The expression "Godavari waters" with its grammatical variations and cognate expressions includes water of the main stream of the Godavari river, all its tributaries and all other streams, contributing water directly or indirectly to the Godavari river.

(c) The sub-basins of the Godavari basin mean the sub-basins described in the statement annexed hereto and marked Annexure "I".

(d) Use of quantities of water specified in the Agreements is for a water year commencing on 1st June and ending on 31st May.

Clause IX

Nothing contained herein shall prevent the alteration, amendment or modification of all or any of the foregoing Clauses by agreement between the parties or by legislation by Parliament.

Clause X

(A) The Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal. The expenses of the Tribunal shall be apportioned and paid by the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares. These directions relate to the reference under section 5(1) of the Inter-State Water Disputes Act, 1956.

(B) The Government of India and the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa shall bear their own costs of appearing before the Tribunal in the references under section 5(3) of the said Act. The expenses of the Tribunal in respect of the aforesaid references shall be apportioned and paid by the Governments of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Orissa in equal shares.

ANNEXURE "A"

GODAVARI RIVER BASIN AGREEMENT

WHEREAS certain discussions have taken place amongst the five States of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Orissa, subsequent to meeting of 19th July, 1975 held at New Delhi on the use of the waters of the Godavari river and its tributaries, and

WHEREAS in pursuance thereof the following agreements have been entered into between the States hereinafter mentioned viz.

(a) Agreement between the States of Karnataka and Andhra Pradesh on 17-9-1975—Annexure I;

(b) Agreement between the States of Maharashtra and Andhra Pradesh on 6-10-1975—Annexure II;

(c) Agreement between the States of Madhya Pradesh and Andhra Pradesh on 7-11-1975—Annexure III;

(d) Agreement between the States of Orissa and Madhya Pradesh on 9-12-1975—Annexure IV;

WHEREAS the States of Karnataka, Andhra Pradesh, Maharashtra, Madhya Pradesh and Orissa have considered the said bilateral agreements in their meeting on 19-12-1975 at New Delhi.

NOW the States of Karnataka, Andhra Pradesh, Maharashtra, Madhya Pradesh and Orissa hereby agree to the sanction and clearance of projects for the utilisation of waters of the Godavari river and its tributaries in accordance with the said agreements, provided that nothing in these agreements will be treated as a concession by any State in respect of any of its contentions in any other water disputes with any other State or with respect to the dispute regarding the sharing of the balance quantity of water in the Godavari and its tributaries. State in this agreement means any of the aforesaid five States.

The five basin States agree that this agreement will be filed before the Godavari Water Disputes Tribunal.

NOW as a testimony thereof, we the Chief Ministers of concerned States append our signatures.

NEW DELHI
December 19, 1975.

Sd/- 19-12
(J. VENGAL RAO)
Chief Minister,
Andhra Pradesh.

Sd/- 19-12-75
(D. DEVRAJ URS)
Chief Minister,
Karnataka.

Sd/- 19-12-75
(P. C. SETHI)
Chief Minister,
Madhya Pradesh.

Sd/-
19-12-75
(S. B. CHAVAN)
Chief Minister,
Maharashtra,

Sd/-
(NANDINI SATPATHY)
Chief Minister
Orissa.

In the presence of—

Sd/-
(K. N. SINGH)
Deputy Minister,
Ministry of Agriculture
and Irrigation,
Government of India.

Sd/-
(JAGJIVAN RAM)
Minister of Agriculture
and Irrigation,
Government of India.

ANNEXURE I

PROCEEDINGS OF A MEETING BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH, HELD AT BANGALORE ON THE 17TH SEPTEMBER, 1975.

The following were present :

KARNATAKA

1. Shri D. Devraj Urs,
   Chief Minister,
2. Shri Subhash Asture,
   Minister of State for Major and
   Medium Irrigation.
3. Shri G. V. K. Rao,
   Chief Secretary.
4. Shri I. M. Magdum,
   Special Secretary to
   Government, P.W.D.
5. Shri J. C. Lynn,
   Secretary to Chief Minister.
6. Shri B. Subramanyam,
   Superintending Engineer, W.R.D.O.
7. Shri A. V. Shanker Rao,
   Superintending Engineer W.R.D.O.
8. Shri S. K. Mohan,
   Under Secretary to
   Government, P.W.D.

ANDHRA PRADESH

1. Shri J. Vengal Rao,
   Chief Minister.
2. Shri Ch. Subbarayudu,
   Minister for Municipal Administration.
3. Shri C. R. Krishnaswami Raosaheb,
   Secretary to Chief Minister.
4. Shri M. Gopalkrishnan,
   Secretary, Irrigation & Power.
5. Shri B. Gopalakrishnamurthy,
   Special Officer, Water Resources.
6. Shri G. K. S. Iyyengar,
   Superintending Engineer, Interstate-I,
   Water Resources.

1. The discussions related to the clearance of projects upstream of Nizamsagar in Karnataka and Andhra Pradesh States.

2. After full discussion, the following points were agreed to, as an interim measure :

(a) Karnataka may go ahead with the following two projects, and the utilisation will be as indicated against each :

Name of project	*Utilisation of water*
(i) Karanja Project	13.10 TMC ft.
(ii) Chulkinala Project	1.17 TMC ft.

(b) Andhra Pradesh may go ahead with the construction of a reservoir at Singur for the withdrawal of 4 (four) TMC ft. for purposes of drinking water for Hyderabad city.

3. Andhra Pradesh stated that they propose to construct the Reservoir at Singur with a capacity of 30 TMC ft., and that this may involve the submersion of some land in Karnataka State. In that event, the details regarding the project and of the submersible land in Karnataka will be furnished to the Government of Karnataka for their consideration. Karnataka stated that any evaporation loss from the Reservoir should come out of the share of Andhra Pradesh.

4. The Chief Minister of Andhra Pradesh is having discussions with the Chief Minister of Maharashtra also about the construction of projects in the Manjira sub-basin. Details of any agreement arrived at will be made available to the Government of Karnataka, so that all the three State Governments could arrive at mutually consistent agreements.

5. The details of the interim agreement among the three States will be furnished to the Government of India, and also filed before the Tribunal, at the appropriate time.

D. DEVRAJ URS
Chief Minister
Karnataka

J. VENGAL RAO
18-9-1975
Chief Minister
Andhra Pradesh.

ANNEXURE II

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF MAHARASHTRA AND ANDHRA PRADESH HELD AT HYDERABAD ON THE 6TH OCTOBER 1975

The following were present :

ANDHRA PRADESH

1. Sri J. Vengala Rao,
   Chief Minister.
2. Sri J. Chokka Rao,
   Minister for Agriculture and
   Transport.
3. Sri N. Bhagwandas, IAS,
   Chief Secretary.
4. Sri P. Ramchandra Reddi,
   Advocate-General.
5. Sri A. Krishnaswami, IAS,
   Ist Member, Board of Revenue.
6. Sri C. R. Krishnaswamy Rao
   Sahib, IAS,
   Secretary to Chief Minister.
7. Sri M. Gopalakrishnan, IAS,
   Secretary, Irrigation & Power.
8. Sri P. Sitapati, IAS,
   Joint Secretary,
   Irrigation & Power.
9. Sri B. Gopalakrishnamurthy,
   Special Officer, Water Resources.
10. Sri M. Jaffer Ali, Adviser,
    Irrigation.
11. Sri D. V. Sastry,
    Government Pleader.
12. Sri G. K. S. Iyengar,
    S.E., Inter-State Circle-I.

MAHARASHTRA

1. Sri S. B. Chavan,
   Chief Minister.
2. Sri V. B. Patil,
   Minister, Irrigation.
3. Sri M. N. Phadke,
   Barrister-at-Law.
4. Sri V. R. Deuskar,
   Secretary, Irrigation Deptt.
5. Sri M. G. Padhye,
   Chief Engineer (WR) and
   Joint Secretary Irrigation Deptt.

6. Sri K. S. Shankar Rao,
   S. E. & Dy. Secy.
   Irrigation Deptt.

7. Sri Sridhara Rao Joshi,
   Spl. Officer, Irrgn. Deptt.

The discussions related to the clearance of the projects on and the use of waters of Godavari river and its tributaries.

After full discussions the following points were agreed to :

I. Maharashtra can use for their beneficial use all waters upto Paithan dam site on the Godavari and upto Siddheswar dam site on the Purna.

II. (i) From the waters in the area of the Godavari basin below Paithan dam site on the Godavari and below Siddheswar dam site on the Purna and below Nizamsagar dam site on the Manjra and upto Pochampad dam site on the Godavari, Maharashtra can utilise waters not exceeding 60 TMC for new projects including any additional use over and above the present sanctioned or cleared utilisation, as the case may be.

(ii) Andhra Pradesh can go ahead with building its Pochampad Project with FRL 1091 and MWL 1093 and is free to utilise all the balance waters upto Pochampad dam site in any manner it chooses for its beneficial use. Maharashtra will take necessary action to acquire any land or structures that may be submerged under Pochampad Project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of some bridges and roads that may become necessary. Maharashtra also agrees to the submergence of the river and stream beds.

III. (i) In the Manjira sub-basin above Nizamsagar dam site, Maharashtra can utilise waters not exceeding 22 TMC for new projects including any additional use over and above the present sanctioned or cleared utilisation as the case may be.

(ii) Andhra Pradesh can withdraw 4 TMC for drinking water supply to Hyderabad city from their proposed Singur project on the Manjira.

(iii) Andhra Pradesh can construct Singur project with a storage capacity of 30 TMC. Andhra Pradesh can also use 58 TMC under Nizamsagar project.

IV. Maharashtra concurs with the agreement arrived at between the States of Andhra Pradesh and Karnataka in regard to the use proposed by Karnataka in the Manjira sub-basin upstream of Nizamsagar dam site.

V. Maharashtra and Andhra Pradesh will be free to use additional quantity of 300 TMC of water each below Pochampad dam site for new projects.

VI. Maharashtra and Andhra Pradesh agree in principle to the taking up of the Inchampalli Project with FRL as commonly agreed to by the interested States, viz., Maharashtra, Andhra Pradesh and Madhya Pradesh.

VII. Maharashtra and Andhra Pradesh agree to take up the following joint projects at the appropriate time with agreed utilisation :

(a) Lendi Project
(b) Lower Penganga Project
(c) Pranhita Project

and to set up joint committees for this purpose.

VIII. The States of Maharashtra and Andhra Pradesh agree that this agreement will be furnished to the Government of India and also be filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
(J. VENGAL RAO)
6-10-75
Chief Minister,
Andhra Pradesh.

Sd/-
(S. B. CHAVAN)
6-10-75
Chief Minister
Maharashtra

ANNEXURE III

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF MADHYA PRADESH AND ANDHRA PRADESH HELD AT NEW DELHI ON THE 7TH NOVEMBER, 1975.

The following were present :—

MADHYA PRADESH

1. Shri P. C. Sethi,
   Chief Minister.
2. Shri V. R. Uike,
   Minister for Irrigation and
   Electricity.
3. Shri Manohar Keshav,
   Secretary, Irrigation & Electricity.
4. Shri Y. S. Chitale,
   Senior Advocate.
5. Shri R. C. Jain,
   Commissioner, Madhya Pradesh,
   Delhi.
6. Shri S. R. Bhatia,
   Secretary to Chief Minister.
7. Shri V. M. Chitale,
   Deputy Secretary, Irrigation.
8. Shri H. V. Mahajani,
   Superintending Engineer,
   Godavari Basin Circle.

ANDHRA PRADESH

1. Shri J. Vengal Rao,
   Chief Minister.
2. Shri P. Ramachandra Reddi,
   Advocate General.
3. Shri C. R. Krishna Swamy Rao Saheb,
   Secretary to Chief Minister.
4. Shri C. M. Shastry,
   Special Commissioner, Govt. of Andhra Pradesh.
5. Shri M. Gopalakrishnan,
   Secretary, Irrigation & Power.
6. Shri B. Gopalakrishnamurthy,
   Special Officer, Water Resources.
7. Shri D. V. Sastry,
   Govt. Pleader.
8. Shri G. K. S. Iyanger,
   Superintending Engineer,
   Inter-State Circle-I.

The discussions related to the clearance of the projects and the use of waters of Godavari river and its tributraries.

2. After full discussions, the following points were agreed to—

(i) Madhya Pradesh and Andhra Pradesh will be free to use an additional gross quantity of 300 T.M.C. each, out of the water in the Godavari River and its tributaries below Pochampad Dam site for new projects.

(ii) Madhya Pradesh concurs generally with the agreement arrived at between Andhra Pradesh and Maharashtra on 6-10-1975. The quantity of the 300 TMC mentioned in clause I above will not be in addition to 300 TMC agreed to between Andhra Pradesh and Maharashtra as per agreement dated 6-10-1975.

(iii) In agreeing to 300 TMC referred to in clauses I and II above, for Andhra Pradesh, Madhya Pradesh on its part, has taken into account the estimated requirements within the basin only.

(iv) Madhya Pradesh and Andhra Pradesh agree in principle to the taking up of the Inchampalli project with F.R.L. as commonly agreed to by the interested States viz. Maharashtra, Andhra Pradesh and Madhya Pradesh.

(v) It is also agreed that Madhya Pradesh and Andhra Pradesh will consider the feasibility of taking up the Inchampalli project as a Joint Project with costs and benefits equitably shared amongst the above 3 States in accordance with a common agreement.

(vi) Madhya Pradesh agrees to the taking up of Taliperu project by Andhra Pradesh involving a use of 5 TMC (Gross) of water out of the 300 TMC agreed to in clause I and to the submersion of river bed only in Madhya Pradesh. Andhra Pradesh agrees to put up at its cost such protective measures as would be necessary in consultation with Madhya Pradesh to prevent submersion of other areas in Madhya Pradesh.

(vii) The States of Madhya Pradesh and Andhra Pradesh agree that nothing in this agreement will be treated as a concession by either State in respect of any of their contentions in any other water dispute with any other State or with respect to the dispute regarding the sharing of the balance of water in Godavari and its tributaries.

(viii) The States of Madhya Pradesh and Andhra Pradesh agree that this agreement will be furnished to the Government of India and they would be requested to expedite the clearance of the projects. This Agreement will also be jointly filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
(P. C. SETHI)
Dt. 7-11-75
Chief Minister
Madhya Pradesh

Sd/-
(J. VENGAL RAO)
Dt. 7-11-75
Chief Minister
Andhra Pradesh

ANNEXURE IV

Agreement between the States of Orissa and Madhya Pradesh on 9-12-1975

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF ORISSA AND MADHYA PRADESH HELD AT NEW DELHI ON THE 9TH DECEMBER 1975

The following were present—

ORISSA

1. Smt. Nandini Satpathy,
   Chief Minister.
2. Shri Dibyalochan Shekhar Deo,
   Minister for Irrigation & Power.
3. Shri B. K. Mishra,
   Additional Development
   Commissioner.
4. Shri N. R. Hota,
   Secretary, Irrigation and Power
5. Shri Suresh Chandra Tripathy,
   Chief Engineer, Irrigation.
6. Shri K. S. R. Chandran,
   Special Commissioner,
   Liaison.
7. Shri R. K. Rath,
   Secretary to Chief Minister.
8. Shri Govind Das,
   Senior Advocate.
9. Shri M. Lath,
   Executive Engineer.

MADHYA PRADESH

1. Shri P. C. Sethi,
   Chief Minister.
2. Shri V. R. Uike,
   Minister for Irrigation and
   Electricity.
3. Shri Aziz Qureshi,
   Minister for State for Irrigation
   and Electricity.
4. Shri Manish Bahl,
   Secretary, Irrigation and
   Electricity.
5. Shri K. L. Handa,
   Irrigation Adviser.
6. Y. S. Chitale,
   Senior Advocate.
7. Shri R. C. Jain,
   Commissioner, Madhya Pradesh.
8. Shri V. M. Chitale,
   Deputy Secretary,
   Irrigation.
9. Shri H. V. Mahajani,
   Superintending Engineer.

The discussions related to the use of water of the Godavari basin and the clearance of projects of Madhya Pradesh and Orissa.

2. After full discussions, the following agreement was arrived at :—

I. Pending final allocation of the Godavari water, Madhya Pradesh and Orissa will be free to use additional gross quantity of 300 TMC and 200 TMC respectively, out of the water of the Godavari basin below Pochampad Dam site for new projects in such manner as they deem fit.

II. In agreeing to 200 TMC referred to in Clause I for Orissa, Madhya Pradesh on its part has taken into account the estimated requirements within the basin only. All the utilisation by Orissa and Madhya Pradesh contemplated in the various Clauses shall be only as a part of the 200 TMC and 300 TMC respectively agreed to in Clause I above. The States of Orissa and Madhya Pradesh will not be entitled on the basis of the subsequent Clauses to utilise in any way more than 200 TMC and 300 TMC respectively.

III. Below the dam sites of the Upper Indravati Project, as proposed by Orissa, there is a catchment area of about 1,855 sq. miles in the Indravati Sub-basin upto Orissa border with Madhya Pradesh. From this catchment there is some natural flow across the Jaura Nallah to Sabari (Kolab) river. It was agreed that Orissa will ensure as its border with Madhya Pradesh a flow of 45 TMC in the Indravati and its tributaries at 75 percent dependability for use by Madhya Pradesh. In the years of shortage, the shortage will be shared proportionately between the two States and the assurance of flow in the Indravati and its tributaries, referred to above, will stand proportionately reduced. Both the States agree to joint gauging at suitable points to ascertain the yield data and to ensure the flow of 45 TMC at 75 percent dependability of the proportionately reduced flow in years of shortage that has to flow below the common border. The figure of 45 TMC is on the assumption of total yield of 204 TMC from the Indravati sub-basin in Orissa and 91 TMC utilisation for the Upper Indravati Project. If the assessment of 204 TMC is found to be high and the correct figure is lower than 204 TMC and the utilisation for the Upper Indravati Project gets reduced from the figure of 91 TMC then the figure of 45 TMC will get reduced in the same proportion as the reduction in the figure of 91 TMC.

IV. In view of the agreement incorporated in the above clauses, Madhya Pradesh agrees to the clearance and execution of Upper Indravati Project, as proposed and submitted by Orissa to the Government of India. Orissa also agrees to the clearance and execution of Bodhghat Project, as may be modified by Madhya Pradesh taking into account the water availability specified in Clause III.

V. It is agreed that Madhya Pradesh and Orissa will consider the feasibility of taking up joint projects in the Sabari Sub-basin from the point Sabari (Kolab) river forms the common boundary between both the States upto the point where it joins the Sileru river, on the basis of common agreements to be drawn up at appropriate time. The hydel power and the cost debitable to generation of such power will be shared equally between the two States in these projects. The costs and benefits of irrigation, if any from these projects will also be equitably shared among both the States. Orissa will be free to make beneficial use of the water of this river above the common boundary point and lying in its territory in such manner as it deems fit.

VI. Notwithstanding the agreement on the joint projects on the river Sabari (Kolab) mentioned in Clause V, if there is any submersion of land and properties of either State by other projects sponsored by the other State or any other State in the Godavari basin, the question of submersion and the problems connected therewith will have to be mutually settled before execution of such projects.

VII. Madhya Pradesh and Orissa agree that nothing in this agreement will be treated as a concession by either State in respect of any of their contentions in any other water dispute with any other State or with respect to the dispute regarding the sharing of the balance of water in Godavari and its tributaries.

VIII. Madhya Pradesh and Orissa agree that this agreement will be furnished to the Government of India and they would be requested to expedite the clearance of the new projects. This agreement will also be jointly filed before the Godavari Water Disputes Tribunal at the appropriate time.

Sd/-
9-12-1975
(NANDINI SATPATHY)
Chief Minister,
ORISSA

Sd/-
9-12-1975
(P. C. SETHI)
Chief Minister,
Madhya Pradesh

(True copy as received from the Chief Minister, Orissa under D.O. letter No. 7173 dated 9-12-1975 to the Union Minister of Agriculture & Irrigation).

Sd/-
(H. J. DESAI)
Deputy Secretary (F)
Ministry of Agriculture & Irrigation
(Department of Irrigation)

ANNEXURE "B"

AGREEMENT ENTERED INTO BETWEEN THE STATES OF MAHARASHTRA, MADHYA PRADESH AND ANDHRA PRADESH

On the basis of series of discussions held between the representatives of the States of Maharashtra, Madhya Pradesh and Andhra Pradesh, the following Agreement is arrived at regarding the sub-basin wise allocations of the waters of the Godavari and its tributaries down-stream of the Pochampad Dam in the State of Andhra Pradesh, the projects therein and other allied matters, taking into consideration the allocations already agreed to under the Inter-State Agreement dated 19-12-1975 and in furtherance of the same and as a supplement thereto for final allocations of all the waters of the various sub-basins mentioned herein :

(I) *G-5 Middle Godavari sub-basin* :

(1) *Maharashtra*

The State of Maharashtra can use a quantity of 0.4 TMC of water in the Middle Gadavari sub-basin for the existing, under construction and proposed projects/schemes downstream of the Pochampad Dam.

(2) *Andhra Pradesh*

The State of Andhra Pradesh can use all the remaining waters in the Middle Godavari sub-basin downstream of the Pochampad Dam.

(II) *G-6 Manair Sub-basin* :

Andhra Pradesh

The State of Andhra Pradesh can use all the waters of Manair sub-basin.

(III) *G-7 Penganga Sub-basin* :

(1) *Maharashtra*

(A) The State of Maharashtra can use all the waters upto :

(i) Lower Penganga Project site near Chikal Wardha on Penganga river, Lat. 19°-55'N and Long. 78°-15'E subject to the condition that the Lower Penganga Project would be taken up as a joint Project. The details of the joint project will be negotiated separately by the States of Maharashtra and Andhra Pradesh.

(ii) Waghadi Project Dam site on the Waghadi river near village Yelbara, Lat. 20°-12'-30"N and Long. 78°-18'-10"E.

(iii) Saikheda Dam on Khuni river near village Lingti, Lat. 20°-06'-30"N and Long. 78°-28'-15"E.

(B) In addition to the use of all the waters of the Penganga sub-basin upto the point as specified in clause (III) (1) (A) (i) to (A) (iii) above, the State of Maharashtra can use from the waters of the rest of the Penganga sub-basin 9 TMC for its existing, under construction and proposed schemes/projects each of which individually will not exceed an annual use of 1.5 TMC.

(2) *Andhra Pradesh*

The State of Andhra Pradesh can use all the remaining waters of the Penganga sub-basin.

(IV) *G-8 Wardha Sub-basin* :

(1) *Madhya Pradesh*

(a) The State of Madhya Pradesh in terms of the Agreement relating to certain inter-State irrigation and hydel projects between Madhya Pradesh and Maharashtra dated 18th December, 1968 can use 9 TMC for its existing, under construction and proposed schemes/projects which are located upstream of the contemplated Upper Wardha Project of the State of Maharashtra.

(b) In addition to the use of the waters in clause (IV)(1)(a) above, the State of Madhya Pradesh can use a quantity of 1 TMC for its existing, under construction and proposed schemes/projects in the remaining portion of the sub-basin.

(2) *Maharashtra*

(i) Subject to the use by the State of Madhya Pradesh as stipulated above, the State of Maharashtra can use all the waters of the river Wardha and/or its tributaries for its existing, under construction and proposed projects/schemes upto the following points :

(a) upto Tulana Project, Lat. 20°-12'N and Long. 78°-57'E on the Wardha river at Tulana village subject to Para (IV)(1)(a) and (b) above.

(b) on the tributaries of the Wardha river joining downstream of the Tulana Project site upto :

(i) Chargaon Project (under construction) across Chargaon river Lat. 20°-23'-20"N and Long. 79°-10'-45"E;

(ii) Nirguda Project, Lat. 20°-03'-N and Long. 78°-53'-E; and

(iii) Bandara Project Lat. 19°-40'-15"N Long. 79°-23'-55"E.

(ii) In addition to the use of water upto the projects as specified in clauses (IV)(2)-(i)(a) & (b), the following uses are agreed to for the schemes existing, under construction and proposed in the Wardha sub-basin downstream of the project sites mentioned above.

(1)	Mudhali Project	2.80 TMC
(2)	Lift Irrigation from Dhanora weir	2.70 "
(3)	Lift Irrigation from Mared weir	2.80 "
(4)	Lift Irrigation from Kalmana weir	2.00 "
(5)	Lift Irrigation from Tohegaon weir	1.60 "
(6)	Lift Irrigation from Sonapur weir	2.00 "
(7)	Usagaon Bulsani and Chandur Lift Irrigation Schemes	3.00 "
(8)	Other Schemes each of which individually utilising not more than 1.5 TMC	9.10 "
	Total :	26.00 "

Provided that in the event of full quantity of water agreed to be allocated for any of the items 1 to 7 above can not be sanctioned for use at any of those projects, the balance of the quantity of water allocated hereinabove for projects at Items 1 to 7 above can be sanctioned for use by the State of Maharashtra in any of the other projects as specified in items 1 to 8 subject to the condition that the total uses of all such sanctions for the projects as specified in items 1 to 8 shall not exceed 26 TMC.

(3) *Andhra Pradesh*

The State of Andhra Pradesh can use all the remaining waters of the Wardha sub-basin.

(V) *G-9 Pranhita sub-basin* :

(I) *Madhya Pradesh*

(A) The State of Madhya Pradesh can use all the waters for the various existing, under construction and proposed projects/schemes in the Pranhita sub-basin upto the sites indicated below :

Kanhan sub-valley :

(i) Nandna Integrated Project

(a) Nandna dam site across the tributary of river Kanhan, near village Nandna. Lat. 22°-13'-0"N and Long. 78°-28'-48"E,

(b) Chenkatwari dam site cross the Kanhan near village Piparia. Lat. 22°-12'-24"N and Long. 78°-26'-48"E.

(ii) Amla Integrated Project

(a) Amla dam site across Bel river near village Amla, Lat. 21°-55'-0"N and Long. 78°-08'-50"E.

(b) Parsadi dam site across the tributary of Bel river near village Parsadi. Lat. 21°-56'-55"N and Long. 78°-12'-0"E.

(c) Dhutmur dam site across the tributary of Bel river near village Dhutmur. Lat. 21°-58'-0"N and Long. 78°-13'-0"E.

(d) Mohali dam site across the tributary of Bel river near village Mohali. Lat. 21°-58'-0"N and Long. 78°-12'-0"E.

(iii) Dokdoh Integrated Project

(a) Dokdoh dam site across the Dokdoh Nalla near village Dokdoh. Lat. 21°-33' 50"N and Long. 78°-44'-15"E.

(b) Chirkutagondi dam site across the tributary of the Jamnalla near village Chirkutagondi Lat. 21°-35'-0"N and Long. 78°-41'-0"E.

(c) Khairi dam site across the tributary of the Kanhan near village Khairi. Lat. 21°-31'-0"N and Long. 78°-50'-0"E.

(d) Chhindwani dam site across the tributary of Dokdoh nalla near village Chhindwani. Lat. 21°-34'-0"N and Long. 78°-45'-40"E.

(iv) Mohgaon integrated project

(a) Mohgaon dam site across the Sampna nala near village Mohgaon. Lat. 21°-38'-55"N and Long. 78°-43'-30"E.

(b) Jamlapani dam site across the Satki nala near village Jamlapani. Lat. 21°-40'-20"N and Long. 78°-43'-20"E.

(c) Khurpara dam site across the Khurpara nalla near village Ambakhapa. Lat. 21°-39'-0"N and Long. 78°-40'-0"E.

(d) Jam nalla dam site across the Jam nalla near village Kondar. Lat. 21°-38'-0"N and Long. 78°-38'-0"E.

(v) Sovana Nalla Project

(a) Sovana Dam site across Sovana Nalla near village Badosa. Lat. 21°-41'-15"N and Long. 78°-53'-40"E.

(B) Downstream of the project sites as specified in clause (V)(1)(A) above, the State of Madhya Pradesh can use an additional quantity of 14 TMC for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(C) (a) The State of Maharashtra has suggested the need of creating certain storages in the territory of the State of Madhya Pradesh to regulate water for use in the State of Maharashtra. In this particular situation as a special case the State of Madhya Pradesh has agreed to construct or augment storage/storages across the Kanhan at sites within its territory, location of which will be decided by the State of Madhya Pradesh, for regulation of 15 TMC of the Kanhan flows at 75 per cent dependability for use in the State of Maharashtra between 15th October to 30th June. As these storages will be created for the State of Maharashtra, the entire cost of these storages or augmentation as the case may be including the cost of compensation for lands, properties and rehabilitation etc., will be incurred as per the norms for such works in vogue in the Country at the time of the construction of the project and will be borne entirely by the State of Maharashtra. The detals of provision of such storage/storages or augmentation would be mutually settled by the two State Governments at the appropriate time later.

(b) The State of Madhya Pradesh can generate power, by bearing the cost of power component only at the storage/storages as specified in clause (V)(1)(C)(a) above, without any power to be allocated to the State of Maharashtra. The power component is not to include any cost on account of the dam/storage.

(c) The State of Madhya Pradesh can construct at its cost a low dam/pick up weir or such other structure as may be necessary, below the storage/storages as mentioned in clause (V)(1)(C)(a) above at any future date, in order to improve the peaking capability of the power system within the State.

(d) The State of Maharashtra for its use of 15 TMC as regulated by storage/storages as specified in clause (V)(1)(C)(a) above, agrees to construct pickup weir, downstream, in its territory with adequate pondage to cater for the fluctuating releases in consultation with the State of Madhya Pradesh.

(D) The State of Maharashtra has proposed a pickup weir at Temurdoh across the Kanhan, which will cause submergence in the State of Madhya Pradesh. The details of extent of submergence are not yet indicated. The State of Madhya Pradesh agrees to consider the proposal when the details of submergence are known, provided the submergence is kept to a minimum and is acceptable to the State of Madhya Pradesh.

The provision of compensation for lands, properties and rehabilitation etc., will be made as per the norms for such works being adopted in the Country at the time of the construction of the project and will be borne by the State of Maharashtra.

(E) The State of Madhya Pradesh can lift water from the river Kanhan and its tributaries within its territory and downstream of the storage/storages as specified in clause (V)(1)(A). The use will be within the use of 14 TMC as specified in clause (V)(1)(B) above, and without prejudice to the right of the State of Maharashtra for the flow of 15 TMC of regulated water as specified in clause (V)(1)(C)(d) above.

(F) *Rest of the Wainganga Sub-valley.*

The State of Madhya Pradesh can use all waters in the Wainganga sub-valley upto the sites mentioned below :—

(a) The Dhuti weir across the Wainganga near village Dhuti.

(b) The following project sites on the tributaries of the Wainganga, joining downstream of the Dhuti weir.

(1) Mahakari dam site across the Mahakari river near village Lamta.
Lat. 22°-07'-55"N and Long. 80°-07'-45"E.

(2) Nahara Multipurpose Project.

(i) Nahara dam site across Nahara river near village Warurgota.
Lat. 22°-05'-30"N and Long. 80°-19'-35"E.

(ii) Diversion site across Nahara river near village Khami.
Lat. 21°32'-15"N and Long. 80°-38'-0"E.

(3) Son Multipurpose project.

(i) Son dam site across river Son near village Baigatola.
Lat. 21°-32'-15"N and Long. 80°-38'-0"E.

(ii) Diversion site across Son river near village Sarra.
Lat. 21°32'-15"N and Long. 80°-38'-0"E.

(4) Deo Ama Multipurpose Project.

(i) Deo Dam site across Deo river near village Sukalpat.
Lat. 21°-47'-30"N and Long. 80°-33'-0"E.

(ii) Ama Dam site across Ama river near village Bithli.
Lat. 21°-32'-15"N and Long. 20°-38'-0"E.

(iii) Diversion site across Deo river near village Bhagatpur.
Lat. 21°-45'-35"N and Long. 80°-29'-0"E.

(5) Karadi tank across Pandharipat Nalla near village Karadi.
Lat. 21°-25'-0"N and Long. 80°-35'-0"E.

(6) Sarathi Tank across Sarathi nalla near village Tikari.
Lat. 21°-56'-0"N and Long. 79°-58'-50"E.

(7) Nahlesara tank across Chandan river near village Nahlesara.
Lat. 21°-49'-30"N and Long. 79°-47'-30"E.

(8) Daidburra tank across Katanga nalla near village Daidburra.
Lat. 21°-41'-24"N and Long. 79°-53'-0"E.

(G) The State of Madhya Pradesh can use the waters of the river Bagh upto the Pujaritola pickup weir and the waters of the river Bawanthadi upto Sitekasa dam site; and waters of the river Pench upto the Totladoh Dam, in accordance with the Agreements already entered into, or as may be agreed to in future, between the States of Madhya Pradesh and Maharashtra for use of waters upto these sites.

(H) Downstream of the project sites as specified in clauses (V) (1) (F) and (V) (1) (G) above, the State of Madhya Pradesh can use an additional quantity of 59 TMC for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(I) (i) The State of Maharashtra has suggested the need of creating certain storage in the territory of the State of Madhya Pradesh to regulate water for use in the State of Maharashtra. In this particular situation as a special case, the State of Madhya Pradesh agrees to make provision of suitable additional storage at one or more than one project/projects out of those specified in clause (V) (1) (F) above to be decided by the State of Madhya Pradesh, for the regulation of 15 TMC of water at 75 per cent dependability for use in the State of Maharashtra lower down during 15th October to 30th June. The entire cost of such additional storage/storages or augmentation for the above regulation will be borne by the State of Maharashtra. The cost to be borne by the State of Maharashtra will also include the cost on account of compensation for land and properties and rehabilitation etc., as per the norms for such works in vogue in the Country at the time of the construction of the project. This quantum of 15 TMC would be made available out of the waters which the State of Madhya Pradesh can use as specified in clause (V) (1) (F) above. The details of provisions of the necessary storages for this regulation will be mutually settled by the two State Governments at the appropriate time later.

(ii) The State of Madhya Pradesh can generate power from such storage/storages by bearing the necessary costs of power component only at the storage/storages as specified in clause (V) (1) (F) above, without any power to be allocated to the State of Maharashtra. The power component is not to include any cost on account of the dam/storage.

(iii) The State of Madhya Pradesh can provide at its cost a low dam/pickup weir or such other structure as may be necessary downstream of the Project sites as specified in clause (V) (1) (F) in order to improve the peaking capability of the power system within the State.

(iv) The State of Maharashtra for its use of 15 TMC as specified in clause (V) (1) (F) above agrees to construct a pickup weir downstream in its territory with adequate pondage to cater for the fluctuating releases, in consultation with the State of Madhya Pradesh.

(2) *Maharashtra.*

(A) Subject to what has been stated above regarding use of the Pranhita sub-basin waters by the State of Madhya Pradesh, the State of Maharashtra can use all waters of the river Wainganga and/or its tributaries upto the following points :

(i) Gasikhurd Project site on the Wainganga river near village Gosikhurd.
Lat. 20°-51'-0"N and Long. 79°-37'-20"E.

(ii) Lower Chulband Dam site on the Chulband river near village Bonde.
Lat. 21°-02'-0"N and Long. 79°-57'-0"E.

(iii) Itiadoh dam on the Garvi river near village Gothangaon.
Lat. 20°-47'-45"N and Long. 80°-10'-05"E.

(iv) Satti Project site on the Satti river near village Palasgad.
Lat. 20°-38'-0"N and Long. 80°-17'-0"E.

(v) Lower Tultuli dam site on the Khobragadi river near village Tultuli.
Lat. 20°-26'-0"N and Long. 80°-14'-0"E.

(vi) Lower Kathani dam site on the Kathani river near village Rajoli.
Lat. 20°-14'-30"N and Long. 80°-15'-30"E.

(vii) Karwappa Project dam site on Karwappa Nalla near village Nakkaponli.
Lat. 20°-07'-40"N and Long. 80°-13'-40"E.

(viii) Bhimkund dam site on the Pohar river near village Wakri.
Lat. 19°-55'-0"N and Long. 79°-58'-30"E.

(ix) Dina dam on the Dina river near village Regree.
Lat. 19°-45'-0"N and Long. 80°-07'-0"E.

(x) Buti nala dam site on the Buti nala near village Panoti.
Lat. 20°-39'-0"N and Long. 79°-48'-0"E.

(xi) Gardi Project dam site on the Gardi nalla near village Chandgaon Khurd.
Lat. 20°-35'-20"N and Long. 79°-50'-0"E.

(xii) Nimghat dam site on the Nimghat Dhoda nalla near village Mendki.
Lat. 20°-28'-15"N and Long. 79°-48'-50"E.

(xiii) Asolamendha dam on the Pathri river near village Asolamendha.
Lat. 20°-28'-15"N and Long. 79°-50'-0"E.

(xiv) Ghorajhari dam on the Bokardho nalla near village Ghorajhari.
Lat. 20°-32'-0"N and Long. 79°-38'-0"E.

(xv) Human nalla dam site on the Human nalla near village Chirkhada.
Lat. 20°-14'-0"N and Long. 79°-34'-35"E.

(xvi) Naleshwar dam on the Upsa nalla near village Naleshwar.
Lat. 20°-15'-0"N and Long. 79°-35'-35"E.

(xvii) Andhari dam site on the Andhari river near village Pahami.
Lat. 20°-06'-0"N and Long. 79°-28'-0"E.

(B) In addition to the use of all the waters of the river Wainganga and/or its tributaries upto the points as specified in clauses (V) (2) (A) (ii) to (V) (2) (A) (xvii) above, the State of Maharashtra can use, from the waters of rest of the Pranhita sub-basin 41 TMC for its existing, under construction and proposed schemes/projects using annually not more than 1.50 TMC individually.

(3) *Andhra Pradesh*

(A) The State of Andhra Pradesh can use the remaining waters of the Pranhita sub-basin.

(B) It is also agreed that Pranhita Hydro-electric Project is not viable and therefore has to be given up. However, the States of Andhra Pradesh and Maharashtra agree to have barrage/ barrages across the Pranhita river at suitable sites so that they may provide irrigation facilities in their areas. The quantum of water that will be used by Maharashtra from these barrages will be reckoned against 41 TMC as specified in clause (V) (2) (B) above. The joint Project/Projects for such barrages are to be taken up after reaching separate Agreement/Agreements for them, between the States of Maharashtra and Andhra Pradesh, either for the benefit of both the States or one State.

(VI) *G-10 Lower Godavari sub-basin* :

(1) *Maharashtra*

The State of Maharashtra can use upto 1 TMC for its existing, under construction and proposed schemes/projects in the Lower Godavari sub-basin.

(2) *Madhya Pradesh*

(A) The State of Madhya Pradesh can use all the waters upto the following sites :

(a) Mukpara (Sankampalli) Project. Mukpara dam site across Talperu river near village Mallepalli.
Lat. 18°-36'-43"N and Long. 80°-56'-45"E.

(b) Tummal vagu dam site across Tummal vagu near village Junaguda.
Lat. 18°-25'-33"N and Long. 81°-03'-32"E.

(c) Joranvagu Integrated Project.

(i) Joranvagu dam site across Joranvagu near village Durma.
Lat. 18°-27'-26"N and Long. 81°-13'-36"E.

(ii) Dhondivagu dam site across Dhondivagu near village Kamaram.
Lat. 18°-24'-10"N and Long. 81°-13'-20"E.

(d) Malavagu Project.
Malavagu dam site across Malavagu near village Chintalnar.
Lat. 18°-21'-35"N and Long. 81°-11'-48"E.

(e) Raspalle Project.
Raspalle dam site across tributary of Chinta river near village Raspalle.
Lat. 18°-12'-0"N and Long. 80°-58'-38"E.

(B) Downstream of the projects as specified in clause (VI)(2)(A) above, the State of Madhya Pradesh can use an additional quantum of 9 TMC for its existing, under construction and proposed schemes/projects each using not more than 1.5 TMC annually.

(C) The State of Madhya Pradesh agrees to the submersion of its river bed only due to the Taliperu project of the State of Andhra Pradesh. The State of Andhra Pradesh agrees to put up at its costs, such protective measures as would be necessary in consultation with the State of Madhya Pradesh, to prevent submergence of other areas in the State of Madhya Pradesh due to aforesaid project. The State of Andhra Pradesh agrees to forward the details of submergence in the State of Madhya Pradesh along with the project Report. The construction of the project would be taken up in hand after mutual agreement to the submergence and measures to protect the flooding of the areas of the State of Madhya Pradesh.

(D) (a) The States of Madhya Pradesh, Maharashtra and Andhra Pradesh agree to take up the Inchampalli Multi-purpose Project as a joint venture with an FRL and MWL as may be agreed to by the three States. The project will be surveyed, planned, executed and subsequently operated and maintained under the directions of a Tripartite Interstate Control Board, duly constituted for this purpose by the three States concerned. The State of Andhra Pradesh cannot divert for its use more than 85 TMC directly from the Inchampalli reservoir. No part of the reservoir losses at Inchampalli shall be debitable to the shares of water agreed to for the States of Maharashtra and Madhya Pradesh herein above or hereunder in this Agreement. The balance available water shall be used for power generation at Inchampalli Power House. The compensation for the acquisition of lands and properties belonging to both the Government as well as private parties would be charged to the construction of storage. The provision for the rehabilitation of the oustees will be made as per the norms for such works in vogue in the Country at the time of the construction of the project and charged to the construction of storage.

(b) The State of Andhra Pradesh shall bear 78.10 per cent of the cost of Inchampalli storage, the State of Maharashtra shall bear 10.50 per cent and the State of Madhya Pradesh shall bear 11.40 per cent.

(c) The power generation at Inchampalli and the cost of power component, excluding the storage cost, shall be shared between the States of Madhya Pradesh, Maharashtra and Andhra Pradesh in the proportion of 38, 35, 27 per cent, respec-

tively. After generation of power the State of Andhra Pradesh can use the water released in any manner they like.

(d) The States of Madhya Pradesh, Maharashtra and Andhra Pradesh would be free to use 3 TMC, 4 TMC and 5 TMC, respectively, by lifting water from the Inchampalli reservoir for use in their own territory without bearing any cost of the storage. The quantum of this use will be accounted for against the provision under clauses (VI)(2)(B) and (VII)(C) for the State of Madhya Pradesh; and clauses (III)(1)(B), (IV)(2)(ii), (V)(2)(B), (VI)(1) and (VII)(E) for the State of Maharashtra; and out of 85 TMC specified in this clause for the State of Andhra Pradesh.

(e) The States of Madhya Pradesh, Maharashtra and Andhra Pradesh would be free to develop pisciculture and boating facilities in their own territories under submergence. The sovereign rights over the submerged lands upto their territorial limits shall continue to vest with the respective States.

(f) The three States agree that the FRL/MWL as may be agreed to for the Inchampalli reservoir shall be only on the express condition that any of the provisions, facilities given for utilisation of waters of the Godavari and its tributaries, to each other in this Agreement herein above or hereunder is not at all disturbed.

(g) Navigational facilities at the Inchampalli reservoir shall be allowed free to the States of Madhya Pradesh, Maharashtra and Andhra Pradesh.

(h) A pumped storage scheme may be introduced below the Inchampalli reservoir as part of the Inchampalli project Hydro-electric Component. Such a scheme may be constructed even by one or two of the three States and the other State or States may later share the benefits of the said scheme by paying their share of the cost of the scheme as may be mutually agreed to.

(3) *Andhra Pradesh.*

The State of Andhra Pradesh can use the remaining waters of the Lower Godavari sub-basin.

(VII) *G*-11 *Indravati sub-basin* :

(A) (i) Subject to the provisions of the Inter-State Agreement dated 19-12-1975 affirming the bilateral Agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh, and any equitable allocation that may be made to the State of Orissa by the Godavari Water Disputes Tribunal in the Indravati sub-basin, the State of Madhya Pradesh upto the Bhopalpatnam Hydro-electric Project Lat. 19°-03'-45"N and Long. 80°-19'-05"E across the Indravati river (a joint project between the States of Madhya Pradesh and Maharashtra) can use 273 TMC for its various existing, under construction and proposed schemes/projects. This quantum includes the share of evaporation loss of the State of Madhya Pradesh at the Bhopalpatnam I Hydro-electric Project.

(ii) The State of Andhra Pradesh agrees that the States of Maharashtra and Madhya Pradesh may introduce Pumped Storage Scheme in their joint Bhopalpatnam Hydro-electric Project on the Indravati at any stage, making use of the Inchampalli reservoir on the downstream. No cost of Inchampalli storage will be debitable to Bhopalpatnam Hydro-electric Project on this account. However, there will be no obligation to maintain any specific level at any time at the Inchampalli reservoir to suit the above Pumped Storage Scheme.

(B) The State of Madhya Pradesh, in addition to the use as agreed to in clause (VII)(A)(i) above can use all the waters upto the following project sites on the tributaries joining the Indravati downstream of the Bhopalpatnam I Hydro-electric Project site :

(i) Chintavagu Project site on Chintavagu near village Pavrel.
Lat. 18°-41'-25"N and Long. 80°-40'-47"E.

(ii) Jallavagu Project site on Jallavague near village Chillamarka.

Lat. 18°-56'-34"N and Long. 80°-21'-34"E.

(iii) Kothapalli Integrated Project across tributary of Chintavagu.

(a) Kothapalli Project site Lat. 18°-40'-54"N and Long. 80°-34'-54"E.

(b) Minur Project site Lat. 18°-45'-24"N and Long. 80°-28'-13"E.

(C) The State of Madhya Pradesh can use an additional quantity of 19 TMC downstream of the project sites as specified in clauses (VII) (A) (i) and (VII) (B) above for its existing, under construction and proposed projects/schemes each using not more than 1.5 TMC annually.

(D) The State of Maharashtra can use 34 TMC for its existing, under construction and proposed project/projects upstream of Bhopalpatnam I Hydro-electric Project. This includes the share of evaporation losses of Maharashtra at the Bhopalpatnam I Hydro-electric Project.

(E) The State of Maharashtra can use an additional quantum of 7 TMC downstream of the Bhopalpatnam I Hydro-electric Project for its existing, under construction and proposed projects/ schemes each using not more than 1.5 TMC annually.

(F) The above uses by the States of Madhya Pradesh and Maharashtra would be without prejudice to the Agreements concerning Kotri-Nibra Hydel Project, Bandia Hydel Project and Nagur II Hydel Project entered into between the two States and as ratified by the both the Governments.

(G) The State of Andhra Pradesh can use the remaining waters of the Indravati sub-basin downstream of the Bhopalpatnam I Hydro-electric Project site of the States of Madhya Pradesh and Maharashtra.

(H) The States of Madhya Pradesh and Maharashtra agree that regulated releases after generation of power from Bhopalpatnam I Hydro-electric Project, a joint project of the two States as per the finalised scope would be available for use lower down for the Inchampalli Project another joint project of all the three States, viz., Madhya Pradesh, Andhra Pradesh and Maharashtra.

(VIII) *G-12 Sabari sub-basin* :

(A) Subject to the provisions of the Inter-State Agreement dated 19-12-1975 affirming the bilateral Agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh, and any equitable allocation that may be made to the State of Orissa by the Godavari Water Disputes Tribunal in the Sabari sub-basin, the allocation to the States of Madhya Pradesh and Andhra Pradesh shall be as agreed to hereunder. Downstream of the point where the Sabari forms the common boundary between the States of Orissa and Madhya Pradesh (at near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E), the State of Madhya Pradesh can use all the waters upto the following project sites on the tributaries of river Sabari as indicated below :

(a) Baru Nadi Integrated Project.

(i) Barunadi site across Baru river near village Tankavada, Lat. 18°-45'-33"N and Long. 81°-48'-50"E.

(ii) Bhimsen storage site across Bhimsen near village Bodavada, Lat. 18°-45'-0"N and Long. 81°-55'-46"E.

(iii) Kudripal Pickup weir site across Baru river near village Kudripal. Lat. 18°-40'-42"N and Long. 81°-51'-30"E.

(b) Mupari Project site across Mupari (Jamair) river near village Jamair. Lat. 18°-42'-30"N and Long. 81°-45-0"E.

(c) Gorali Nadi Project.

(i) Gorali dam site across Gorali Nadi near village Kanjipani. Lat. 18°-32'-50"N and Long. 81°-40'-55"E.

(ii) Andumpal dam site across Pulnadi near village Andumpal. Lat. 18°-34'-43"N and Long. 81°-42'-04"E.

(d) Sailervagu Integrated Project.

(i) Mankapal dam site across Malengar river near village Mankapal. Lat. 18°-32'-06"N and Long. 81°-29'-26"E.

(ii) Sailervagu dam site across Sailervagu near village Paila. Lat. 18°-26'-12"N and Long. 81°-31'-38"E.

(e) Ordeltong Integrated Project.

(i) Ordeltong dam site across tributary of Tinarayavagu near village Ordeltong. Lat. 18°-13'-24"N and Long. 81°-24'-06"E.

(ii) Tinarayavagu dam site across Tinarayavagu near village Korrapal. Lat. 18°-11'-0"N and Long. 81°-18'-56"E.

(f) Janavagu Integrated Project.

(i) Janavagu dam site across Janavagu near village Gorkha. Lat. 17°-57'-24"N and Long. 81°-20'-15"E.

(ii) Elemmadugu vagu dam site across Elemmadugu vagu near Jarput village. Lat. 18°-03'-42"N and Long. 81°-18'-09"E.

(B) The State of Madhya Pradesh can use an additional quantity of 18 TMC downstream of the project sites as specified in clause (VIII) (A) above, for its existing, under construction and proposed schemes each using not more than 1.5 TMC annually.

(C) The quantum of water to meet the evaporation losses of the power projects across the Sabari, of the State of Madhya Pradesh will be in addition to the quantum as specified in clauses (VIII) (A) and (B) above and this quantum would however be limited to 10 TMC while excess if any, shall be borne by the State of Madhya Pradesh out of its quantum already specified in clauses (VIII) (A) & (B) above.

(D) The State of Andhra Pradesh can use the remaining waters of the Sabari sub-basin for the existing, under construction and proposed schemes/projects after the uses by the State of Madhya Pradesh for projects/schemes as specified in clauses (VIII) (A) to (VIII) (C) above and the allocation that may be made by the Godavari Water Disputes Tribunal to the State of Orissa in this sub-basin.

(E) The State of Madhya Pradesh agrees subject to the State of Orissa agreeing for the construction of Polavaram Project of the State of Andhra Pradesh so that the maximum submergence in Madhya Pradesh territory at Konta does not exceed RL+150 ft. due to all effects including back water effect. The Polavaram Project shall be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above. For the submerged lands and projerties both of the Government as well as private parties, the cost of compensation and rehabilitation on the basis of the norms in vogue in the Country at the time of the construction of the project shall be charged to the project. Model villages with facilities/amenities etc., shall be constructed at the cost of the project before the submergence actually takes place. The sovereignty over the land shall continue to vest with the respective States. The State of Madhya Pradesh can lift 1.5 TMC from the Polavaram lake for its use within its territory without bearing any cost of storage and this use shall be out of the allocation agreed to for the State as in clause (VIII).

(F) The State of Madhya Pradesh can transport its forest or mineral produce through all navigational facilities/lock etc., which shall be provided by Andhra Pradesh at its own cost at Polavaram. These facilities will be available to the State of Madhya Pradesh at the Polavaram Project, at the rates applicable to the State of Andhra Pradesh for their own cargo at Polavaram. The State of Madhya Pradesh can develop and exploit pisciculture and boating facilities in its own territory.

(IX) *General Clauses* :

(1) (a). The States of Madhya Pradesh and Maharashtra may vary the location of sites of projects using more than 1.5 TMC annually which have been specifically mentioned in the above paragraphs by informing the lower State/States. If as a result of shifting or alteration in the case of any such specified sites upto which a State has been permitted to use all the water

more or less catchment area than what is indicated in above clauses is intercepted, a corresponding reduction/increase will be made in the catchment area of other specified sites, so that the total catchment area allowed for each State for interception of all the water is not exceeded.

(b) It is also agreed that with respect to projects as specified in clauses (III)(1)B), (V)(1)(B) and (H), (V)(2)(B), (VI)(2)(B), (VII)(C), (VII)(E), (VIII)(A) and (VIII)(B) and if there is a marginal increase of utilisation over 1.5 TMC but not exceeding 2 TMC for each project, such increase may be permitted by mutual consultation between the State concerned and the lower Riparian State/States, provided that the total utilisation as specified in each of the said clauses is not exceeded by the concerned State.

(2) In the above Agreement, wherever specified quantities of the water has been mentioned as permitted use by any State it is agreed that the use shall be measured in the manner indicated below :

Use	*Measurement*
(i) Irrigation use	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use	100 per cent of evaporation losses in the storage.
(iii) Domestic and Municipal water supply within the basin.	by 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	by 2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(3) It is agreed that in using the waters permitted to each State in the above Agreement no State can construct projects other than those already specifically agreed to, submerging the territory of another State/States, without the prior consent of that State for such submergence.

(4) It is agreed that all the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

(5) The sub-basins referred to in the Agreement are according to the division of Godavari Basin into sub-basins made in the Report of the Krishna Godavari Commission in Chapter III paragraph 4.27 at page 28.

(6) Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

(7) All the levels mentioned in the clauses above are with reference to the G.T.S. levels.

(8) This agreement is subject to ratification by the respective State Governments of Maharashtra, Madhya Pradesh and Andhra Pradesh.

Dated the 7th August, 1978.

Sd/-
(V. R. DEUSKAR)
Secretary,
Irrigation Department,
Government of Maharashtra.

Sd/-
(R. K. TIKKU)
Secretary,
Irrigation & Power Departments,
Government of Madhya Pradesh.

Sd/-
(M. GOPALA KRISHNAN)
Secretary,
Department of Irrigation & Power,
Government of Andhra Pradesh.

more or less catchment area than what is indicated in above clauses is intercepted, a corresponding reduction/increase will be made in the catchment area of other specified sites, so that the total catchment area allowed for each State for interception of all the water is not exceeded.

(b) It is also agreed that with respect to projects as specified in clauses (III)(1)B), (V)(1)(B) and (H), (V)(2)(B), (VI)(2)(B), (VII)(C), (VII)(E), (VIII)(A) and (VIII)(B) and if there is a marginal increase of utilisation over 1.5 TMC but not exceeding 2 TMC for each project, such increase may be permitted by mutual consultation between the State concerned and the lower Riparian State/States, provided that the total utilisation as specified in each of the said clauses is not exceeded by the concerned State.

(2) In the above Agreement, wherever specified quantities of the water has been mentioned as permitted use by any State it is agreed that the use shall be measured in the manner indicated below :

Use	*Measurement*
(i) Irrigation use	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal and 100 per cent of evaporation losses in these storages.
(ii) Power use	100 per cent of evaporation losses in the storage.
(iii) Domestic and Municipal water supply within the basin.	by 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	by 2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(3) It is agreed that in using the waters permitted to each State in the above Agreement no State can construct projects other than those already specifically agreed to, submerging the territory of another State/States, without the prior consent of that State for such submergence.

(4) It is agreed that all the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

(5) The sub-basins referred to in the Agreement are according to the division of Godavari Basin into sub-basins made in the Report of the Krishna Godavari Commission in Chapter III paragraph 4.27 at page 28.

(6) Use shall include any use, made by any State of the waters of the river Godavari and its tributaries for domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

(7) All the levels mentioned in the clauses above are with reference to the G.T.S. levels.

(8) This agreement is subject to ratification by the respective State Governments of Maharashtra, Madhya Pradesh and Andhra Pradesh.

Dated the 7th August, 1978.

Sd/-
(V. R. DEUSKAR)
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(R. K. TIKKU)
Secretary,
Irrigation & Power Departments,
Government of Madhya Pradesh.

Sd/-
(M. GOPALA KRISHNAN)
Secretary,
Department of Irrigation & Power,
Government of Andhra Pradesh.

ANNEXURE "C"

ANNEXURE I—GODAVARI

SUMMARY RECORD OF THE DISCUSSIONS OF THE MEETING HELD BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH AT BANGALORE ON 4TH AUGUST 1978

The following were present :—

KARNATAKA

1. Sri D. Devraj Urs, Chief Minister
2. Sri N. Narasimha Rau, Chief Secretary
3. Sri J. C. Lynn, Secretary to Chief Minister
4. Sri B. C. Angadi, Special Secretary, P.W. & E. Deptt. (Irrigation).
5. Sri S. R. S. Sastry, Chief Engineer, W. R. D. O.
6. Sri B. Subramanyam, Chief Engineer, Bangalore Water Supply and Sewerage Board.

ANDHRA PRADESH

1. Dr. M. Chennareddy, Chief Minister
2. Sri G. V. Sudhakara Rao, Irrigation Minister
3. Sri M. Gopalakrishnan, Secretary, Irrigation & Power
4. Sri B. Gopalakrishna Murthy, Adviser, Irrigation & Power
5. Sri K. R. Chudamani, Adviser, Irrigation & Power
6. Sri M. Satyanarayana Singh, Special Officer, Water Resources

After discussion, the following points were agreed to :

Andhra Pradesh and Karnataka agree that Karnataka would, in addition to its existing utilisation above the proposed Singur project in the Manjra sub-basin and the utilisation for Karanja and Chulkinala projects, as per the agreement of 17-9-1975 read with the agreement of 19-12-1975 utilise one TMC of water more for lift irrigation from the Manjra river.

2. In order to utilise this quantity or any other additional quantity that may be agreed to later, on the Manjra, Karnataka may put up such pondage as may be necessary and as may be agreed to between Andhra Pradesh and Karnataka to utilise one TMC or such additional agreed quantities as may become available for this purpose.

3. Andhra Pradesh and Karnataka agree that Karnataka may utilise 2.5 (two point five) TMC of water in the Manjra sub-basin in its territory in the catchment below Nizamsagar project.

4. Andhra Pradesh and Karnataka agree that Andhra Pradesh may go ahead with the construction of the Singur project, as proposed by Andhra Pradesh, with the maximum capacity of 30 TMC of gross storage with FRL/MWL of plus 523.6 metres (1717.41 ft.) above MSL.

5. Karnataka will take necessary action to acquire any land or structure that may be submerged and/or affected under Singur project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of bridges and roads that may become necessary. Such acquisition and rehabilitation shall be as per the norms prevailing in Karnataka at the time of acquisition/rehabilitation. Karnataka also agrees to the submergence of the river bed and its stream-beds.

6. In the event of Andhra Pradesh developing hydro-electric power at Singur Project, Karnataka and Andhra Pradesh agree to share the cost and benefits of such power in such proportion as may be agreed upon.

7. (a) Subject to the clearance of Polavaram Project by the Central Water Commission for FRL/MWL plus 150 ft. the State of Andhra Pradesh agrees that a quantity of 80 TMC at 75 percent dependability of Godavari waters from Polavaram project can be diverted into Krishna river above Vijayawada Anicut displacing the discharges from Nagarjunasagar Project for Krishna Delta, thus enabling the use of the said 80 TMC for projects upstream of Nagarjunasagar.

(b) The States of Andhra Pradesh and Karnataka agree that the said quantity of 80 TMC shall be shared in the proportion of Andhra Pradesh 45 TMC, Karnataka and Maharashtra together 35 TMC.

(c) Andhra Pradesh agrees to submit the Polavaram project report to Central Water Commission within three months of reaching an over-all agreement on Godavari waters among the five-party States.

(d) Andhra Pradesh agrees to bear the cost of diversion fully.

(e) Maharashtra and Karnataka are at liberty to utilise their share of 35 TMC mentioned in sub-para 7(b) above from the date of clearance of the Polavaram Project by Central Water Commission with FRL/MWL of plus 150 ft. irrespective of the actual diversion taking place.

(f) It is also agreed that if the diversion at 75 percent dependability as stated in clause (a) above exceeds the said quantity of 80 TMC due to diversion of Godavari waters from the proposed Polavaram Project into Krishna river, further diminishing the releases from Nagarjunasagar project such excess quantity shall also be shared between the three States in the same proportion as in sub-clause (b) above.

MR. S. CHAUDHURI
of Counsel for the
State of Karnataka

MR. P. RAMACHANDRA REDDY
Advocate General for the
State of Andhra Pradesh

ANNEXURE II—KRISHNA

SUMMARY RECORD OF THE MEETING HELD BETWEEN THE CHIEF MINISTERS OF KARNATAKA AND ANDHRA PRADESH AT BANGALORE ON 4TH AUGUST, 1978

The following were present :—

KARNATAKA	*ANDHRA PRADESH*
1. Sri D. Devraj Urs, Chief Minister	1. Dr. M. Chennareddy, Chief Minister
2. Sri N. Narasimha Rau, Chief Secretary.	2. Sri G. V. Sudhakara Rao, Irrigation Minister
3. Sri J. C. Lynn, Secretary to Chief Minister	3. Sri M. Gopalakrishnan, Secretary, Irrigaton & Power
4. Sri B. C. Angadi Special Secretary, P.W. & E. Dept. (Irrigation)	4. Sri B. Gopalakrishna Murthy Adviser, Irrigation & Power
5. Sri S. R. S. Sastry, Chief Engineer, W.R.D.O.	5. Sri K. R. Chudamani, Adviser, Irrigation & Power
6. Sri B. Subramanyam Chief Engineer, Bangalore Water Supply & Sewerage Board.	6. Sri M. Satyanarayana Singh, Special Officer Water Resources.

After discussion, the following points were agreed to :—

Karnataka and Andhra Pradesh agree that Andhra Pradesh would go ahead with the proposed Jurala Project with FRL/MWL of plus 1045 feet above MSL in Krishna basin.

2. Karnataka will take necessary action to acquire any lands or structures that may be submerged and/or affected under Jurala Project and Andhra Pradesh agrees to bear the cost of acquisition, the cost of rehabilitation of the displaced families and the cost of construction of bridges and roads and cost of protection or shifting of temples and other religious shrines that may become necessary, as decided by Karnataka. Such acquisition and rehabilitation shall be as per the norms prevailing in Karnataka at the time of acquisition/rehabilitation. Karnataka also agrees to the submergence of river bed and stream beds.

3. Karnataka and Andhra Pradesh also agree that in the event of Andhra Pradesh generating power from this project, the cost and benefits of hydro-power will be shared equally between the two States. The question of what would constitute the cost of hydro-power was not discussed and will be agreed upon separately.

MR. S. CHAUDHURI
of Counsel for the
State of Karnataka.

MR. P. RAMACHANDRA REDDY
Advocate General for the
State of Andhra Pradesh

ANNEXURE "D"

GODAVARI

PROCEEDINGS OF THE MEETING BETWEEN THE CHIEF MINISTERS OF ANDHRA PRADESH AND ORISSA AT HYDERABAD ON THE 15TH OF DECEMBER 1978

The following were present :—

ANDHRA PRADESH

1. Dr. M. Channa Reddy, Chief Minister.
2. Sri G. Rajaram, Minister for Finance and Power.
3. Sri G. V. Sudhakar Rao, Minister for Major Irrigation & Commercial Taxes.
4. Sri I. J. Naidu, IAS, Chief Secretary.
5. Sri S. R. Rama Murthy, IAS, Secretary to Chief Minister.
6. Sri P. Ramachandra Reddy, Advocate General.
7. Sri C. N. Shastry, IAS, Secretary, Irrigation and Power.
8. Sri M. Gopalakrishnan, IAS, Secretary, Primary & Secondary Education.
9. Dr. N. Tata Rao, Chairman, A.P.S.E.B.
10. Sri Satyanarayan Singh, Special Officer, Water Resources.
11. Sri D. V. Sastry, Advocate.

ORISSA

1. Sri Nilamani Routroy, Chief Minister.
2. Sri Pratap Chandra Mohanty, Minister for Revenue & Power.
3. Sri Prahllad Mallik, Minister for Irrigation.
4. Sri B. M. Patnaik, Advocate General.
5. Sri B. Ramadorai, IAS, Secretary, Irrigation & Power.
6. Sri A. K. Biswal, Secretary to Chief Minister.
7. Sri S. C. Tripathy, Chief Engineer, Irrigation.
8. Sri B. Mishra, Chief Engineer, Electricity.
9. Sri M. L. Lath, Executive Engineer, Irrigation.

After full discussions, the following agreement was reached :

I. *G-11 Indravati sub-basin* :

The State of Orissa can utilise its share of water in G-11 Indravati sub-basin in terms of the Inter State agreement dated 19-12-1975 affirming the bilateral agreement dated 9-12-1975 between the States of Orissa and Madhya Pradesh.

II. *G-12 Sabari sub-basin* :

(A) The State of Orissa can use all the water of the river Sabari (Kolab) upto the point (at near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E) where the river Sabari forms the common boundary between the State of Orissa and the State of Madhya Pradesh in terms of the Inter-state Agreement dated 9-12-1975, Clause V.

(B) The States of Orissa and Andhra Pradesh agree for utilisation of all waters upto the following project sites on the tributaries and sub-tributaries of the river Sabari (Kolab) by the State of Orissa.

(i) Govindapalle Project on :—

(a) Dharmgedda nalla site near Lingiyaput village Lat. 18°-36'-07"N. and Long. 82°-16'-11"E.

(b) Jamnadi site near Govindpalli village Lat. 18°-36'-13"N, and Long. 82°-16'-48"E.

(c) Garianadi site near Deraguda village. Lat. 18°-34'-03"N, and Long. 82°-17'-18"E.

(ii) Satiguda Project site on the tributary of Potteruvagu.
Lat. 18°-18'-57"N. and Long. 81°-56'-24"E.

(iii) Parasanapalle project site on the tributary of Sabari near village Parasanapalli.
Lat. 18°-16'-44"N. and Long. 81°-36'-44"E.

(iv) Potteru project site on Potteruvagu near Surliuknta village.
Lat. 18°-12'-30"N. and Long. 82°-01'-30"E.

(C) The State of Orissa, in addition to the uses as specified in clauses II(A) and II(B) above, can use 40 Tmc., for its existing, under construction and proposed project/schemes each using not more than 1.5 Tmc., annually.

(D) Downstream of the point where the Sabari forms the common boundary between the States of Orissa and Madhya Pradesh (at near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E.) and upto the confluence of the Sileru and the Sabari, the State of Orissa, can use not more than 27 tmc., for irrigation by withdrawals from the main river for its existing, under construction and proposed schemes/projects.

(E) The quantum of water to meet the evaporation losses of project under clause II D and power projects across the Sabari by the States of Madhya Pradesh and Orissa in terms of clause V of bilateral agreement dated 9-12-1975 between Orissa and Madhya Pradesh will be in addition to the quantum specified in clauses II A, B, C & D above and shall be shared in such proportion as the said two States may agree. However the share of Orissa in excess of 10 T.M.C. in the evaporation losses mentioned above shall b met from its quantum specified in clauses II A, B, C & D above.

(F) The States of Orissa and Andhra Pradesh shall utilise the Sileru river waters in terms of :

(a) 1946 Agreement between the Governments of Madras and Orissa regarding development of Hydro-electric power at Dudma falls on the Machkund river.

(b) Final agreement between the Governments of Orissa and Andhra Pradesh in relation to the use of the waters of the Sileru river dated the 4th September, 1962.

(c) Any other subsequent agreement/agreements that the two States of Orissa and Andhra Pradesh may mutually conclude in future.

(d) All use of water for beneficial purpose by the States of Orissa and Andhra Pradesh for their existing, under construction and proposed schemes/projects upstream of Machkund Project the total utilisation under which shall not exceed 2 TMC by each State will be charged to their respective shares at Machkund correspondingly reducing their respective share of power at Machkund & Dudma falls. Similarly, use under Schemes/projects which shall not exceed 2 TMC by each State downstream of Machkund project and upstream of Balimela Dam, will be charged to their respective shares at Balimela dam project reducing their respective shares of water by the total quantity used both above Machkund project and between Machkund and Balimela project. All such use should be intimated to the other Government.

(e) Notwithstanding any restriction imposed under the past agreements, the State of Orissa will be permitted to utilise not exceeding 2 TMC of Sileru water for beneficial use downstream of Balimela dam for its existing, under construction and future projects out of the yield of the catchment lying down-stream of Balimela dam project. This quantity will be out of 40 TMC as specified in Clause II(C) above.

(G) The State of Orissa agrees for the construction of Lower Sileru Irrigation scheme with FRL +235 ft. and MWL +262 ft. by the State of Andhra Pradesh, which involves some submergence in the State of Orissa. The State of Andhra Pradesh shall bear the cost of compensation for submergence of land and properties both of the Government as well as private parties that may be agreed to. The provision of rehabilitation of the oustees will be made as per the norms in vogue in the State of Orissa at the time of construction of the project.

(H) The State of Andhra Pradesh can, subject to agreement dated 7-8-1978, use the remaining waters in the Sabari Sub-basin excluding Sileru river vide clause F above for the existing, under construction and proposed schemes/projects after the uses by the State of Orissa for projects/Schemes as specified in Clauses I & II A to E above.

(I) The States of Orissa and Andhra Pradesh agree for the construction of Polavaram Project of the State of Andhra Pradesh, so that the maximum submersion in the State of Orissa territory at Motu/Konta does not exceed R.L. +150 ft. due to all effects including back water effect. The Polavaram project shall be designed for the maximum probable flood in consultation with the Central Water Commission so as not to exceed the limit of submergence mentioned above. For the submerged lands and properties both of the Government as well as private parties, the cost of compensation and rehabilitation on the basis of the norms in vogue in the State of Orissa at the time of the construction of the projects shall be charged to the project. Model villages with facilities/amenities etc. shall be constructed at the cost of the project before the submergence actually takes place.

The sovereignty over the land shall continue to vest with the respective States. The State of Orissa can lift 5 Tmc from the Polavaram lake, without bearing any cost of the storage for its use in the territory and this use shall be reckoned against the allocation made to that State as specified in clause II bove. The State of Orissa can transport their forest or mineral produce through all navigational facilities/lock etc.; which shall be provided, by the State of Andhra Pradesh at its own cost at Polavarm. These facilities will be available to the State of Orissa at the Polavaram Project at the rates applicable to the State of Andhra Pradesh for their own cargo at Polavaram. The State of Orissa can develop and exploit pisciculture and boating facilities in their own territory. The States are agreeable to the level of RL +150 feet for Polavaram storage as defined above only on the express conditions that any of the provisions, facilities and liberties given for utilisation of waters of the Godavari and its tributaries, to each other in this Agreement herein above or here under are not at all disturbed.

III. *General clauses* :

(1) (a) The State of Orissa may vary the location of sites of projects using more than 1.5 Tmc., annually which have been specifically mentioned in the above clauses by informing the lower State/States. If as a result of shifting or alteration in the case of any such specified sites upto which a State has been permitted to use all the water more or less catchment area than what is indicated in the above clauses is intercepted, a corresponding reduction/increase will be made in the catchment area of other specified sites, so that the total catchment area allowed for each State for interception of all the water is not exceeded.

(b) It is also agreed that with respect to projects as specified in clauses I & II above if there is a marginal increase of utilisation over 1.5 TMC, but not exceeding 2 TMC., for each Project, such increase may be permitted by mutual consultation between the States concerned and the lower Riparian State/States, provided that the total utilisation as specified in each of the said clauses is not exceeded by the concerned State.

(2) In the above agreement, wherever specified quantities of the water has been mentioned as permitted use by any States it is agreed the use shall be measured in the manner indicated below :

Use	*Measurement*
(i) Irrigation use.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries/or from any reservoir, storage or canal and 100 percent of evaporation losses in these storages.
(ii) Power use.	100 per cent of evaporation losses in the storage.
(iii) Domestic and Municipal water supply within the basin.	By 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
(iv) Industrial use within the basin.	By 2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir or storage or canal.
(v) All uses outside the basin.	100 per cent of the quantity diverted or lifted from the river or any of the tributaries or from any reservoir, storage or canal.

(3) It is agreed that in using the waters permitted to each State in the above agreement no State can construct a project other than those already specifically agreed to submerging the territory of another State/States, without prior consent and acceptance by mutual discussions by that State for such submergence.

(4) It is agreed that all the States can make use of underground water within their respective State territories in the Godavari basin and such use shall not be reckoned as use of the water of the river Godavari.

(5) The sub-basins referred to in this agreement are according to the division of Godavari basin into sub-basins made in the report of the Krishna Godavari Commission in Chapter-III paragraph 4.27 at page 28.

(6) Use shall include any use, made by any State of waters of the river Godavari and its tributaries or domestic, municipal, irrigation, industrial, production of power, navigation, pisciculture, wild life protection, recreation purposes and evaporation losses from the storages created for the above purposes.

(7) All the levels mentioned in the clauses above are with reference to G.T.S. levels.

Sd/-
(DR. M. CHANNA REDDI)
Chief Minister,
Andhra Pradesh

Sd/-
(NILAMANI ROUTROY)
Chief Minister,
Orissa

ANNEXURE "E"

ANNEXURE I

B. C. ANGADI
Special Secretary to Government
Irrigation Department

VIDHAN SOUDHA, BANGALORE
dated 29th January 1979

D.O. No. PWD 25 BRA 78
DEAR SHRI DEUSKAR,

Sub :—Agreement between Maharashtra and Karnataka regarding Godavari waters distribution.

In confirmation of our telephonic talks during the last week, I have to state that we agree that :

(a) 35 TMC of water in Krishna, which is the share of Karnataka and Maharashtra out of 80 TMC of Godavari diversion by the State of Andhra Pradesh from Polavaram Barrage, shall be shared between Karnataka and Maharashtra as under :—

Karnataka	21 TMC
Maharashtra	14 TMC

(b) Karnataka had requested for at least 1 TMC of Manjra waters upstream of Nizamsagar from the share allocated to Maharashtra. Maharashtra has expressed its inability to spare this water. Karnataka accepts that position in the interest of arriving at an agreement.

(c) A copy of this letter with your confirmation to it may be filed before the Godavari Tribunal on 2-2-1979.

Kindly confirm the above points as agreed on telephone.

Yours sincerely,
Sd/-
(B. C. ANGADI)
29-1-1979

Shri V. R. DEUSKAR
Secretary to Government,
Irrigation Department,
Government of Maharashtra,
Mantralaya,
Bombay-400 032.

ANNEXURE II

V. R. DEUSKAR,
Secretary to Government

D.O. No. ISW 5179 KG
Irrigation Department.
Mantralaya, Bombay-400 032.
Camp : New Delhi.
Dated the 30th January 1979

Sub : Agreement between Maharashtra and Karnataka regarding Godavari waters distribution...

Ref : Your D.O. letter No. PWD 25 BRA 78 dated 29th January 1979.

Dear Shri Angadi,

In confirmation of our telephonic talk during the last week and with reference to your above D.O. letter, the points as agreed between the two States mentioned in your letter are hereby confirmed subject to the following understanding :—

> The present ratio of sharing of 35 TMC viz. 14 to Maharashtra and 21 to Karnataka shall not be applicable to any additional water that would become available by virtue of Andhra Pradesh diverting water in excess of 80 TMC.

We may authorise our Counsel before Godavari Water Disputes Tribunal to draw up an agreement in a proper form in terms of our understanding reached between the two States and file it before the Godavari Tribunal.

Yours sincerely,
Sd/-
(V. R. DEUSKAR)

Shri B. C. ANGADI,
Special Secretary,
Irrigation Department,
Government of Karnataka
Bangalore.

ANNEXURE III

B. C. ANGADI,
Special Secretary to Government,
Irrigation Department.

VIDHANA SOUDHA, BANGALORE
Dated the 31st January 1979

D.O. No. PWD 25 BRA 78
Dear Shri Deuskar,

Sub : Agreement between Maharashtra and Karnataka regarding Godavari waters distribution.

I received your D.O. letter No. ISW 5179-KG, dated 30-1-1979 through telex, confirming our telephonic talk and points agreed between the two States as mentioned in my D.O. letter No. PWD 25 BRA 78, dated 29th January 1979.

2. I further agree that the following condition mentioned in your above letter, namely that—

> "The present ratio of sharing 35 TMC viz. 14 to Maharashtra and 21 to Karnataka shall not be applicable to any additional water that would become available, by virtue of Andhra Pradesh diverting water in excess of 80 TMC."

should form part of the agreement which should be drawn up and filed before the Tribunal.

Yours sincerely,
Sd/-
(B. C. ANGADI)

Shri V. R. DEUSKAR,
Secretary to Government,
Irrigation Department,
Government of Maharashtra,
Mantralaya,
Bombay-400 032.

ANNEXURE "F"

AGREEMENT ENTERED INTO BETWEEN THE STATES OF ORISSA AND MADHYA PRADESH

After full discussions, the following agreement was reached at Bhopal on 11th July 1979

G-11 *Indravati Sub-basin* :

1. *ORISSA*

(a) The State of Orissa can use all the waters upto Upper Indravati Project site comprising :

(i) Indravati dam site (Lat. 19°-16'N & Long. 82°-50'E).

(ii) Podaga dam site (Lat. 19°-14'N and Long. 82°-49'E).

(iii) Kapur dam site (Lat. 19°-06'N and Long. 82°-47'E).

(iv) Muran dam site (Lat. 19°-06'N and Long. 82°-46'E).

(b) Out of the balance flows available below the Upper Indravati Project within its territory, the State of Orissa shall ensure forty five (45) tmc of water to flow down at the Orissa-Madhya Pradesh border in the Indravati sub-basin. In the years, when the diversion of water outside the Godavari basin at the Upper Indravati Project is less than eighty five (85) tmc (exclusive of evaporation losses) this quantum of forty-five (45) tmc at the Orissa-Madhya Pradesh border in the Indravati sub-basin will be reduced in the same proportion as the reduction in the quantum of eighty five (85) tmc. The State of Orissa can use all the balance water thus left within its territory for its existing, under construction & proposed projects/schemes.

(c) (i) The States of Orissa and Madhya Pradesh agree to measure this quantum of forty five (45) tmc at Jagdalpur gauge site across Indravati river, which is maintained at present by the Central Water Commission, subject to adjustment as mentioned in sub-paragraph (c)(ii).

(ii) The catchment area of the State of Orissa contributing to the flow in Indravati river below Jagdalpur gauge site is about two hundred and thirty eight (238) square miles, while the catchment area of the State of Madhya Pradesh upto the gauge site is about one hundred and ninety eight (198) square miles. The seventy five (75) per cent dependable yield from this area of forty (238 minus 198 equal to 40) square miles may be taken as two point eight (2.8) tmc. This quantum of two point eight (2.8) tmc will be added to the observed flow at Jagdalpur gauge site for estimating the flows available at the Orissa-Madhya Pradesh border specified in sub-paragraph 1(b). The quantum of two point eight (2.8) tmc will be reduced proportionately in the lean years in the same proportion to the reduction of seventy five (75) per cent dependable yield of eighty nine point five (89.5) tmc at Upper Indravati Project site as cleared by Planning Commission.

(iii) At any time if the Central Water Commission closes Jagdalpur gauge site, the two States shall maintain the gauge site jointly or any other site(s) as may be mutually agreed upon for the purpose.

2. *MADHYA PRADESH*

(a) The State of Madhya Pradesh can use two hundred and seventy three (273) tmc of water for its various existing, under construction and proposed projects/ schemes, subject to the agreed uses in paragraph (1) upto the Bhopalpatnam-I Hydro-electric project site (Lat. 19°-03'-45"N and Long. 80°-19'-05"E) across Indravati river—a joint project between the States of Madhya Pradesh and Maharashtra. This quantum includes the share of evaporation loss of the State of Madhya Pradesh at the Bhopalpatnam-I reservoir.

(b) The State of Madhya Pradesh in addition to the uses as agreed to in paragraph 2(a) can use all the waters upto the following project sites on the tributaries joining the Indravati downstream of Bhopalpatnam-I Hydro-electric project site :

(i) Chintavagu dam site on Chintavagu near village Pavrel.
(Lat. 18°-41'-25"N and Long. 80°-40'-47"E).

(ii) Jallavagu dam site on Jallavagu near village Chillamarka.
(Lat. 18°-56'-34"N and Long. 80°-21'-34"E).

(iii) Kothapalli Integrated Project across tributary of Chintavagu comprising :

(1) Kothapalli dam site :
(Lat. 18°-40'-54"N and Long. 80°-34'-54"E).

(2) Minur dam site :
(Lat. 18°-45'-24"N and Long. 80°-28'-13"E).

(c) The State of Madhya Pradesh can use an additional quantity of nineteen (19) tmc of water downstream of the project sites specified in paragraphs 2(a) and 2(b) for its existing, under construction and proposed projects/schemes each using not more than one point five (1.5) tmc annually.

G-12 Sabari sub-basin.

3. *ORISSA*

a) The State of Orissa can use all the waters of Sabari (Kolab) river upto a point near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh.

b) In addition to the above, the State of Orissa can use all the waters upto the following project sites on the tributaries of Sabari (Kolab) river :

(i) Govindpalli Project site comprising :

1. Dharamgedda nalla near Lingiyaput village.
(Lat. 18°-36'-07"N and Long. 82°-16'-11"E).

2. Jamnadi near Govindpalle village.
(Lat. 18°-36'-13"N and Long. 82°-16'-48"E).

3. Gurianadi near Doraguda village
(Lat. 18°-34'-03"N and Long. 82°-17'-18"E).

(ii) Satiguda project site on the tributary of Potteruvagu.
(Lat. 18°-18'-57"N and Long. 81°-56'-24"E).

(iii) Parasanapalle project site on the tributary of Sabari river near village Parasanapalle.
(Lat. 18°-16'-44"N and Long. 81°-36'-44"E).

(iv) Potteru Project on Potteruvagu near Surlinkunta village.
(Lat. 18°-12'-30"N and Long. 82°-01'-30"E).

(c) The State of Orissa can use an additional quantity of forty (40) tmc of water downstream of Projects specified in paragraphs 3(a) and 3(b) for its existing, under construction and proposed projects/schemes each using not more than one point five (1.5) tmc annually.

(d) Downstream of the point where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh (near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E) and upto the confluence of Sileru and Sabari rivers, the State of Orissa in addition to the use specified in paragraphs 3(a) to 3(c) can use not more than twenty seven (27) tmc of water for irrigation by withdrawals from the main river for its existing, under construction and proposed projects/schemes.

(e) The State of Orissa agrees to exploit Sabari (Kolab) river waters by joint projects on the main Sabari river with the State of Madhya Pradesh from a point on Sabari (Kolab) river near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E where it forms the common boundary between the two States upto the confluence with Sileru river on the basis of agreement(s) to be drawn up at appropriate time, except for use as mentioned in sub-paragraph 3(d). At present Lower Kolab and Konta Projects are under investigation and the sites of these projects will be decided mutually by the two State Governments. The hydel power and the cost debitable to generation of such power will be shared equally between the two States in these or such other projects. The cost and benefit of irrigation, if any from these projects will also be equitably shared between the two States.

(f) The share of evaporation losses for the projects specified in paragraph 3(e) for the State of Orissa to the extent of ten (10) tmc will be in addition to the quantum specified in paragraphs 3(a) to 3(d) and excess if any, will be met from the use specified in paragraphs 3(a) to 3(d).

(g) The use specified for the State of Orissa in paragraphs 3(a) to 3(d) and 3(f) is exclusive of the use in Sileru river as per the agreement dated 15-12-1978 between the States of Orissa and Andhra Pradesh.

4. *MADHYA PRADESH*

(a) The State of Madhya Pradesh can use all the waters of the tributaries of Sabari river downstream of a point where Sabari river forms the common boundary between the States of Orissa and Madhya Pradesh near about Lat. 18°-55'-04"N and Long. 82°-14'-53"E and upto the following project sites :

(i) Baru Nadi Integrated Project comprising :

1. Barunadi site across Baru river near village Tankavada.
(Lat. 18°-45'-33"N and Long. 81°-48'-50"E).
2. Bhimsen storage site across Bhimsen river near village Bodavada.
(Lat. 18°-45'-0"N and Long. 81°-55'-46"E).
3. Kudripal Pick-up weir site across Baru river near village Kudripal.
(Lat. 18°-40'-42"N and Long. 81°-51'-30"E).

(ii) Mupari project site across Mupari (Jaimer) river near village Jaimer.
(Lat. 18°-42'-30"N and Long. 81°-45'-0"E).

(iii) Gorali Nadi Project comprising :

1. Gorali dam site across Gorali nadi near village Kanjipari.
(Lat. 18°-32'-50"N and Long. 81°-40'-55"E).
2. Andumpal dam site across Pulnadi near village Andumpal.
(Lat. 18°-34'-43"N and Long. 81°-42'-04"E).

(iv) Sailervagu Integrated project comprising :

1. Mankapal dam site across Malengar river near village Mankapal.
(Lat. 18°-32'-06"N and Long. 81°-29'-26"E).
2. Sailervagu dam site across Sailervagu near village Paila.
(Lat. 18°-26'-12"N and Long. 81°-31'-38"E).

(v) Ordeltong Integrated Project comprising :

1. Ordeltong dam site across tributary of Tinarayavagu near village Ordeltong.
(Lat. 18°-13'-24"N and Long. 81°-24'-06"E).
2. Tinarayavagu dam site across Tinarayavagu near village Korrapal.
(Lat. 18°-11'-0"N and Long. 81°-18'-56"E).

(vi) Janavagu Integrated Project comprising :

1. Janavagu dam site across Janavagu near village Gorkha. (Lat. 17°-57'-24"N and Long. 81°-20'-15"E).
2. Elammaduguvagu dam site across Elammaduguvagu near Jarput village. (Lat. 18°-03'-42"N and Long. 81°-18'-09"E).

(b) The State of Madhya Pradesh can use an additional quantity of eighteen (18) tmc of water downstream of the project sites specified in paragraph 4(a) for its existing, under construction and proposed projects/schemes each using not more than one point five (1.5) tmc. annually.

(c) (i) The share of evaporation losses of the power projects across Sabari river specified in paragraph 3(e) for the State of Madhya Pradesh to the extent of ten (10) tmc will be in addition to the quantum specified in paragraphs 4(a) and 4(b) and excess, if any, shall be borne by the State of Madhya Pradesh out of its share specified in paragraphs 4(a) & 4(b).

(ii) The quantum of water for the use by the State of Madhya Pradesh in the joint projects specified in paragraph 3(e) would be met with from the use specified for the State in paragraph 4(a).

(iii) Further, the quantum of water to meet the evaporation losses of the joint projects/schemes specified in the paragraph 3(e) shall be shared equally between States of Orissa and Madhya Pradesh.

Sd/-
(B. RAMADORAI)
Secretary,
Irrigation & Power Department
Government of Orissa.

Sd/-
(DR. ISHWAR DASS)
Secretary
Irrigation & Power Department
Government of Orissa.

ANNEXURE "G"

AGREEMENT DATED THE 2ND APRIL 1980 BETWEEN THE STATES OF ANDHRA PRADESH, MADHYA PRADESH AND ORISSA

To enable clearance of Polavaram Project, the following is agreed to :

1. The Polavaram Project spillway shall be designed for a flood discharging capacity of 36 (thirty six) lakh cusecs at pond level of RL+140 (one hundred and forty) feet and not less than 20 (twenty) lakh cusecs at pond level of RL+130 (one hundred and thirty) feet.

2. The pond level shall not be kept higher than RL+145 (one hundred and forty five) feet in the month of June if the inflow into the Polavaram reservoir exceeds 3 (three) lakh cusecs.

3. On receipt of flood warning from the upper sites and/or due to anticipated inflows into the reservoir requiring regulation, the pond levels shall be regulated as follows :—

(a) the pond level of RL+145 (one hundred and forty five) feet shall be lowered progressively as the inflows exceed 3 (three) lakh cusecs so as to restrict the pond level to RL+140 (one hundred and forty) feet for an inflow of 10 (ten) lakh cusecs.

(b) for inflows higher than 10 (ten) lakh cusecs the pond level shall be further lowered, so that it does not exceed RL+130 (one hundred and thirty) feet for an inflow of 20 (twenty) lakh cusecs.

(c) for inflows higher than 20 (twenty) lakh cusecs, all the gates shall be opened fully.

(d) the pond level can be built up progressively in the receding floods to RL+140 (one hundred and forty) feet if the inflow drops down to 10 (ten) lakh cusecs and to RL+145 (one hundred and forty five) feet if the inflow drops down to 3 (three) lakh cusecs or less, but during the months of July and August, the pond level shall not exceed RL+145 (one hundred and forty five) feet.

(e) on or after first September, whenever the inflow in the Polavaram Reservoir is 1 (one) lakh cusecs or less, the storage at Polavaram can be built up beyond RL+145 (one hundred and forty five) feet, subject to aforementioned depletions at (a) to (c) in the case of higher inflows.

4. In order to protect the lands and properties above RL+150 (one hundred and fifty) feet in the territory of the State of Orissa likely to be affected due to construction of Polavaram Project, protective embankments with adequate drainage sluices, shall be constructed and maintained at the cost of Polavaram Project. However, the State of Orissa may exercise an option at the time of construction of Polavaram Project for compensation to land and property likely to be affected above RL+150 (one hundred and fifty) feet as agreed to in the case of State of Madhya Pradesh in paragraph 5 (five) below.

5. In respect of the properties in the territory of State of Madhya Pradesh likely to be affected above RL+150 (one hundred and fifty) feet, because of the construction of the Polavaram Project, the State of Andhra Pradesh shall :—

(a) pay compensation towards all buildings with their appurtenant lands situated above RL+150 (one hundred and fifty) feet which will be affected due to all effects including backwater effect and rehabilitate the oustees, etc. on the same pattern as below RL+150 (one hundred and fifty) feet at the project cost; or

(b) construct and maintain at the cost of the State of Andhra Pradesh, the necessary protection embankments with adequate pumping arrangements and/or drainage sluices.

The said option for alternatives (a) or (b) being exercised by the State of Madhya Pradesh at the time of the construction of Polavaram Project depending upon the location of each affected site.

(c) For damages or injury to lands beyond RL+150 (one hundred and fifty) feet in the territory of the State of Madhya Pradesh, in any event, the State of Andhra Pradesh shall pay full compensation for such damage or injury as may be assessed by the District Collector of the said District of the State of Madhya Pradesh.

(d) The State of Andhra Pradesh agrees to fix permanent Bench Marks connected to G.T.S. Bench Marks in the territory of the State of Madhya Pradesh for RL+150 (one hundred and fifty) feet as well as for the backwater effect, in both cases, at an interval of approximate one kilometre all along the periphery of the Polavaram reservoir.

	Sd/- H. V. MAHAJANI	Sd/- M. L. LATH
2-4-80	2-4-80	2-4-80
Representative for the State of Andhra Pradesh	Representative for the State of Madhya Pradesh	Representative for the State of Orissa.
Sd/- P. RAMACHANDRA REDDY	Sd/- M. K. RAMAMURTHY	Sd/- G. B. PATNAIK
Advocate General for the State of Andhra Pradesh	Senior Counsel for the State of Madhya Pradesh.	Govt. Advocate Orissa.

ANNEXURE "H"

STATEMENT SUBMITTED BY COUNSEL FOR THE GOVERNMENT OF INDIA IN THE MINISTRY OF ENERGY AND IRRIGATION (DEPARTMENT OF IRRIGATION) AND THE CENTRAL WATER COMMISSION

The Government of India in the Ministry of Energy & Irrigation (Department of Irrigation) and the Central Water Commission are willing to submit to the following order by the Tribunal :

The Polavaram Project shall be cleared by the Central Water Commission as expeditiously as possible for FRL/MWL+150 feet.

The matter of design of the dam and its operation schedule shall be left to the Central Water Commission, which they shall decide keeping in view all the Agreements between the parties, including the Agreement of 2nd April, 1980 filed today, as far as practicable.

If there is to be any change in the operation schedule as indicated in the Agreement of 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.

Sd/- MURLIDHAR BHANDARE
3-4-1980
Counsel for the Department of Irrigation and
Central Water Commission

ANNEXURE "I"

SUB-BASINS OF THE GODAVARI BASIN

G-1 UPPER GODAVARI : This sub-basin includes the reach of the river Godavari from its source to its confluence with the Manjra. The sub-basin excludes the catchment areas of the Pravara, the Purna and the Manjra but includes that of all other tributaries which fall into the Godavari in this reach.

G-2 PRAVARA : This sub-basin includes the entire catchment of the Pravara from the source to its confluence with the Godavari including the catchment areas of the Mula and other tributaries of the Pravara.

G-3 PURNA : This sub-basin includes the entire catchment of the Purna and of all its tributaries.

G-4 MANJRA : This sub-basin includes the entire catchment of the Manjra from its source to its confluence with the Godavari including the catchment areas of the Tirna, the Karanja, the Haldi, the Lendi, the Maner and other tributaries.

G-5 MIDDLE GODAVARI : This sub-basin comprises the river Godavari from its confluence with the Manjra to its confluence with the Pranhita. The sub-basin includes the direct catchment of the Godavari in this reach as well as of its tributaries, except the Maner and the Pranhita.

G-6 MANER : This sub-basin includes the enfire catchment of the Maner from its source to its confluence with the Godavari, including all its tributaries.

G-7 PENGANGA : This sub-basin includes the entire catchment of the Penganga from its source to its confluence with the Wardha with all its tributaries.

G-8 WARDHA : This sub-basin comprises river Wardha from its source to its confluence with the Wainganga with all its tributaries but excluding the catchment of the Penganga (G-7 above).

G-9 PRANHITA : This sub-basin comprises the catchments of river Wainganga from its source to its confluence with the Wardha and the Pranhita up to its confluence with the Godavari. The sub-basin includes all the tributaries of the Wainganga and the Pranhita except the Penganga and the Wardha (G-7 and G-8 above). The Wainganga after its confluence with the Wardha is called the Pranhita.

G-10 LOWER GODAVARI : This sub-basin consists of the lower part of the river Godavari from its confluence with the Pranhita up to the sea. The sub-basin includes the direct catchment of the Godavari in this reach with all its tributaries except the Indravati and the Sabari (G-11 and G-12 below).

G-11 INDRAVATI : This sub-basin includes all the areas drained by the Indravati and its tributaries from its source to its confluence with the Godavari.

G-12 SABARI : This sub-basin includes the entire catchment of the Sabari river from its source to its confluence with the Godavari including its main tributary Sileru (also known as Machkund river in its initial reaches).