34

STANDING COMMITTEE ON AGRICULTURE (1995-96)

TENTH LOK SABHA

MINISTRY OF WATER RESOURCES

DEMANDS FOR GRANTS (1995-96)

[Action taken by the Government on the recommendations/ observations contained in the Twenty-Second Report of Standing Committee on Agriculture]

THIRTY-FOURTH REPORT

LOK SABHA SECRETARIAT
NEW DELHI

December, 1995/Agrahayana, 1917 (Saka)

THIRTY-FOURTH REPORT

STANDING COMMITTEE ON AGRICULTURE (1995-96)

(TENTH LOK SABHA)

MINISTRY OF WATER RESOURCES DEMANDS FOR GRANTS (1995-96)

[Action taken by Government on the recommendations/observations contained in the Twenty-Second Report of Standing Committee on Agriculture (1995-96) (Tenth Lok Sabha)]

Presented to Lok Sabha on 14.12.1995
Laid in Rajya Sabha on 14.12.1995

LOK SABHA SECRETARIAT
NEW DELHI

December, 1995/Agrahayana, 1917 (Saka)

C.O. A. No. 34

Price : Rs. 30/-

Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Seventh Edition) and Printed by Jainco Art India, 1/21, Sarvapriya Vihar, New Delhi-110016

CONTENTS

COMPOSITION OF STANDING COMMITTEE ON AGRICULTURE (1995-96)

Shri Nitish Kumar — *Chairman*

MEMBERS

Lok Sabha

2. Shri D. Pandian
3. Shri Birbal
4. Shri Nathuram Mirdha
5. Shri G. Ganga Reddy
6. Shri Ankushrao Raosaheb Tope
7. Shri Sarat Pattanayak
8. Shri Govindrao Nikam
9. Kumari Pushpa Devi Singh
10. Shri Channaiah Odeyar
11. Shri Tara Singh
12. Shri Anantrao Deshumkh
13. Shri Uttamrao Deorao Patil
14. Shri V. V. Nawale
15. Shri Rajvir Singh
16. Kumari Uma Bharati
17. Shri Rudrasen Chaudhary
18. Shri Ganga Ram Koli
19. Dr. Gunawant Rambhau Sarode
20. Dr. Parshuram Gangwar
21. Shri Rajendra Kumar Sharma
22. Smt. Krishnendra Kaur (Deepa)
23. Shri Ram Tahal Chaudhary
24. Shri Zainal Abedin
25. Shri B.N. Reddy
26. Shri Kamla Mishra Madhukar

27. Dr. R. K. G. Rajulu
28. Shri Upendra Nath Verma
29. Shri Shibu Soren

Rajya Sabha

30. Shri Govindrao Adik
31. Shri Satyanarayana Dronamraju
32. Shri Ramnarayan Goswami
33. Shri H. Hanumanthappa
34. Shri Anant Ram Jaiswal
35. Dr. Bapu Kaldate
*36. Shri David Ledger
37. Shri Bhupinder Singh Mann
38. Shri N. Thangaraj Pandian
**39. Shri S.K.T. Ramachandran
40. Shri K. N. Singh
41. Shri Maheshwar Singh
42. Dr. Ranveer Singh
43. Shri Shiv Charan Singh
44. Shri Som Pal

SECRETARIAT

1. Shri S.N. Mishra — *Additional Secretary*
2. Smt. Roli Srivastava — *Joint Secretary*
3. Shri P. D. T. Achary — *Director*
4. Shri S. Bal Shekar — *Under Secretary*

---

* Ceased to be member of the Committee consequent upon his retirement from Rajya Sabha w.e.f. 14. 6. 95.

** Ceased to be member of the Committee consequent upon his retirement from Rajya Sabha w.e.f. 24. 7. 95.

COMPOSITION OF SUB-COMMITTEE 'D'

1. Shri Kamla Mishra Madhukar — *Convenor*
2. Shri Rajendra Kumar Sharma — *Alternate Convenor*
3. Shri Birbal
4. Shri Ankushrao Raosaheb Tope
5. Shri Maheshwar Singh
6. Dr. Gunwant Rambhau Sarode
7. Dr. R.K.G. Rajulu

INTRODUCTION

I, the Chairman of the Standing Committee on Agriculture (1995-96) having been authorised by the Committee to submit Report on their behalf, present this 34th Report on Action Taken by Government on the recommendations/observations contained in the Twenty-Second Report of the Standing Committee on Agriculture (1995-96) (Tenth Lok Sabha) on the Demands for Grants (1995-96) of the Ministry of Water Resources.

2. The Twenty-Second Report which was presented to Lok Sabha on 4th May, 1995 contained 13 recommendations/observations. The Government furnished their replies indicating action taken on the recommendations/observations contained in the Report on 8th November, 1995.

3. The Committee considered and adopted the Thirty Fourth Report at their sitting held on 7. 12. 1995.

NEW DELHI;
14 December, 1995
23 Agrahayana, 1917 (Saka)

NITISH KUMAR,
Chairman,
Standing Committee on Agriculture.

CHAPTER I

REPORT

This Report of the Committee on Agriculture (1995-96) deals with the action taken by the Government on the recommendations contained in the Twenty-Second Report (Tenth Lok Sabha) on the Demands for Grants (1995-96) of the Ministry of Water Resources. The 22nd Report was presented to Lok Sabha on 4th May, 1995. It contained 13 (thirteen) recommendations/observations.

1.2. Action taken notes have been received from the Government in respect of all the 13 recommendations contained in the 22nd Report. These have been categorized as follows:

(i) Recommendations/Observations that have been accepted by the Government: (Chapter II of the Report)

Recommendation Para Nos. 2.19-2.20, 2.38-2.39, 22.47, 2.49 and 2.66 (Total 5)

(ii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies: (Chapter III of the Report)

Recommendation Para Nos. 2.13 and 2.76 (Total 2)

(iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee: (Chapter IV of the Report)

Recommendation Para Nos. 2.22-2.23 and 2.27-2.28 (Total 2)

(iv) Recommendations/Observations in respect of which final replies of the Government are still awaited: (Chapter V of the Report)

Recommendation Para Nos. 2.7, 2.30-2.31, 2.52 and 2.69 (Total 4). Action taken reply in respect of recommendation at Para Nos. 2.30-2.31 has also been commented upon in the Chapter V.

1.3. The Committee will now deal with action taken by the Government in respect of some of the recommendations/observations made by the Committee in its 22nd Report.

Recommendation (Para Nos. 2.22-2.23)

(SYL Canal Project)

1.4. The Committee in its original Report, deplored the lackadaisical attitude of the Ministry in dealing with the SYL project. The Committee expressed its serious concern over the hard fact that the construction work at the project has not been taken up since July, 1990. The cost of the project has been revised considerably from Rs. 272 crores to 601 crores and almost Rs. 500 crores have already been spent on the project from the central pool. The Committee, after having taken into cognizance of the heavy expenditure (i.e. almost Rs. 500 crores) already incurred on the project over the years from the National Exchequer, recommended that SYL Canal Project be implemented within a time-frame keeping in view the national interest ahead.

1.5. The Government in their action taken reply have stated:—

"Ministry of Water Resources has spared no efforts in the matter and continues to do so. The matter is very sensitive and the details cannot be divulged in public interest."

I.6. The Committee note that Sutlej-Yamuna Link Canal Project (SYL) is completely a centrally funded project and upto July 1990, nearly 97% of the earth-work, 95% of lining work and 86% of the structural work had already been completed. The Committee further note that the remaining negligible quantum of work required for completion of SYL project had been remaining unattended since July, 1990 and due to this delay, there has been considerable escalation in the project-cost and also no benefit has been derived from the funds already invested over the years and it is likely that the works already completed may have suffered considerable deterioration over these years. The Committee are hardly convinced of the reply of the Government that the matter is sensitive and it appears that the Committee have been left to draw an inference that the matter has reached a dead-end and all the investment made so far has gone literally down the drains. The Committee desire that the matter should now be taken up at the highest political level in the Union Government and be brought to its logical conclusion immediately by drawing up a time-bound programme for immediate completion of SYL project without any further loss of time.

Recommendation (Para Nos. 2.27-2.28)

(Ghaggar Flood Control Scheme in Rajasthan)

1.7. The Committee, having taken into account the tremendous magnitude of flood susceptibility and resultant devastation of life and

property caused every year by Ghaggar river in the districts of Ganganagar, Hanumangarh and Suratgarh of Rajasthan State, recommended to the Ministry to take up the issue with the State concerned with the necessary immediate allocation in the form of grants-in-aid under the Major Head 3601 of the Central Ministry of Water Resources to execute the Ghaggar Flood Control Scheme which was approved by the Planning Commission in 1972. The Committee noted with serious concern the non-implementation of the above scheme till date even after a prolonged period of 23 years.

1.8. The Government in their action taken reply have stated:

"The background information above Ghaggar Flood Control Scheme of Rajasthan is as follows:

River Ghaggar, originating in the Shivalik Hills in the foothills of Himalayas, after passing through the State of Punjab and Haryana, enters Rajasthan in Sriganganagar district. Since the seasonal discharges in the river used to be of small magnitude, they were absorbed in the sandy regions of Haryana & Rajasthan. The bed of the river course is known as Ghaggar Nali in Rajasthan. The areas around Ghaggar Nali have come under irrigation command of the Bhakra, Indira Gandhi Nahar project and Gang Canal systems and as such agriculture in these areas is highly developed. Prior to the year 1955 the flood waters of Ghaggar travelled only once beyond bilibangan and the flood was of very short duration. However, since then the flood magnitudes have been increasing and flood waters have travelled upto Hanumangarh and beyond. In 1962 and 1964 the floods in Ghaggar travelled upto Pakistan Border, which is about 150 km. from Hanumangarh along the river bed. To prevent the cultivate areas around Ghaggar Nali in Rajasthan from getting flooded by the increasing flood flows received in the river from Upper riparian States of Punjab and Haryana, a project was formulated in 1965 for Rs. 4.22 crores, envisaging diversion of flood waters to the 18 natural depressions available near the town of Suratgarh by constructing Ghaggar Diversion Channel. It was anticipated at that time that the flood waters in the depressions will partly be absorbed and balance would get evaporated. The works envisaged in the scheme were completed in the year 1966."

1.9. Flood water of Ghaggar were diverted through the Ghaggar Diversion channel for the first time in the monsoon of 1967. However, the channel failed during its first running and the same was inspected by the then Union Minister for Irrigation alongwith officers from the CWC and Rajasthan. As per the suggestions made by the Union

Minister some additional works for improvement in the safe running of the channel were incorporated in the first revised project estimate, which was approved in 1972 for Rs. 6.50 crores.

1.10. Though it was anticipated while framing the Ghaggar Flood Control Scheme that the flood waters in the depressions would partly be absorbed and balance evaporated, the actual losses were much less and the flood waters remained standing throughout the year on account of presence of an impervious layer below the depressions. This standing water in the depressions has caused water logging in the adjoining areas. Besides, the standing water in the depressions also reduced the capacity to accommodate flood waters in the next monsoon season. As such it became necessary to deplete the water and utilise this for irrigation facilities after constructing the link channels and minors. The State Government formulated a re-revised project in 1979 for a cost of Rs. 17.15 crores, which was submitted to the CWC for appraisal. The processing of this re-revised project remained under correspondence when Ghaggar Diversion Channel again breached in February, 1983. Government of Rajasthan constituted a one man Committee for conducting an inquiry to identify the cause of this breach. This Committee made certain technical recommendations for improvement works. Keeping in view these recommendations the project report was further revised in the year 1985 for a cost of Rs. 30.31 crores, which also incorporated the suggestions made by Member RMO, CWC and Central Ground Water Board in respect of the depletion of the Ghaggar depressions to mitigate the problem of water logging.

1.11. After the abnormal floods experienced in 1988 three emergent works at an estimated cost of Rs. 7.05 crores were approved by the Technical Advisory Committee in September, 1990. These works were to deplete the depressions quickly and they were also within the overall flood control master plan. One of the works has already been completed as reported by Government of Rajasthan.

1.12. As the flood flows in river Ghaggar were observed to be increasing due to development works in the Upper Riparian States of Punjab and Haryana, the Technical Advisory Committee in its meeting held on 9.3.91 suggested that a revised project report be formulated by the State Government after getting flood discharge studies carried out through WAPCOS. WAPCOS submitted its report in February, 1995. Based on the recommended flood discharges the State Government has now formulated a project report at an estimated cost of Rs. 105.97 crores after incorporating the recommendations of Water and Power Consultancy Services (India) Ltd. This Schemes is being techno-economically appraised by Central Water Commission.

1.13. From the above, it would be evident that there have been a number of changes in the scope of this project, thereby necessitating detailed investigations and studies before modifying project proposals, the latest of which has been received in CWC only in August, 1995.

1.14. Ministry of Water Resources does not provide any allocations to projects in the form of grants-in-aid to the States. The Planning Commission makes the Plan allocation in the form of block grants which are not tied up with any sector or project. The State Government appropriates the fund from block grants to various projects as per the priority fixed by them.

Conclusion

1.15. As far as implementation of the scheme is concerned, the schemes are not only formulated but also executed by the State Government according to the priority fixed by them with funds appropriated from block grants made available by the Planning Commission as per usual norms. However, Ministry of Water Resources is pursuing the case for early implementation of the project.

1.16. The Committee note that the Ghaggar Flood Control Scheme originally formulated in 1972 had a number of changes in its scope in the past 23 years necessitating every time detailed investigations and modifications and the latest modified proposal from the State has been received in the Central Water Commission only in August 1995 for techno-economic appraisal. The Committee also note that the scheme is formulated and executed by the State Government appropriating the funds from block grants made available to it by the Planning Commission and the Union Ministry of Water Resources do not provide any financial allocations to the States for such projects. The Committee are pained to note that in the process of never-ending modifications, the project cost has escalated from Rs. 6.50 crores in 1972 to Rs. 105.97 crores in 1995. The Committee do not approve of the sluggish manner in which the project has been handled over the last three decades and desire that special efforts should be made by the Union Government to implement this scheme as a special case within a period of six months with both financial and technical assistance by suitably taking up the matter with the State Government and the Planning Commission. In matters concerning flood control, the Committee desire that the Union Government should not remain a silent spectator and should follow-up matters with the State Governments, as the States always look upto the Union Government for assistance during natural calamities including floods. The Committee hope that the Union Government would impress upon the State Government to accord the highest

priority to this long-pending project and take up its implementation within a period of six months and make a report to the Committee.

Implementation of Recommendations

1.17. The Committee would like to emphasise that the greatest importance should be attached to the implementation of the recommendations by Government. They, therefore, expect that Government would implement such recommendations expeditiously. In case, it is not possible to implement any recommendation in letter and spirit for any reason, the matter should be reported to the Committee in time with reasons for non-implementation.

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Para Nos. 2.19-2.20)

The Committee wish to point out that regulation of water resources in the country for sustained development is the primary function of the Central Government and despite this role, the Central Ministry of Water Resources has done nothing to cope up with water pollution which is increasing day by day in the major rivers of the country. Though the Ministry does not have paraphernalia to control the water pollution of rivers, the Ministry can not be absolved of the responsibility of conducting survey and monitoring the level of pollution and bringing the same to the notice of the nodal agencies involved.

2.2 The Committee, in this regard, would like to recommend that the Ministry must consider it to be its moral duty to conduct the survey to find out to what extent the water of major rivers in the country is polluted and the same must be brought to the Central Pollution Control Board for necessary action against the defaulting agencies involved. The Committee also recommend that a standing system for monitoring of water quality in all the major rivers in the country be made mandatory to monitor the water quality from time to time and for reporting the same for necessary action by the Ministry.

Reply of the Government

2.3 The Ministry of Water Resources is actively engaged in water quality data collection and analysis as a part of its hydrological and hydro-geological data collection. It is also engaged in research and development in this field. The details of these activities are as under:—

A. Water Quality of River Flows:—

2. The Ministry of Water Resources is responsible for overall planning. Coordination and guidance of the States for development and management of their Water Resources through the specialised technical organisations. This task *inter-alia*, involves field observations and assessment of water resources of all major rivers in the country.

3. Monitoring of water quality in rivers is being looked after by Ministry of Environment and Forests. The Ministry of Water Resources has been assisting the Ministry of Environment & Forests in collecting

the required data. The Central Government has established a hydrological network comprising of 877 observation stations covering all river basins of the country.

4. Ministry of Water Resources is aware of the problems of pollution in major river basins of the country and therefore, has already considered the importance of water quality surveys as an essential component of the integrated hydrological investigations and accordingly water quality survey observations are being carried out at 319 stations in major river basins.

5. Initialy the water quality investigations by Central Water Commission were started with a limited purpose of classification of water for irrigation and other related uses. The physio-chemical characteristics of water were analysed for this purpose from which the chemical indices like sodium absorption ratio, sodium percentage, residual sodium carbonate and hardness number could be computed. Later with the realisation of the growing threat of the vast pollution loads being discharged into the river, it was considered necessary to monitor the pollution parameters. Accordingly, in 1978 a special scheme was launched to study the flow of pollution loads in the Ganga river system. In the water quality monitoring programme of CWC the water samples are collected at a regular frequency of once a month, usually on the first working day. A three tier laboratory system is deployed for testing/ analysing the water samples for various quality parameters with varying permissible holding time. That is the minimum allowable time in which value of parameters does not undergo considerable change. The water quality monitoring stations having different types of sampling devices and institutes monitoring instruments are termed as Level-I Laboratories. As they happen to be hydrological observation stations also, the necessary navigational equipment, powered boats or motor launches and survey instruments enabling collection of water sample from desired points in the river are already available there. Most of the water quality monitoring stations are sediment observation sites too. Therefore, at the Level-I laboratories sediment analysis is also done apart from that of the basic water quality parameters which have no holding time. The laboratories situated at some of the Divisional Headquarters of CWC and equipped with the necessary instruments and trained scientific staff are termed as Level-II laboratories. These laboratories, numbering 19 and spread over the country are capable of analysing the physio-chemical characteristics of water. Some of them are equipped with BOD incubators for analysing the bio-chemical oxygen demand (BOD). The Level-III laboratories provided with sophisticated analytical equipment are capable of undertaking analysis of trace and toxic elements, bacteriological and micro

biological tests, etc. Under the special scheme to study the flow of pollution loads in the Ganga river system the water samples are collected thrice in a month, usually on the Ist, 11th and 21st dates, and analysed for various parameters. Intensive surveys for longitudinal dispersion of organic pollution in the rivers below the outfalls of waste water drains are carried out at selected stations twice a year, once during the critical pre-monsoon months and once again during the post monsoon period.

6. At present, the activities of CWC are limited only to the main stem of the rivers and CWC does not have infrastructural facilities for monitoring the sewage treatment plant and outfalls of the municipal drains and from the industries. With the technical and scientific staff and infrastructural facilities available with the CWC, with marginal expenditure, CCW is monitoring all the 24 physio-chemical parameters, *i.e.*, complete tests upto Level II laboratories.

7. CWC is upgrading some existing laboratories under the Hydrology Project funded by the World Bank. To assist the National River Action Plan Programme (NRAP), Central Water Commission is proposing augmentation of facilities at 19 of its existing Level II Laboratories and also be converting one Level II Laboratory to Level III Laboratory. Additional sophisticated equipment shall be provided in the existing 19 Level II Laboratories to improve the quality of the existing works, as per international standards to meet the requirements of National River Action Plan, (NRAP). In respect of upgradation of Level II Laboratory to Level III Laboratory, it is proposed to provide inductive coupling plasma (ICP), spectro photometer, gas liquid chromatograph and other essential equipment for analysing biological and bacteriological parameters.

8. Although great importance has been attached to the monitoring of water quality in the Ganga basin by having 118 stations, similar monitoring by the Ministry of Water Resources has also been undertaken in other major river basins. In the western river basin there are 63 monitoring stations, and in the river basin flowing to the East Coast there are 126 monitoring stations. The remaining 12 stations are on Brahmaputra Basin.

9. All the data collected are compiled and a publication on water quality status for each river basin is issued. CWC also publishes ten daily water quality bulletins for 10 sites on the main stem of the Ganga basin. The Water Quality Status Reports and ten daily water quality bulletins are circulated to Ganga Project Dte., the Central and State Pollution Control Boards and various other related organisations who are effectively using this data to supplement their activity for undertaking necessary schemes for pollution control and management.

B. Water Quality of Ground Water :—

10. The Central Ground Water Board has been engaged in the work of monitoring changes in the chemical regime of ground water. Samples for detailed chemical analysis are collected as a part of the Regional Hydro-geological surveys, exploratory drilling, short term water supply investigations and from the National Hydrograph Network. On an average an area of 2 lakh sq. km. is covered under the hydrogeological surveys and water samples are collected and analysed. Samples are also collected from nearly 250 sites where short term investigations are carried out. The water quality analysis of the a samples collected from these activities provide a very good idea of the chemical conditions in particular areas/ sites. National Hydrograph Network has also been set up at 15,532 stations. From these stations the analysis of the water quality parameters are done.

11. In addition, heavy metals' analysis is also carried out on water samples in cases where pollution of ground water consequent to the actions of man, *i.e.,* from industrial, urban or agricultural activities are noticed. The samples for quality analysis are collected before the onset of rains, *i.e.,* May in the entire country except Tamil Nadu and adjoining areas, receiving north-eastern monsoon rains where the samples are collected in November.

12. Utilising the data from the analysis of the water samples collected during this programme, region-wise water quality maps are prepared. Detailed studies are done to analyse the cause and effects of the changes that have taken place in the quality of ground water over a period of time. The data from these stations is also used to prepare national maps indicating quality hazards in special frame.

13. The CGWB is also carrying out detailed analysis of the impact of disposal of untreated and treated industrial and urban wastes in specific areas on ground water and soil regime. Water quality data over a long period has been stored with the use of computer in the CGWB.

14. The data is utilised for delineating the pockets where pollution of ground water is taking place on account of Industrial, Urban or Agricultural activities. Detailed studies are being undertaken for tracking the sources and movement of pollutants. The data is regularly made available to the Central Pollution Control Board and State Pollution Control Boards for appropriate action.

C. Research Activities in Water Quality :—

15. Mathematical modelling in Environmental Hydraulics at Central Water & Power Research Station (CWPRS) has been dealing with the

problems of thermal pollution, salinity intrusion, pollutant dispersion, water quality and ecological studies. This data have been helpful to the development, calibration and application of models in solving the environmental problems. Existing models can be grouped in the following four categories.

(i) Mathematical Model using analytical methods:—

16. Analytical models have been developed to assess the suitable location of industrial or sewage outfall in rivers, estuaries and coastal areas for the cases of point source and line source problems. These models require less observed data and yield an idea of locating the outfall so as to produce least detrimental affects on the water quality components.

(ii) Finite Difference Models for Pollution Study in Coastal Areas:—

17. By this it has been possible to pinpoint the location of outfall and assess the suitability of permissible amounts of pollutants to be discharged in the coastal areas without producing detrimental effects on the aquatic life.

(iii) Simulation of Water Quality for Reservoirs and Lakes:—

18. This provides the facility of simulation of about 27 water quality components and their variation with time and depth in the reservoir and lakes.

(iv) Mathematical Model of Stream Water Quality:—

19. These models can be used to study the impact of waste loads on the stream water quality. A number of problems referred to CWPRS were examined and a report sent to the concerned agencies.

20. It may be seen that the water quality monitoring network operated by the Ministry of Water Resources extensively covers major river basins in the country. Whenever it is felt necessary to extend this network to cover other smaller river basins/rivers, this would be considered on priority.

21. The water quality data collected by CWC have been effectively used in implementation of Ganga Action Plan (GAP) schemes by Ministry of Environment and Forests. State Governments have been made responsible for operating and maintenance of the schemes under Ganga Action Plan (GAP). The cost of execution of these schemes is fully borne by the Ministry of Environment and Forests. The operation and maintenance cost is equally shared by the Ganga Project Directorate (GDP) and the State Government for a period of three years only after the completion and commissioning of these schemes. Thereafter, these are to be maintained by the State Governments only.

22. Under the Ganga Action Plan (GAP), 68 gross polluting industries directly discharging their waste into the river were identified. Out of these 55 industries were persuaded to instal waste treatment plants, 12 were closed and changed the manufacturing process. This resulted in reduction of 260 mld. discharge of untreated waste water to the river 41 site specific research schemes were sponsored for attaining the objectives of GAP. Out of these 11 have been completed.

Conclusion

23. It would be evident from the above that Ministry of Water Resources is conducting surveys to find out the extent of pollution in major rivers in the country and passing on the data to the Central and the State Pollution Control Boards for necessary action. Also in pursuance of the recommendations of the Standing Committee, monitoring of water quality will be attempted in all the major rivers in the country and the data collected should be passed on to the Central and State Pollution Control Boards, In addition, Central Ground Water Board, a subordinate office of this Ministry is also carrying detailed analysis of the impact of disposal of untreated and treated industrial and urban wastes in specific areas on ground water and soil regime. Research on the subject is also being carried out by Central Water & Power Research Station, Pune, a subordinate office of the Ministry.

Recommendation (Para Nos. 2.38-2.39)

2.4 The Committee is appartently stunned to know that Command Area Development Programme which is widely acclaimed as an important and indispensable device for bringing the irrigation potential created under optimum utilisation with better water management techniques, has been relegated to secondary importance due to their failure to achieve physical targets and the very purpose of enhancing agricultural productivity and production through optimum and scientific use of scarelly available water resources has been defeated. The Committee is also unhappy over the fact that the Ministry has not done any justice of this programme as the progress under this programme has been very very tardy.

2.5 The Committee, in this regard, would like to recommend that the peace of achieving physical targets must be a geared up.

Reply of the Government

2.6 Efforts are being made to improve the performance of the Command Area Development Programme by revamping and strengthening the monitoring system and taking other measures, as indicated below:—

1. *Effective Monitoring:*

Monitoring of Command Area Development Programme is proposed to be carried out through Central Water Commission and reputed

consultancy organisations. The details are given as under:—

(A) Monitoring through CAD Wing:—

(a) Monitoring in the CAD Wing is being done on the basis of information received by way of quarterly reports and annual progress reports from the State Governments. Staff constraint was a major problem in analysing these reports in depth. However, in the past few months, most of the vacant posts of Joint Commissioners in the Division have been filled up and each officer has been allocated charge of generally 2 to 3 States. This would greatly help in improving the monitoring of the Command Area Development Programme. These officers would be visiting the States and project cities at frequent intervals. A format for such monitoring has been finalised in the Ministry. However, some State Governments and monitoring agencies should also be involved in this exercise before giving the formats a final shape.

(b) A Monitoring Committee has been constituted under the Chairmanship of Joint Secretary (CAD & MI) with representation from the Finance Wing of the Ministry. The Committee would hold meetings bi-monthly.

(B) Monitoring through Central Water Commission:—

It has been decided that Central Water Commission will also monitor the progress of the works in selected projects through its field formations.

(C) Monitoring through Private Consultancy Organisations:—

Some private consultancy organisations or non-governmental organisations have also been identified for monitoring of projects. Some of these organisations are already monitoring various field programme of the Ministry of Rural Development and have expertise in this work.

A detailed format has been developed for monthly and quarterly monitoring of the Command Area Development Programme in consultation with some of the State Government Officers working in the field, private consultants, and Central Water Commission.

2. *Improving Farmers' Participation:*

(i) To achieve the physical targets and ultimately the objectives of the Command Area Development Programme, need for effective farmers' participation has been recognised. To encourage the farmers, a functional grant to farmers' associations @ Rs. 500/- per hectare has been recommended by the Expenditure Finance Committee. The earlier pattern was that a management subsidy

of Rs. 100 per hectare for first two years and Rs. 75 per hectare for the third year on equal sharing basis with States was given. Now Rs. 225/- per hectare shall be given by the Centre and Rs. 225/-per ha. by the States as one time functional grant and Rs. 50/-per ha. contributed by the farmers.

(ii) To create wide awakening on the Participatory Irrigation Management (PIM) in the country, a five day conference on PIM was held at New Delhi w.e.f. 19-23 June,1995. It has also been decided to hold 13 regional conferences on PIM. The preparation of manuals in the regional languages has also begun.

(iii) Tenth Conference of Ministers of Irrigation and Water Resources was held on 22nd of August, 1995 at New Delhi, which has also recommended the participatory Irrigation Management.

(iv) An Advisory Committee, already constituted under the Chairmanship of Hon'ble Union Minister of Water Resources & Parliamentary Affairs during March, 1994 has also initiated action to encourage farmers' participation in the management of irrigation water and effective implementation of CAD Programme besides improving linkage between different developmental departments of States, concerned with the CAD Programme. This Committee, in its 2nd meeting held on 6th September, 1995 at New Delhi further impressed the need of PIM and effective monitoring of CAD programme.

3. Evaluation of the CAD Programme:—

To make an assessment of impact of the programme on various indicating factors and to identify the constraints in the implementation of CAD programme for taking up mid-term correction. If needed, 18 Evaluation studies had already been taken up in projects of different Agro-climatic Zones, whose final reports are likely to come shortly. A few more studies are also to be taken up during 1995-96.

4. Dissemination of Technical Know-how among Farmers:—

States are being advised to take up measures to disseminate technical know-how of scientific water management among farmers through adaptive trials, demonstrations and draining to farmers to improve upon the productivity/production in the irrigation projects under CAD Programme.

Conclusion

5. In view of the above, it would be seen that the Ministry has made earnest efforts to improve the performance of the programme by

revamping and strengthening the monitoring systems and taking other appropriate measures.

Recommendation (Para No. 2.47)

2.7 The Committee are satisfied with the overall performance of the Central Ground Water Board but at the same time suggest that the Board should ensure full utilisation of funds to achieve the desired results.

Reply of the Government

2.8 The observation of the Committee has been noted. All efforts will be made and progress closely monitored so as to ensure the full utilisation of funds to achieve the targets set for 1995-96.

Recommendation (Para No. 2.49)

2.9 The Committee take a very serious note of the slow progress made under this scheme (Rationalisation of Minor Irrigation Statistics) and recommend that the Ministry must ensure compliance of concerned States for speedy execution of the schemes.

Reply of the Government

2.10 The scheme was sanctioned only in December, 1993 for VIII Five year Plan by the Government of India. Before that only twelve States were implementing the scheme. During 1994-95 four more States namely West Bengal, Maharashtra, Uttar Pradesh and Nagaland came forward to implement the scheme. Besides UTs of Delhi and Dadra & Nagar Haveli also adopted the scheme for implementation. Few more States like Bihar, Tamil Nadu are considering its implementation during 1995-96. The remaining States and Union Territories are constantly being persuaded to implement the scheme.

2.11 Under the scheme, a Census of minor irrigation works is being conducted which is likely to be completed during the VIII Plan by all States & UTs. During 1994-95, 19 States and 3UTs were provided the first instalment amounting to 40% of the total estimated cost of Census operations including computerisation. State of Sikkim has been provided with first instalment during current year. It is expected that the remaining States & UTs would take up the Census work during the current year, *i.e.*,1995-96. Statistical Cells created under the Scheme of Rationalisation of Minor Irrigation Statistics (RMIS) are presently engaged in Census work and compilation of quarterly progress report on development of minor irrigation in their respective States/UTs. Eighteen States including UT of Pondicherry have already conducted training programmes for field enumerators so far. About 8 States have started collection of data

from field. The computerisation of Census data and its processing is being entrusted to the National Informaties Centre (NIC). A MoU has already been signed between NIC and Ministry of Water Resources (MOWR). A workshop was conducted on 26th and 27th October at NIC Conference room inviting Secreataries-in-Charge of Census work in the States to demonstrate the software. The progress of the Census work is also to be reviewed during the above workshop.

Conclusion

2.12 It would, thus, be evident that the Ministry is taking all necessary steps to ensure compliance of the concerned States for speedy execution of the schemes.

Recommendation (Para No 2.66)

2.13 The Committee note that the Brahmaputra Board has given up the projects for construction of Subansiri and Dehang dams as the Government of Arunachal Pradesh is firm in their stand that submergence of important towns due to these dams would not be allowed. The Committee also note that Brahmaputra Board has proposed to construct alternative dams to save the towns. The Committee regret to note that all the funds spent on the projects so far have gone down the drains, as the work on these projects were taken up without the full and committed consent of the State Government. The Committee, therefore, recommend that the State Government should be taken into complete confidence before embarking upon the alternative projects in order to do meaningful work.

Reply of the Government

2.14 As part of its activities integrated development of water resources in the Brahmaputra Valley, the Brahmaputra Board undertook investigations of several multipurpose projects. Amongst them one was at 4 kilometer upstream of Rotung village in Arunachal Pradesh, on Dihang river, a tributary of the Brahmaputra. At this site, a rockfill dam of 262 meter height with a live storage of 35.5 billion cubic meter was envisaged which would have a hydroelectric plant of installed capacity of 20,000 MW. The reservoir of the project would have submerged the towns of Along, Yinkiong and Pangin in Arunachal Pradesh.

2.15 Another project on Subansiri river, a tributary of Brahmaputra was located at 3 kilometer upstream of Gerukamukh village on the Assam-Arunachal Pradesh border. At this site a rockfill dam of 240 meter high with a live storage capacity of 10 billion cubic meter was envisaged which would have a hydroelectric plant of installed capacity of 4,800 MW. The reservoir of this project would have submerged the towns of Daporizo and Dimparizo.

2.16 While the investigations were in full swing, Government of Arunachal Pradesh expressed their objections to the investigations of these projects in the late eighties, as these projects would lead to the submergence of towns like Along, Yinkiong and Pangin by the Dihang reservoir and towns like Daporizo and Dimparizo by the Subansiri reservoir. The benefits from these projects, as projected by the Brahmaputra Board, could not convince the Government of Arunachal Pradesh to reconcile to the submergence of the towns mentioned above when those two hydroelectric projects are implemented. The investigation at these two sites were, therefore, suspended by the Brahmputra Board in 1990. However, efforts to convince the Government of Arunachal Pradesh on the enormous benefits of these two projects were continued by the Brahmputra Board and the Ministry of Water Resources for obtaining their concurrence to continue investigations.

2.17 Persistent efforts by the Brahmputra Board and the Ministry of Water Resources led to a positive outcome. The Government of Arunachal Pradesh agreed in February, 1995 that the investigations on these rivers may be carried out so long as the envisaged projects would not cause submergence to the towns mentioned above. This stand of Arunachal Pradesh has now resulted in Brahmputra Board Planning to undertake investigation at three dam sites on Dihang and three on Subansiri rivers as under:—

Dihang (Siang) Project Sites

(i) Site at 4 Kilometer upstream of Yinkiong town on Dihang (Siang) river envisaging a 328 meter high dam with an installed capacity of 13,300 MW.

(ii) Site slightly upstream of Along town of Yombung river (a tributary of Dihang) envisaging a 152 meter high dam with an installed capacity of 1,080 MW.

(iii) Site of Bodak on Dihang river envisaging a 95 meter high dam with an installed capacity of 11,560 MW.

Subansiri Project Sites

(i) Site at 10 kilometer north of Tamen town on the river Kamala (atributary of Subansiri) envisaging construction of 272 meter high dam with an installed capacity of 2,050 MW.

(ii) Site at 4 kilometer upstream of Daporizo town on Subansiri river envisaging construction of a 272 meter high dam with an installed capacity of 1,800 MW.

(iii) Site at 3 kilometer upstream of Gerukamukh village (*i.e.* the original site) envisaging a 111 meter high dam with an installed capacity of 2,130 MW.

2.18 Projects implemented at the sites mentioned above would not submerge towns like Along, Yinkiong and Pangin in respect of dams on Dihang river and towns like Daporizo and Dimparizo for dams on Subansiri river. Thus, the new sites meet the requirements of the Government of Arunachal Pradesh. The Government of Arunachal Pradesh through a letter dated June 15, 1995 have conveyed their approval to investigate river basins like Dihang, Subansiri etc. with a view to examine the possibility of execution of multipurpose dams which would cause the least amount of submergence, displacement of people and damage to the environment. Brahmaputra Board has accordingly taken up the investigations for multipurpose projects at all these sites on Dihang and Subansiri rivers.

Conclusion

2.19 The survey and investigations carried out at the original sites on Dihang and Subansiri rivers mainly concerning geological, hydrological, topographical and other related aspects for the multipurpose projects are not infrutuous. Dams are proposed to be constructed at these sites in the revised planning except that they will be of heights lower than those originally planned to avoid submergence of the important towns already mentioned. The results of the investigations would also help in interpretation of the conditions at the additional sites now proposed.

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF GOVERNMENT'S REPLY

Recommendation (Para No. 2.13)

"The Committee, after having done a detailed study on this issue of transferring of water from water surplus basins to water scarce basins, observe that the Central Govt. without having taken into confidence the concerned States had started the pre-feasibility studies on both the Himalayan as well as Peninsular components of this scheme. Now all pre-feasibility studies, as reported by the Ministry are sure to be completed by the fag end of 8th Plan. But the major problem being faced by the Ministry is to convince the affected States to agree to start investigation and environmental studies. Majority of the States involved in this scheme are not coming forward to accept the pre-feasibility studies and consequently the Central Ministry find it difficult to go ahead with the scheme for investigation and execution. The Committee are of the opinion that the Ministry, should in first instance make all out efforts to convince the concerned States and then only after having achieved success in the same should start investigation studies. Though the Ministry has constituted a Committee to do this business, the efforts have not been adequate enough. The Committee opined that the failure of the Ministry to get the agreement of the States for starting environmental studies, indicates defective planning on the part of the Ministry. Thus, it becomes imperative for the Committee to recommend that if the Ministry does not find itself competent enough to convince the States concerned, it must not go ahead with the scheme and the nodal agency created for this only purpose should be disbanded immediately without any further thought."

Reply of the Government

The National Perspective

3.2 Due to uneven distribution of rainfall in time and space, India is frequently affected by floods and droughts. While many regions in the country are faced with recurring floods, nearly one third of the country is drought prone. For optimum utilisation of water resources to meet the growing demand for food and fibre, it is necessary to make scientific studies and make advance planning for possible transfer of waters from surplus regions to deficit areas by inter-basin transfers of waters.

2. The Ministry of Irrigation (now Water Resources) had formulated a National Perspective Plan for Water Development(NPP) in August 1980 which comprises two components *viz.*,

(i) Himalayan Rivers Development; and

(ii) Peninsular Rivers Development.

Himalayan Rivers Component

3. The Himalayan Rivers Component envisages construction of storages on the main Ganga and the Brahmaputra rivers and their principal tributaries in India and Nepal so as to conserve monsoon flows for flood control, hydro-power generation and irrigation. Inter-linking canal systems will be provided to transfer surplus flows of the Kosi, Gandak and Ghagra to the west. In addition, Brahmputra-Ganga Link will be constructed for augmenting dry weather flows of the Ganga. Surplus flows available on account of inter-linking of Ganga and Yamuna are proposed to be transferred to the drought areas of Haryana, Rajasthan and Gujarat. The scheme will also enable large areas in South-Uttar Pradesh and South Bihar to obtain irrigation benefits from the Ganga with a moderate lift of less than 30 m. Further, all lands in Tarai area of Nepal would also get irrigation apart from generation of about 30 million kw of hydro-power in Nepal and India. It will also provide substantial flood control in the Ganga-Brahmputra system. With this proposal, about 14.0 million ha.m. of additional water would be available from these river systems for irrigating an estimated 22 million ha. in the Ganga-Brahmputra basin, apart from Haryana, Punjab, Rajasthan and Gujarat. It would also provide water to Calcutta Port and would provide navigation facilities across the country. The scheme will benefit not only parts of India but also our neighbours-Nepal and Bangladesh. Implementation of this scheme will, however, depend on the cooperation of neighbouring countries (Nepal and Bhutan).

Peninsular River Component

4. Amongst the Peninsular rivers, the Mahanadi and Godavari have sizeable surpluses after meeting the existing and projected needs of the States within these basins. It is, therefore, proposed to provide terminal storages on Mahanadi and Godavari river to divert surplus flows of Mahanadi to the Godavari system and to further transfer surplus from the Godavari Systems to water short rivers namely, Krishna, Pennar and Cauvery. The transfer of waters would enable irrigation in drought areas of Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu by successive exchange.

5. A sub-component of this proposal is to divert surplus waters of the west flowing rivers of Kerala to the east for irrigating the drought areas of Tamil Nadu, apart from bringing new areas under irrigation in Kerala.

6. A second sub-component is to construct storages and to inter link small rivers flowing along the west-coast, north of Bombay and south of Tapi. This will enable partial release of waters from Tapi and Narmada which will enable extension of irrigation to Saurashtra and Kutch areas. It will also enable provision of extra water to meet the growing needs of metropolitan area of Bombay as well as providing irrigation to the coastal areas in Maharashtra.

7. The third sub-component envisages inter-linking of the southern tributaries of the Yamuna like the Ken and the Chambal in addition to construction of small storages on intermediate tributaries and a dam on the Yamuna at Panchnad. This will enable irrigation in Ujjain and Indore areas of Madhya Pradesh as well as Upper areas in Rajasthan.

8. The proposal of Peninsular River Development will enable additional use of about 8.4 million ha.m. of water to benefit the States of Orissa, Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu, Madhya Pradesh etc. This will provide irrigation benefits to over 13 million ha.

Discussion on the National Perspective and setting up of National Water Development Agency

9. An outline of the National Perspective was circulated to all the members of the National Development Council in its meeting held in November, 1980. Similarly, it was also sent to all the State Chief Ministers and Members of Parliament for information.

10. The National Perspective proposals were discussed with the Irrigation Secretaries and the Chief-Engineers of concerned State Governments, the Central Water Commission, the Central Electricity Authority and the Planning Commission, by the Secretary (Irrigation) in June, 1980. The broad approach of harnessing the water resources in the overall national interest and the concrete initiative taken in this regard by the Centre was welcomed by all.

11. Regarding the proposal for inter-linking of the Mahanadi, Godavari, Krishna, Pennar and Cauvery some of the basin-States of the Mahanadi and the Godavari expressed apprehension regarding availability of surplus waters in these two basins for being transferred outside. It was, however, agreed, *inter-alia*, that there is need for creating storages on these river systems so that the waters so harnessed could be used for beneficial purposes; and that the Government of India, in cooperation with the State Governments may take up immediately the work of surveys

and investigations of all the storage sites identified so far as tentatively proposed in the national perspective. Similarly, the other segments of the Peninsular component, *viz.* inter-linking of the west flowing rivers north of Bombay and South of Tapi, diversion of west-following rivers in Kerala, and inter-linking of Ken with the Chambal, were discussed with the State Governments and it was agreed to take up requisite surveys and investigations.

12. The proposals were further discussed in 5th Conference of the State Irrigation Ministers held in November, 1980 and broadly agreed upon. The Central Govt. was asked to take up necessary surveys and investigations. The matter was also discussed further in the 6th Conference held in September, 1981 when it urged upon all the States to extend their full support in the task.

These developments lead to the setting up of the National Water Development Agency.

Inter-basin transfer proposals in the past

13. Suggestions for a national water grid envisaging inter-linking of rivers with a view to transferring surplus water available in some regions to water-deficit areas have been made from time to time. Two proposals for inter-linking of major rivers like Ganga and Cauvery were considered earlier in the seventies by the Govt. of India. The position about these proposals and further developments are given below.

(a) National Water Grid by Dr. K.L. Rao

14. Dr. K.L. Rao had given a proposal advocating the Ganga-Cauvery Link along with a few other links including the Brahmaputra and Ganga Link. The proposal of the Ganga-Cauvery Link essentially envisages the withdrawal of 1680 cumecs (60000 cusecs) of the flood flows of the Ganga near Patna for about 150 days in a year and pumping about 1400 cumecs (50,000 cusecs) of this water over a head of 549 metres (1800 feet) for transfer to the Peninsular region and utilising the remaining 280 cumecs (10,000 cusecs) in the Ganga basin itself. The proposal envisaged utilisation of 2.59 million hectare meters of Ganga waters to bring under irrigation and additional area of 4 m. ha. Dr. Rao had estimated his proposal to cost about Rs. 12,500 crores. The proposals were examined by the Central Water Commission and found to be grossly under-estimated. The scheme, it was seen, would require large blocks of power (5 to 7 million kw.) for lifting water. It will also have no flood control benefits. Therefore, the proposal was not pursued as such.

(b) Drought Prone Area Studies

15. However, after a series of discussions, the Planning Commission expressed in 1974 that initially some minimum field studies should be carried out for inter-linking of some rivers to relieve drought problem. Accordingly, the Drought Prone Area Studies Unit was set up in the Central Water Commission in 1975 and preliminary reports were prepared by this Unit.

(c) Garland Canal Project by Captain Dastur

16. Around this time, Captain Dastur a pilot by profession put forward his proposal for Garland Canal. It mainly consists of two canals, *viz*, (i) the Himalayan Canal at a constant bed level between 335 m. and 457 m. above Mean Sea Level aligned along the southern slopes of the Himalayan and extending southwards beyond Brahmaputra. (ii) the Central and Southern Garland Canal at a constant elevation of between 244 m. and 305 m. above the Mean Sea Level. The Himalayan canal running from the Ravi in the West to the Brahmaputra and beyond will be fed from the waters of the Himalayan rivers which will be stored in 50 integrated lakes of the northern side of the canal to be created by cutting the hill slopes of the Himalayas to the same level as the bed of the canal, and another 40 lakes on the southern limb beyond Brahmaputra. The Central and Southern Garland Canal will have about 200 integrated lakes, besides two large reservoirs, one at Nagaur in Rajasthan and another in the Sone Valley. The Himalayan and Garland canals are proposed to be inter-connected at two points (Delhi and Patna) by pipelines for transfer of water.

17. The proposal was examined by two committees of Experts comprising experts from Central Water Commission, State Governments and Professors who were of the opinion that the proposal was technically unsound and economically prohibitive. Preliminary studies carried out by the Central Water Commission indicated that the cost of the Dastur proposal was about Rs. 12 million crores, which is 500 times the figure estimated by Shri Dastur. This scheme was also, therefore, given up.

National Water Development Agency

18. The National Water Development Agency was set up in 1982 under the Ministry of Water Resources as an Autonomous Society vide Government of India resolution dated 26.08.81 (copy enclosed vide Annexure I) entrusting the work of, Peninsular component of the National Perspective Plan to it. During the proceedings of the 8th Annual General Meeting of the Society held on 5. 4. 90, and attended by Ministers incharge of Irrigation of the States, the work of NWDA was reviewed and it was also decided that NWDA which was initially organised on a temporary

basis would be considered hereafter as a organisation for continuing with the long term studies of inter-basin river transfer and optimisation of basin development through VIIIth Plan and beyond.

19. The objectives of the Society as amended recently vide Gazette notification dated 16.04.94 (copy enclosed vide Annexure II) are as follows:

(a) To carry out detailed surveys and investigations of possible reservoir sites and inter-connecting links in order to establish feasibility of the proposal of Peninsular Rivers Development and Himalayan Rivers Development Components forming part of the National Perspective for Water Resources Development prepared by the then Ministry of Irrigation (now Ministry of Water Resources) and Central Water Commission.

(b) To carry out detailed studies about the quantum of water in various Peninsular River systems and Himalayan River systems which can be transferred to other basins/States after meeting the reasonable needs of the basins/States in the foreseeable future.

(c) To prepare feasibility report of the various components of the scheme relating to Peninsular Rivers development and Himalayan Rivers development.

(d) To do all such other thing the Society may consider necessary, incidential, supplementary or conducive to the attainment of above objectives.

Organisational structure of NWDA

The Society

20. The Society (General Body) is the apex body of the National Water Development Agency and meets at least once in a year to review the progress and performance of the Agency towards the attainment of its objectives and to give such policy directions as it deems fit. The Minister-in-charge of Water Resources in the Union Cabinet is the President of the Society. Twelve annual meetings and three special meetings of the Society have been held so far. The last meeting was held in December, 1994.

The Governing Body

21. The Governing Body of the Society under the Chairmanship of the Secretary, Ministry of Water Resources manages, administers, directs and controls the affairs and funds of the Society subject to the rules, bye-

laws and orders of the Society and generally persues and carries out the objectives of the Society as set forth in its Memorandum of Association and in doing so, follows and implements the policy directions and guidelines laid down by the Society. The Governing Body is required to meet at least twice in a financial year. Twenty nine meetings of the Governing Body have been held so far. The last Meeting was held in June 1995.

The Technical Advisory Committee

22. The Governing Body of the Society has constituted a Technical Advisory Committee for the Agency under the Chairmanship of the Chairman, Central Water Commission, for examination and scrutiny of the various technical proposals framed by the Agency. Twenty two meetings of the Technical Advisory Committee have been held so far. The last meeting was held on 5th June, 1995.

The Standing Committee

23. To review the programme of such studies, issue guidelines for assessment of future requirements of water, make provision for integrated and coordinated use of surface and ground water and to suggest measures for optimum utilisation of the available water on Scientific lines, a Standing Committee under the Chairmanship of Member (Irrigation), Planning Commission was constituted by the National Water Development Agency Society in March, 1990. The Standing Committee had 3 meetings and the task assigned to it had been completed. Accordingly President of National Water Development Agency Society has discontinued the Committee.

Advisory Group

24. The programme of National Water Development Agency has initially been oriented towards formulating the physical proposals of water transfer. The need to study the economic aspects of such proposals has been felt and it was considered that the corresponding programme of studies should be undertaken well in time. For this purpose, an Advisory Group was constituted in March, 1990. The advisory group has so far met six times and approved the reports submitted by National Council of Applied Economic Research (NCAER) on Agro-Economic, Socio-Economic and Environmental Impact studies in respect of six links proposed by NWDA were examined and approved by the Advisory Group. The last meeting of the group was held in February, 1995.

Programme and Progress of works

Types of Studies

25. The Agency identified 36 water transfer links (17 under Peninsular Component and 19 under Himalayan Component). For making scientific

studies following procedure has been adopted.

(i) Collection and compilation of data.

(ii) Water balance studies of basins/sub-basins and at diversion points.

(iii) Toposheet studies of identified storages.

(iv) Toposheet studies of link canals.

(v) Preparation of pre-feasibility reports.

(vi) Preparation of feasibility reports after carrying out required field surveys and investigations.

26. The water balance studies and pre-feasibility reports are prepared on the basis of available data/records and collection/compilation of information from various States.

27. For the purpose of feasibility studies, the minimum surveys and investigations comprising of surveys of possible link alignment, geological investigations, environmental assessment, surveys for command area etc. are carried out so that *prima facie* techno-economic viability of the proposals can be established on a realistic basis.

Programme of work by the end of VIII Plan

28. The agency have programmed to complete the pre-feasibility reports for all the 36 links and feasibility reports in respect of 3 links by the end of VIII Plan. Besides the work relating to feasibility reports for 8 links has been taken up.

Progress of work upto 1994-95

29. The studies for the Peninsular Component envisaged collection of data of 137 basins/sub-basins, water balance studies of 1137 basins/sub-basins, water balance studies at 49 diversion points, studies of 58 storages, toposheet studies of 17 links pre-feasibility report of 17 links and survey and investigations and preparation of feasibility reports of 15 links. Against this the Agency has completed the collection of data of 137 basins/sub-basins, water balance studies of 137 basins/sub-basins, water balance studies at 52 diversion points (including 3 additional studies), studies of 58 identified storages, toposheet studies of 18 links (including one additional study), pre-feasibility reports of 17 links (two of the links have been merged into one link) and survey and investigation and feasibility reports of 3 links. Names of the 3 links for which feasibility

reports have been completed are as follows :

(1) Ken-Betwa link

(2) Par-Tapi-Narmada link

(3) Pamba-Achankovil-Vaippar link

30. Survey and investigations of 6 more links have been taken up. Names of the six links are;

(1) Godavari (Polavaram)–Krishna (Vijayawada) link

(2) Krishna (Almatti)–Pennar link

(3) Krishna (Srisailam)–Pennar (Prodattur) link

(4) Krishna (Nagarjunasagar)-Somasila link

(5) Damangamga-Pinjal link

(6) Parbati-Kalisindh–Chambal link

31. The Himalayan Component envisaged the water balance studies at 19 identified diversion points, toposheet studies of 16 storages, toposheet studies of 19 links, pre–feasibility reports of 19 links and survey and investigations and feasibility report of 15 links. The Agency has so far completed water balance studies at 16 identified diversion points, toposheet studies of 14 storages, toposheet studies of 13 links and pre–feasibility reports of 5 links. Survey and investigations of the following 2 links have also been taken up;

(1) Manas-Sankosh-Tista-Ganga link

(2) Sarda-Yamuna link

Further Programme of work

32. The prefeasibility studies for all the 17 links under the Peninsular Component have been completed. Pre–feasibility studies for all the 19 links under the Himalayan Component are programmed to be completed during the VIII Plan, Survey and investigations for preparing feasibility report of 6 links under Peninsular Component and 2 links under Himalayan Component have already been taken up and are likely to be completed by 1998-99. Survey and investigations of the remaining links are programmed to be taken up in phases and likely to extend to IX Plan and beyond.

Methodology adopted for water balance studies

Water balance studies-their significance :

33. In order to assess the surplus or deficit of water in various basins/ sub-basins and thereby formulate the possible inter-basin water transfer

link proposals, the sub-basin-wise water balance studies are being conducted and reports are being prepared by NWDA. In addition, the water balance studies at certain diversion points on various rivers are also being conducted by NWDA in order to assess the suitability of these points for the transfer of water through the link proposals formulated by the NWDA.

34. The assessment of water balance consists of four components *viz.* (i) assessment of overall surface water availability at different dependabilities, (ii) assessment of surface water requirement for various uses in foreseeable future, (iii) consideration of regenerated flows which may be available from various uses of surface water and finally (iv) determination of surplus or deficit i.e. the water balance.

Guidelines given by TAC

35. The Technical Advisory Committee has approved various guidelines for uniformity in the studies. Some important aspects are discussed below :

(i) Assessment of surface water availability

36. The overall surface water availability in basin/sub-basin at 75% and 50% dependabilities is considered to be the sum of surface water yield of the basin/sub-basin at the respective dependabilities and import less export of water, if any. The yield at both 75% and 50% dependabilities is assessed from the long-term yield series (usually for the period of 80 years or so) generated by using rainfall-runoff relationship developed by statistical methods.

(ii) Estimation of water requirement in the foreseeable future (say by 2025 AD) :

37. The ultimate surface water requirement for various uses *viz.* irrigation, domestic, industrial, hydro-power and salinity control in the sub-basin/basin is worked out as indicated below in accordance with the guideline of Technical Advisory Committee.

Irrigation requirement

38. While the designed annual irrigation and annual utilisation for existing and on-going projects as planned by the States are considered without any change, the annual irrigation for proposed identified projects is estimated by NWDA considering intensities of irrigation of 150%, 125% and 100% respectively for major, medium and minor projects as per the norms decided in the meeting of the TAC.

39. The annual utilisation for future projects is worked out by climatological approach considering a model cropping pattern representing the entire basin/sub-basin and using the potential evapo-transpiration values worked out by Modified Penman's method as given in the scientific report No. 136 (1971) of I.M.D.

40. In case the annual irrigation from all the existing, on-going and proposed projects as worked out above in a deficit basin/sub-basin is less than 30% of its maximum culturable area, the same is being enhanced to 30% and the water requirements are estimated accordingly. The increased annual irrigation on account of this is considered to be spread uniformly in a basin or sub-basin at 50% under future medium projects and 50% under future minor projects.

41. Similarly, in case of a surplus basin/sub-basin, the annual irrigation is increased to 60% of the maximum culturable area so as to ensure provision for all the possible reasonable in-basin demand prior to contemplating any proposal for transfer of water to the deficit areas.

Domestic water requirement:

42. The human population as well as livestock as per the latest census is projected to 2025 AD by adopting suitable annual compound growth rates. The water requirement for rural and urban population is worked out taking the per capita daily needs of 70 litres and 200 litres respectively as per the norms of the Ministry of Works and Housing from its manual "Water Supply and Treatment". In the absence of any norms for livestock water requirement, the per capita daily needs of 50 litres is considered. The requirement in respect of entire urban population and 50% of that of rural population is proposed to be met from surface water resources, while the remaining 50% of the requirement of rural population and the total requirement of livestock population is proposed to be met from ground water resources.

Industrial water requirement:

43. In the absence of data on the water requirement of present or proposed industries, it is assumed that the total industrial water requirement in the basin or sub-basin would be of the same order as the total domestic water requirement for human population and livestock. The industrial requirement is considered to be met from surface water resources.

Hydro Power:

44. If the data on evaporation losses at the hydel projects are vailable, the same have been considered as the requirement for hydro power. In

case such data are not available, the same is worked out from the water spread area of the reservoirs assuming suitable evaporation rates. In absence of any information it is assumed to be 20% of utilisations.

Salinity Control:

45. In the absence of any scientific study on the minimum flow required in the river for controlling salinity intrusion into the basin and to maintain the alluvial morphology of the stream etc. 10% of the yield at 75% dependability is considered towards salinity control in projects when such problems are anticipated.

Regeneration:

46. The regeneration is considered to be available at 10% of the net utilisation for irrigation from existing, ongoing and proposed major and medium projects and at 80% from the industrial and domestic requirement met from surface water resources.

(iii) Water Balance

47. The total water requirement obtained by adding together the requirements for all purpose as stated above is deducted from the overall surface water availability at 75% and 50% dependabilities and the regeneration available back to the streams is then added to determine the surplus or deficit of water in the basin or sub-basin at 75% and 50% dependabilities respectively.

Special technical points related to Himalayan Component studies

Intensity of Irrigation:

48. Considering availability of considerable ground water potential in the basins of the Himalayan rivers, it was decided that in the areas where existing irrigation intensity is less than 100%, the same may be increased to level of 100% from surface waters. Wherever the existing intensity of irrigation is more than 100% the intensity can remain at the same level. Additional intensifications over and above those indicated above may be carried out by using ground water to encourage conjunctive use and to avoid the problems of waterlogging and salinity.

Irrigation in the enroute areas:

49. The areas enroute that link canals not covered by any other irrigation scheme may be provided irrigation to the extent of 100% intensity from the surface water and any additional irrigation by ground water.

Irrigation in the target area:

50. It was decided that the target area should be covered by extensive irrigation and an intensity of not more than 100% should be provided from the transferred water.

Water requirements downstream of diversion points:

51. While carrying out water balance studies at the point where diversions are contemplated, the water requirements will also include the committed utilisation and additional requirements downstream which cannot be met from the water available downstreams.

Seasonal water balance:

52. Water balance study at diversion points where a reservoir is contemplated, will be carried out on annual basis as most of the flows can be considered to be regulated. However, at diversion point where reservoirs are not contemplated, water balance study will be carried out on a seasonal basis.

Link proposals framed by the NWDA:

53. The inter-basin water transfer link proposals that are framed and being studied by NWDA are broadly the same as those indicated in the Peninsular rivers development component of National Perspective Proposals. However, as there are large reductions in the quantum of surpluses available in the Mahanadi and Godavari basins as considered originally in the NPP and as now scientifically estimated by the NWDA, the links of the NPP have been revised. The link proposals envisaged by NWDA broadly contemplate interlinking of Mahanadi-Godavari-Krishna-Pennar-Cauvery and Vaigai rivers. The proposals as per the pre-feasibility studies are briefly given as under :

54. *Mahanadi to Godavari :* The water balance studies carried out for the Mahanadi basin have revealed that the basin is surplus by about 11500 Mcm, out of which, a quantum of 8000 Mcm has been proposed for transfer through Mahanadi-Godavari link taking off at Manibhadra on Mahanadi. The link after providing for enroute irrigation in the Srikakulam and Visakhapatnam districts of Andhra Pradesh proposes to deliver about 6500 Mcm of water to Godavari Delta.

55. *Godavari to Krishna :* The gross surplus available in the Godavari basin considering 6500 Mcm of water received from Mahanadi would be 21500 Mcm (15000 + 6500) which is contemplated for diversion to the Krishna through three links–(1) diversion of 1200 Mcm of water through Polavaram-Vijayawada link for supplementation of the Krishna delta

requirement, (2) about 4370 Mcm through Inchampalli-Pulichintala link for taking over part commands under Nagarjunasagar LBC and Nagarjunasagar RBC as exchange, and (3) around 14000 Mcm of water into the Nagarjunasagar reservoir after accounting for transmission losses and enroute irrigation requirement.

56. *Krishna to Pennar* : Out of the 14000 Mcm of water received at Nagarjunasagar through Inchampalli-Nagarjunasagar link, 12000 Mcm is proposed for diversion through Nagarjunasagar-Somasila link and the balance is utilised for taking over part command of Nagarjunasagar LBC in exchange. The quantum of water reaching the Somasila reservoir on Pennar after considering utilisation under part command of Nagarjunasagar RBC in exchange as well as for additional enroute irrigation in the basin covering streams between Gundlakamma and Pennar and losses in conveyance is around 9800 Mcm.

57. As the entire command of existing Nagarjunasagar Project under Nagarjunasagar LBC and RBC are proposed to be taken over by the link waters, an equal quantum of water as an exchange will have to be diverted from suitable locations *viz.* Srisailam and Almatti across the river Krishna to the needy areas. About 2300 Mcm is proposed to be diverted from Srisailam through Srisailam-Proddatur link which would deliver water at the proposed barrage near Proddatur. In addition, about 2000 Mcm quantity is proposed for diversion from Almatti through Almatti-Pennar link to cater for enroute irrigation in Krishna and Pennar basins.

58. *Pennar to Cauvery* : About 9500 Mcm of water is proposed to be transferred through this link. The link out fall is at Grand Anicut on Cauvery. After accounting for enroute requirement for irrigation and water supply to Madras City and transmission losses about 5000 Mcm of water will be reaching Grand Anicut. Out of this quantity about 3000 Mcm proposed to be utilised in Cauvery delta.

59. *Cauvery to Vaigai* : Out of the 5000 Mcm reaching Upper Anicut on Cauvery, about 2000 Mcm is proposed for diversion through Cauvery-Vaigai link for utilisation in Cauvery, Vaigai and streams between Gaigai and Vaippar.

60. A number of alternative proposals are also under study based on which some modifications may be suggested in the link proposals.

61. Based on Pre-feasibility reports of Peninsular Component prepared so far, it has been assessed that irrigation benefits to an area of about 5 Mha may be possible with investment of around Rs. 30,000 crores.

62. The Pre-feasibility reports for 5 links out of 19 links under Himalayan Component have been completed. A complete picture would

emerge only after pre-feasibility studies of all the links are completed by end of VIII Plan.

Apprehensions of the State Govts. on the studies carried out by NWDA

63. The toposheet as well as pre-feasibility studies of link proposals evolved by the NWDA have been circulated to the basin States and also to the members of the TAC inviting suggestions/comments on the studies. Some States have furnished comments on the link proposals.

64. Some States have expressed apprehension about the reliability and adequacy of the water transfer from distant sources and as a result the existing irrigation might suffer for want of water. In this connection, it is clarified that the Peninsular links would be operated in an integrated manner to transfer only surplus waters. Before any water is diverted from any basin, it would be ensured that the entire in-basin reasonable needs in ultimate stages of development are met with first. For this purpose, appropriate operation rules and fresh agreements will have to be made.

65. Some concern has been expressed about the large quantum of power required to lift the waters. There is also an apprehension that on implementation of the link proposals, there will be total shut down of the existing Power Stations and the proposed power generation may get affected. The power loss, if any, on account of implementation of the link proposals can be made good through other sources. Further, in the link proposals, possibility of power generation is being examined wherever sufficient head is available.

66. Since NWDA projections and proposals are for optimum development of water resources which involve transfer of surplus waters to deficit areas, fresh agreements between concerned States, sharing of cost etc. will be necessary.

67. It may be mentioned here that due to certain compulsion/ constraints it is expected that the States surplus in water resources would not agree to assessment of such surpluses. Since the future always has considerable uncertainties, it may not be practicable to insist on a complete acceptance. Efforts in this direction have to be consistently continued for a long time. The feasibility studies being done by NWDA will form the basis for discussions and agreements among the States concerned.

68. Since water resources development projects have long gestation period from conception to completion, such planning and preparation of feasibility reports is considered necessary and unavoidable.

DISCUSSIONS WITH STATES

69. The Governing Body of NWDA has constituted a Secretary level Committee headed by Secretary (Water Resources) with concerned State Irrigation Secretaries as members to facilitate survey and investigation work of various water transfer links and consensus among concerned States. The first meeting of the sub-Committee was held on 12th Feb., 1992 to facilitate survey and investigation of Ken-Betwa link. The Second Meeting of the sub-Committee to facilitate survey and investigation work of Pamba-Achankovil-Vaigai/Vaippar link was held on 10. 8. 1993 at New Delhi. Representatives of Kerala did not, however, attend the meeting. The Third Meeting of the Committee was held on 15. 9. 1994 and attended by Andhra Pradesh and Karnataka. Krishna (Nagarjunasagar)-Pennar (Somasila) link and Krishna (Almatti)-Pennar link were discussed during the meeting. The Fourth Meeting of the sub-Committee was held on 26. 6. 1995 to discuss Par-Tapi-Narmada link and Damanganga-Pinjal link concerning Maharashtra and Gujarat. The meeting was attended by Secretary, Govt. of Gujarat but Member from Maharashtra could not attend the meeting. During discussions, the Secretary from Government of Gujarat suggested that it would be advisable to first sort out technical details at the Chief Engineer level by holding meeting by the National Water Development Agency with the concerned State Chief Engineer, so that further policy decision at Government level can be taken.

70. Meetings of the sub-Committee to discuss Pamba-Achankovil-Vaippar link and Kalisindh-Chambal link respectively were also scheduled but could not be held as the representatives from Kerala and Madhya Pradesh respectively expressed their inability to attend the meeting.

71. A Minister level meeting is proposed to be organised for the Pamba-Achankovil-Vaippar link.

72. The Chief Engineer level discussions between NWDA and concerned State Govts. have been initiated for other links for which pre-feasibility reports have been completed.

Further action necessary

73. Since NWDA projections and proposals are for optimum development of water resources which involve transfer of surplus waters to deficit areas, fresh agreement between concerned States, sharing of cost etc. will be necessary. The feasibility reports being preferred by NWDA will form the basis for arriving at consensus/agreements between concerned States without these feasibility reports, no discussions will be possible.

74. After such agreements/understandings are reached, the detailed Project investigations can be decided to be taken up for proposals as

agreed/modified. The investment decisions, mandatory clearances, release of funds, fixing of implementation agencies can then be considered. As detailed investigation and preparation of Detailed Project Reports takes considerable time, action on preparation of DPRs should in fact also be taken up as soon as possible, so that as soon as agreements between the States are reached implementation agencies can be fixed up, approvals obtained and implementation taken up.

75. Since water resources development projects have long gestation period from conception to completion, such advance planning and preparation of feasibility reports is considered necessary and unavoidable.

EXPENDITURE INCURRED ON STUDIES BY NWDA

76. The matter of preparing feasibility reports was considered in 151st Meeting of the Public Investment Board (PIB) in its meeting in March, 1981. The order of the expenditure of Rs. 107.42 crores spread over 7 to 10 years and the details of staff required by the Agency were approved by the PIB. The Governing Body of the National Water Development Agency reviewed Governing year 1988 the progress and programme of the work of the Agency and decided that detailed investigation and designs of the various storages and water transfer links would be taken up only after a view is taken in consultation with concerned States as the possibilities and quantum of actual transfer of water from the surplus to deficit areas. This resulted in a substantial reduction in the work load and the rest of the work was reduced to Rs. 38.2 crores. In the Eighth Annual General Meeting of the Society, it was decided to take up surveys and investigation of Peninsular links. It was also decided to take up investigation and studies in respect of Himalayan Rivers Development Component of National Perspectives. The expenditure/finance committee approved expenditure of Rs. 38.32 crores for continuance of NWDA during Annual Plans 1990-91 and 1991-92 over VIII Plan. Against this actual expenditure incurred till March, 1995 is only Rs. 36.35 crores. Details are as under :

VI Plan		Rs. 3.51 crores
VII Plan		Rs. 12.03 crores
Annual Plan	90-91	Rs. 2.79 crores
	91-92	Rs. 3.55 crores
	92-93	Rs. 4.21 crores
	93-94	Rs. 5.05 crores
	94-95	Rs. 5.21 crores
	Cumulative total	Rs. 36.35 crores

Considering that the cost of inter basin transfer proposals being studied, are of the order of Rs. 230,000 crores, the costs incurred by NWDA are insignificant.

Conclusion

77. It would thus be evident that Ministry of Water Resources is making all all out efforts to convince the States on the usefulness of water transfer links. The feasibility reports being prepared by National Water Development Agency will form the basis for consensus/agreements between the concerned States. Since water resources development projects have long gestation period from conception to completion, such advance planning and preparation of feasibility reports is considered necessary and unavoidable.

ANNEXURE—I

(PUBLISHED IN THE GAZETTE OF INDIA PART I, SECTION 1)

No. 1(7)/80-PP
Government of India
Ministry of Irrigation

New Delhi, the 26th August, 1981

RESOLUTION

As per present broad assessment, the total ultimate irrigation potential of the country has been estimated as 113 million hectares. It is considered that this can be significantly increased by storing and utilising the surplus waters available in some rivers and transferring them to water deficit regions by interlinking of rivers. In order to achieve this purpose and to meet the persistent demand made in the Parliament and outside to have such a plan, the Ministry of Irrigation and Central Water Commission have formulated the National Perspective for Water Resources Development. The National Perspective has two main components, namely (i) Himalayan Rivers Development, and (ii) Peninsular Rivers Development.

The Peninsular Rivers Development component of the Perspective can be implemented on our own as the rivers flowing therein are within the country and do not involve any co-operation with or concurrence from the neighbouring countries. It has, therefore, been decided to take up detailed surveys and investigations of the possible storage reservoir sites as well as inter-connecting links and to prepare feasibility reports of this proposal. To avoid delay and to get the fullest cooperation from the various States, it has been found necessary to get this work done by the Central Government. For this purpose it has been decided to set up an independent organisation to be called "National Water Development Agency" (Rashtriya Jal Vikas Abhikaran) to be registered as a Society under the Societies Registration Act, 1860 with Headquarters at New Delhi.

The Society will have the Union Minister for Irrigation as its President and the Union Minister of State for Irrigation as its Vice-President. A Member from the Planning Commission, Chief Ministers/Ministers-in-charge of Irrigation of the States of Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh, Lt. Governors/Minister-in-charge of Irrigation of the Union Territories of Goa, Daman & Diu and Pondichery, Secretaries of

the Union Ministries of Agriculture (Department of Agriculture), Irrigation, Energy (Department of Power), Civil Aviation, Finance (Department of Expenditure), Planning Commission and Department of Environment, Director-Generals of the Geological Survey of India and the Survey of India, Chairman of the Central Water Commission, Central Electricity Authority and Central Ground Water Board, Members of CWC-in-charge-of Water Resources and Designs & Research, Director-General, Indian Meterological Department and Director, National Remote Sensing Agency will be founder Members of the Society. The Director-General, National Water Development Agency will be the Member Secretary.

4. The function of the National Water Development Agency are as below :—

(a) To carry out detailed surveys and investigations of the possible storage reservoir sites and inter-connecting links in order to establish feasibility of the proposals of Peninsular Rivers Development forming part of the National Perspective for Water Resources Development prepared by the Ministry of Irrigation and the Central Water Commission.

(b) To carry out detailed studies about the quantum of water which is surplus in various Peninsular Rivers System and which can be transferred to other basins/States after meeting reasonable needs of basin States in the foreseeable future.

(c) To prepare feasibility reports of various components of the schemes relating to Peninsular Rivers Development.

(d) To do all such other things the Society may consider necessary, incidental, supplementary or conducive to the attainment of above objectives.

5. The National Water Development Agency will have a Governing Body to carry out effectively the objectives set forth above with the composition proposed as below :

1. Secretary, Ministry of Irrigation	Chairman
2. Secretary or his nominee not below the rank of Joint Secretary, Ministry of Finance (Department of Expenditure)	Member
3. Secretary or his nominee not below the rank of Joint Secretary, Ministry of Energy (Department of Power)	Member

4.	Secretary or his nominee not below the rank of Joint Secretary, Ministry of Agriculture (Department of Agriculture)		Member
5.	-do-	Ministry of Civil Aviation	Member
6.	-do-	Department of Environment	Member
7.	-do-	Planning Commission	Member
8.	Chairman, Central Water Commission		Member
9.	Chairman, Central Ground Water Board		Member
10.	Chairman, Central Electricity Authority		Member
11.	Member (WR), Central Water Commission		Member
12.	Member (D & R), Central Water Commission		Member
13.	Director General or his nominee not below the rank of Joint Secretary— Indian Meteorological Department		Member
14.	Advisor (PP), Ministry of Irrigation		Member
15.	Irrigation Secretary or his nominee not below the rank of Chief Engineer	— Andhra Pradesh	Member
16.	-do-	– Gujarat	Member
17.	-do-	- Karnataka	Member
18.	-do-	- Madhya Pradesh	Member
19.	-do-	- Maharashtra	Member
20.	-do-	- Orissa	Member
21.	-do-	- Rajasthan	Member
22.	-do-	- Tamil Nadu	Member

23.	-do-	- Uttar Pradesh	Member
24.	-do-	- Kerala	Member
25.	-do-	– Goa, Daman & Diu	Member
26.	-do-	- Pondichery	Member
27.	Director General, NWDA		Member Secretary

Except the Member-Secretary, who will be full time, the Chairman and all other Members will work on part-time basis.

6. The Society shall frame its own Regulations and Rules of Business.

7. The Expenditure on the Agency will be met from the budget of the Ministry of Irrigation.

Sd/-
(P.K. Acharya)
Advisor

ORDER

Ordered that this Resolution be communicated to all the State Governments and the Union Territories, the Private and Military Secretaries to the President, Prime Minister's Office, the Comptroller & Auditor General of India, the Planning Commission and all Ministries/ Departments of the Central Government for information.

2. Ordered also that this Resolution be published in the Gazette of India and the concerned State Governments be requested to publish it in the State Gazettes for general information.

Sd/-
(P.K. Acharya)
Advisor

The General Manger,
Government of India Press, (with Hindi Version)
Faridabad (Haryana).

PART I–SEC. 1

THE GAZETTE OF INDIA, APRIL 16, 1994 (CHAITRA 26, 1916)

MINISTRY OF WATER RESOURCES,
New Delhi, the 11th March, 1994

RESOLUTION

No. 22/27/92-BM.- The National Water Development Agency (NWDA) a registered Society under Ministry of Irrigation (now Ministry of Water Resources) was set up in the year 1982 to carry out detailed studies, surveys and investigations in respect of Peninsular Component of National Perspective for Water Resources Development. The functions of NWDA were published under Para 4 of the gazette notification No. 1(7) 80-PP dt. 26.8.1981.

The Government have now modified the Objectives of NWDA to include the Himalayan Component of National Perspective of Water Resources Development also.

Development Agency stand modified as under:—

(a) To carry out detailed surveys and investigations of possible reservoir sites and interconnecting links in order to establish feasibility of the proposal of Peninsular Rivers Development and Himalayan Rivers Development Components forming part of National Perspective for water resources development prepared by the then Ministry of Irrigation (now Ministry of Water Resources and Central Water Commission).

(b) To carry out detailed studies about quantum of water in various Peninsular River Systems and Himalayan River Systems and which can be transferred to other basins/States after meeting reasonable needs of basin States in the foreseeable future.

(c) To prepare feasibility report of various components of the scheme relating to Peninsular Rivers Development and Himalayan Rivers Development.

(d) To do all such other thing the Society may consider necessary incidental, supplementary or conducive to the attainment of above objectives.

ORDER

Ordered that the resolution No. 22/27/92-BM dated 11-3-1994, modifying Ministry of Irrigation resolution No. 1(7)/80/PP dated 26.8.1981 be communicated to the concerned State Governments and Union Territories, the Private and Military Secretaries to the President, Prime Minister's Secretariat, the Comptroller and Auditor General of India, the Planning Commission and the Ministries of Surface Transport, Defence, Human Resources, Science & Technology, Finance (Department of Expenditure), Home Affairs, Railways, Works, Housing & Urban Development etc. for information.

Ordered that the Resolution dated 11-3-1994 be published in the Gazette of India and that the State Governments be requested to publish it in the State Gazettes for general information.

P.P. CHAUHAN, ADDL. SECRETARY

Recommendation (Para No. 2.76)

3.3 The Committee is not happy with the performance made under this Sector and recommend that all necessary steps should be taken to get all the schemes/under this sector cleared from Expenditure Finance Committee and expeditious action be taken to execute the same.

Reply of the Government

3.4 The total outlay earmarked for Farakka Barrage Project in the VIII plan is Rs. 166.00 crores out of which Rs. 100.00 crores is for Farakka Barrage Hydro Electric Project. The remaining Rs. 66.00 crores is for Farakka Barrage Project towards the continuing works of the Second Revised Estimate of the Project as well as for additional Special Protection Works for Farakka Barrage, Feeder Canal and Jangipur Barrage.

2. The Farakka Barrage Project was originally approved for Rs. 68.59 crores, in the year 1962. Subsequently the first Revised Estimate for Rs. 156.29 crores was approved in 1969 and second revised estimate of Rs. 267.45 crores was approved in 1987. Presently, the Second Revised Estimate is in operation and the Ministry of Finance have approved the extension of currency of the estimate upto the VIII Plan with an increase of 10% only, *i.e.*, Rs. 294.19 crores.

3. Details of expenditure incurred upto end of VII plan (upto 3/92) and the expenditure (including anticipated exp.) during VIII Plan against the 2nd revised estimate are as under:—

		(Rs. in Crores)
(i)	Upto 3/92	246.36
(ii)	1992-93	9.80
(iii)	1993-94	10.70
(iv)	1994-95	11.64
(v)	1995-96 (Anticipated)	12.03
(vi)	1996-97 (Anticipated)	3.56
	TOTAL	294.19

In view of the above, the 2nd Revised Estimate would be closed by the end of VIII Plan.

4. In response to the recommendation of the Committee, the following two new schemes were placed before the Expenditure Finance Committee in its meeting held on 01.06.1995.

(i) Additional Protection Works for Farakka Barrage at an estimated cost of Rs. 46.36 crores (Annex. I); and

(ii) Additional Protection Works for Feeder Canal and Jangipur Barrage at an estimated cost of Rs. 26.00 crores (Annex. II).

The Expenditure Finance Committee had agreed in principle to take up these additional works during the VIII Plan Period subject to the condition that the total expenditure on works of Farakka Barrage Project (continuing under the 2nd Revised Estimate and new additional works) is not to exceed the VIII Plan allocation of Rs. 66.00 crores.

5. In view of the above, it will be possible to take up new works as approved by EFC to the extent of Rs. 18.27 crores only during VIII Plan (Expenditure during VIII Plan is expected to be Rs. 47.73 crores as in para 3). Accordingly, it has been planned to spend Rs. 2.00 crores in 1995-96 and Rs. 16.27 crores in 1996-97. The works are being prioritised accordingly. As such, the entire allocation of Rs. 66.00 crores for VIII Plan will be fully utilised.

FARAKKA BARRAGE HYDRO ELECTRIC PROJECT

6. The Farakka Barrage Hydro Electric Project is planned to utilise the discharge let down in the main stream of the Ganga across the Barrage and the head difference available between upstream and downstream water levels of the Barrage depending on the quantity of the discharge.

7. Since funds are not available with Central/State Government, a meeting was held on 13.395 with senior officers of the Ministry of Power, where a consensus emerged regarding implementation of this project through private investment route. Accordingly, M/s Water & Power Consultancy Services (India) Ltd. (WAPCOS) were entrusted with the work of preparation of tender documents. They submitted the draft documents to this Ministry in June, 1995. A Core Group of senior officers of Ministry of Water Resources, Central Water Commission, Ministry of Power and Central Electricity Authority has been constituted for expeditious allotment of works for execution of Farakka Barrage Hydro Electric Project to an agency and for further monitoring the progress. The Notice Inviting Tender (NIT) has been published in National Dailys on 14.10.95. The document namely Request for Qualification (RFQ) has also been approved by the Core Group in its meeting on 17.10.95. The sale of this document will start w.e.f. 20.10.95. The Project will be implemented through Build, Own, Operate (B.O.O.) route.

8. The hydrological data, design and drawings of the Farakka Barrage are classified as Secret. The Cabinet is being approached to declassify these documents so that these can be given to successful short listed private entrepreneurs.

9. It would thus be seen that the implementation of the Farakka Barrage Hydro Electric Project is being pursued in a time bound manner.

Conclusion

10. It would also be evident from the above that the Ministry is constantly pursuing and taking necessary steps for getting the schemes cleared by EFC and to ensure the completion of the works in a time bound manner.

Special Protection Work for Farakka Barrage

Rs. in crores

S. No.	Item	Cost
(A)	Preliminary cost for survey, model test etc.	0.34
(B)	Land–L (8)	1.02
(C)	Works	
	(i) Special repair & overhauling of gates, rail track, hoists etc. and gear boxes of main barrage & fish lock of Farakka Barrage & Head regulator	8.00
	(ii) Long term river training measures on the river Ganga upstream of Farakka Barrage, construction of 2 nos. spurs near Manik Chak Ghat at Malda	24.64
	(iii) Protection work of the apron on upstream and downstream of Barrage and of guide bunds as per recommendations of TAC	7.40
	(iv) Special repairs to guide bunds	0.08
	TOTAL of (i) to (iv)	40.12
(D)	Misc. Electrification, water supply & roads	0.34
(E)	Maintenance	0.34
	TOTAL (A to E)	42.16
(F)	Establishment	3.51
(G)	Tools & Plants	0.35
(H)	Audit & Accounts charge	0.34
GRAND TOTAL		46.36

Special Protection Works for Feeder Canal & Jangipur Barrage

Rs. in crores

S. No.	Item	Cost
(A)	Preliminary cost of survey, model test etc.	0.22
(B)	Land	0.00
(C)	Works	
	(i) Protection works for the bed slope and banks of feeder canal as per study committee recommendation	19.20
	(ii) Payment of State Electricity Board for purchase of Power for Jangipur Barrage & other structures for 5 years	1.00
	(iii) Special repairs to the feeder canal embankments and road including drainage arrangements	1.20
	(iv) Special repairs to gates and hoists of Jangipur Barrage gates and Jangipur lock gates	0.14
	(v) Special repairs to gates hoists of regulators syphone etc. along feeder canal	0.08
	(vi) Dredging works in lock channel & feeder canal	0.95
	TOTAL of (i) to (vi)	22.57
(D)	Misc. Electrification, Water Supply & Roads	0.22
(E)	Maintenance	0.22
	TOTAL (A) to (E)	23.23
(F)	Establishment	2.33
(G)	Tools and Plants	0.22
(H)	Audit & Accounts charge	0.22
	GRAND TOTAL	26.00

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Recommendation (Para No. 2.22-2.23)

The Committee do feel that the Ministry is not serious enough to impress upon the Punjab Government to resume construction for completing the remaining negligible works which are lying unattended by the State Government since July, 1990. Moreover, the Committee think that the stance taken by the Punjab State Government that it will not be possible or desirable to resume work on the Canal project unless inter-state water disputes are settled amicably is not tenable. The Committee invariably reach at the conclusion that the Central Ministry of Water Resources failed in its duty to convince the Punjab State Government to resume the work at the project. The Committee had already in its Sixth, Tenth and Sixteenth Report commented upon this phenomenon, but unfortunately the Ministry concerned has not taken any concrete action in deference to the recommendations of the Committee.

4.2 The Committee once again want to convey its feelings to the Ministry that since substantial amount of funds nearly Rs. 500 crores (non-Plan) has already been spent and merely a negligible amount of work remains to be done, it would be in the national interest to get the SYL Canal Project implemented completely within a time-frame.

Reply of the Government

4.3 Ministry of Water Resources has spared no efforts in the matter and continues to do so. The matter is very sensitive and the details can not be divulged in public interest.

Recommendation (Para No. 2.27-2.28)

4.4 The Committee regret to note that the Ministry has not been able to implement the Ghaggar Flood Control Scheme as approved by the Planning Commission in 1972 with an outlay of Rs. 6.5 crores till today after even a prolonged period of 23 years. This reflected badly on the Ministry's planning and effective implementation of plans/programmes/ schemes envisaged by the Ministry. The Committee deplore such acts of indecisiveness and non-implementation by the Ministry in dealing with such indispensable programme/scheme of prime importance directly linked with socio-economic viability of the poor farmers.

4.5 The Committee, in this regard, would like to recommend that the Ministry should take up this issue with the State concerned and necessary immediate allocation must be ensured to the State of Rajasthan as grants-in-aid under the Major Head 3601 to execute the above scheme within a time-bound frame.

Reply of the Government

4.6 The background information about Ghaggar Flood Control Scheme of Rajasthan is as follows:

River Ghaggar, originating in the Shivalik Hills in the foothills of Himalayas, after passing through the States of Punjab & Haryana, enters Rajasthan in Sriganganagar district. Since the seasonal discharges in the river used to be of small magnitude, they were absorbed in the sandy regions of Haryana & Rajasthan. The bed of the river course is known as Ghaggar Nali in Rajasthan. The areas around Ghaggar nali have come under irrigation command of the Bhakra, Indira Gandhi Nahar Project and Gang Canal Systems and as such agriculture in these areas is highly developed. Prior to the year 1955 the flood waters of Ghaggar travelled only once beyond Bilibangan and the flood was of very short duration. However, since then the flood magnitudes have been increasing and flood waters have travelled upto Hanumangarh & beyond. In 1962 & 1964 the floods in Ghaggar travelled upto Pakistan Border, which is about 150 km. from Hanumangarh along the river bed.

2. To prevent the cultivated areas around Ghaggar Nali in Rajasthan from getting flooded by the increasing flood flows received in the river from Upper riparian States of Punjab and Haryana, a project was formulated in 1965 for Rs. 4.22 crores, envisaging diversion of flood waters to the 18 natural depressions available near the town of Suratgarh by constructing Ghaggar Diversion Channel. It was anticipated at that time that the flood waters in the depressions will partly be absorbed and balance would get evaporated. The works envisaged in the scheme were completed in the year 1966.

3. Flood waters of Ghaggar were diverted through the Ghaggar Diversion Channel for the first time in the monsoon of 1967. However, the channel failed during its first running and the same was inspected by the then Union Minister for Irrigation along with officers from the CWC and Rajasthan. As per the suggestions made by the Union Minister some additional works for improvement in the safe running of the channel were incorporated in the first revised project estimate, which was approved in 1972 for Rs. 6.50 crores.

4. Though it was anticipated while framing the Ghaggar Flood Control Scheme that the flood waters in the depressions would partly be absorbed

and balance evaporated, the actual losses were much less and the flood waters remained standing throughout the year on account of presence of an impervious layer below the depressions. This standing water in the depressions has caused water logging in the adjoining areas. Besides, the standing water in the depressions also reduced the capacity to accommodate flood waters in the next monsoon season. As such it became necessary to deplete water and utilise this for irrigation facilities after constructing the link channels and minors. The State Government formulated a re-revised project in 1979 for a cost of Rs. 17.15 crores, which was submitted to the CWC for appraisal. The processing of this re-revised project remained under correspondence when Ghaggar Division Channel again breached in February, 1983. Government of Rajasthan constituted a one man committee for conducting an inquiry to identify the causes of this breach. This Committee made certain technical recommendations for improvement works. Keeping in view these recommendations the project report was further revised in the year 1985 for a cost of Rs. 30.31 crores, which also incorporated the suggestions made by Member (RM), CWC and Central Ground Water Board in respect of the depletion of the Ghaggar depressions to mitigate the problem of water logging.

5. After the abnormal floods experienced in 1988 three emergent works at an estimated cost of Rs. 7.05 crores were approved by the Technical Advisory Committee in September, 1990. These works were to deplete the depressions quickly and they were also within the overall flood control master plan. One of the works has already been completed as reported by Government of Rajasthan.

6. As the flood flows in river Ghaggar were observed to be increasing due to development works in the upper riparian States of Punjab and Haryana, the Technical Advisory Committee in its meeting held on 9.3.91 suggested that a revised project report be formulated by the State Government after getting flood discharge studies carried out through WAPCOS. WAPCOS submitted its report in February, 1995. Based on the recommended flood discharges the State Government has now formulated a project report at an estimated cost of Rs. 105.97 crores after incorporating the recommendations of Water & Power Consultancy Services (India) Ltd. This scheme is being techno-economically appraised by Central Water Commission.

7. From the above, it would be evident that there have been a number of changes in the scope of this project, thereby necessitating detailed investigations and studies before modifying project proposals, the latest of which has been received in CWC only in August, 1995.

8. Ministry of Water Resources does not provide any allocations to projects in the form of grants-in-aid to the States. The Planning

Commission makes the plan allocation in the form of block grants which are not tied up with any sector or project. The State Government appropriates the fund from block grants to various projects as per the priority fixed by them.

Conclusion

9. As far as implementation of the scheme is concerned, the schemes are not only formulated but also executed by the State Government according to the priority fixed by them with funds appropriated from block grants made available by the Planning Commission as per usual norms. However, Ministry of Water Resources is pursuing the case for early implementation of the project.

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE AWAITED

Recommendation (Para No. 2.7)

The Committee are satisfied with the overall performance made by the technical organisastions/institutions under this sector but at the same time note that almost the entire VIII plan outlays allocated under this Sector had been exhausted at the end of third year (1994-95) itself of the VIII plan. The Committee note that priority has been shifted to Command Area Development Programme, Minor Irrigation and Flood Control from Major & Medium irrigation during the VIII plan. The Committee is constrained to observe that the effects of this shifting of priority have not been reflected in the financial allocations under this Major and Medium Irrigation Sector. However, the Committee recommend that the required allocations under this Sector during the next two years of VIII plan be provided to start the new schemes.

Reply of the Government

5.2 The observation of the Committee expressing satisfaction with the overall performance made by the technical organisations/institutions under the major and medium irrigation sector has been noted. The targets projected for 1995-96 are being monitored closely so as to achieve them fully.

2. It is true that Minor Irrigation, Flood Control and Command Area Development Programme have been identified as thrust areas during the Eighth Five Year Plan. This would be evident from the outlays for the different sectors during the VII Plan and VIII Plan as given below:—

(Rs. in crores)

S.No.	Sector	VII Plan	VIII Plan	
			(As allocated by Planning Commission)	As re-allocated by M/o W. R.
1	2	3	4	5
(i)	Secretariat	-	-	1
(ii)	Major & Medium Irrigation	50.00	95	129

(iii) Minor Irrigation	135.00	293	293
(iv) Flood Control	149.93	282	377
(v) Command Area Development	500.00	830	700
TOTAL	834.93	1500	1500

3. It would be seen that higher outlays have been provided for the Minor Irrigation, Flood Control and Command Area Development Programme as compared to the VII Plan outlays.

4. It is true that the Ministry of Water Resources suggested an outlay of Rs. 129 crores under Major & Medium Irrigation Sector against the VIII Plan outlay of Rs. 95 crores as the same was not sufficient even to meet the requirements of ongoing activities under this sector.

5. The details of allocations as made by the Planning Commission for Eighth Five Year Plan and the allocations as suggested by the Ministry of Water Resources are given in para 2 above.

6. In response to this re-allocation the Planning Commission informed that the Eighth Plan allocations made by the Planning Commission are tentative in nature and requirements for all the sub-Sectors including major & medium are to be firmed up during the Annual Plan allocations. This would be evident from the details of plan allocations during the first four years of VIII plan under the major medium sector as given below against an allocation of Rs. 95 crores:—

	(Rs. in crores) Amount)
1992-93	30.20
1993-94	35.60
1994-95	21.99
1995-96	30.21
TOTAL	118.00

7. Actual expenditure during the first three years of the VIII Plan (1992-97) is Rs. 82.49 crores. It is thus true that a substantial portion of the outlay under Major & Medium Sector has been exhausted *vis-a-vis* allocation as approved by the Planning Commission during the first three years itself.

8. However, in consonance with the recommendation of the Committee, an exercise has been undertaken to identify a shelf of new schemes under the Major & Medium Irrigation Sector which could not be taken up during the Eighth plan for want of adequate funding by the Planning Commission. As a result of this exercise, it is fund that the realistic requirement for ongoing schemes excluding Rashtriya Pariyojana Nirman Nigam Limited (RPNNL) during 1995-96 works out to Rs. 30.62 crores against the approved outlays of Rs. 28.84 crores, thus requiring an additional amount of Rs. 1.78 crores in the current year.

9. As regards new schemes, against the approved outlays of Rs. 0.37 crores in the current year, the rivesed requirement works out to Rs. 1.22 crores. For the year 1996-97, the requirement for new schemes have been estimated at Rs. 9.25 crores. Organisation wise details of realistic requirement of ongoing and new schemes are at Annexure I.

Conclusion

10. The above requirement of new schemes will be projected to planning Commission for necessary funding during the remaining period of VIII plan.

CONTINUING SCHEMES

(Rs. in crores)

Name of Organisation	No. of schemes	1995-96		
		Approved Outlays	Revised realistic requirement	Additional requirement
CSMRS	14	4.31	4.31	—
NIH	4	3.25	4.45	1.20
NWDA	1	5.70	6.28	0.58
RPNNL	—	—	—	—
CWC	19	11.38	11.38	—
CWPRS	7	3.70	3.70	—
MOWR (R & D)	—	0.50	0.50	—
Total	45	28.84*	30.62	1.78

* Excluding provision of Rs. 1.00 crore for RPNN Ltd.

NEW SCHEMES

S. No.	Name of Orgn.	No. of schemes	1995-96			1996-97 Requirement
			Approved outlays	Revised requirement	Additional requirement	
1.	CSMRS	10	—	0.85	0.85	6.35
2.	NIH	3	—	—	—	1.30*
3.	NWDA	—	—	—	—	—
4.	RPNN Ltd.	—	—	—	—	—
5.	CWC	3	0.36	0.36	—	1.09
6.	CWPRS	1	0.01	0.01	—	0.51 (for 7 schemes)
Total		17	0.37	1.22	0.85	9.25

* It does not include requirements for Hydrology Project. Full form of Organisations on next page.

CSMRS	=	Central Soil & Materials Research Station
NIH	=	National Institute of Hydrology
NWDA	=	National Water Development Agency
RPNNL	=	Rashtriya Pariyojana Nirman Nigam Limited
CWC	=	Central Water Commission
CWPRS	=	Central Water & Power Research Station
MOWR (R & D)	=	Ministry of Water Resources (Research & Development)

Recommendation (Para No. 2.30-2.31)

5.3 The Parliamentary Standing Committee on Agriculture in its 10th Report had recommended to revitalise and revamp the Nigam. It is a matter of regret that no concrete action on the part of Ministry has been taken to decide the fate of the Nigam. The Nigam at present has been trapped into a vicious circle of financial crisis and is badly in need of budgetary support from the Government of India. For 1995-96, the Nigam has sought budgetary support of Rs. 30 crores for the purpose of repayment of loan to Oil & Natural Gas Commisison (ONGC) and National Mineral Development Corporation (NMDC) and also for salary payable to the surplus staff of the Nigam. Against this, the Government of India have made a provision of Rs. 1 crores as loan for the Nigam during 1995-96.

5.4 The Committee deplore this type of lackadaisical attitude of the Ministry in dealing with the fate of the Nigam and recommend for a time bound decision on the part of Ministry to revamp and revive the Nigam. The Committee is of the opinion that it can be done only by pursuing the matter vigorously with the Ministry of Finance and Department of Public Interprises.

Reply of the Government

5.5 The Rashtriya Pariyojana Nirman Nigam Limited (formerly the National Projects Construction Corporation Limited) is a sick Company according to the conditions stipulated in Sick Industrial Companies (Special Provisions), Act, 1985. However, being a non-manufacturing concern, it is not covered under the Act and, therefore, its case for revival can not be referred to bureau for Industrial and Financial Reconstruction (BIFR). The Department of Public Enterprises advised that the administrative Ministries may take up the exercise on the lines followed by BIFR for the formulation of revival plan for such companies.

2. Accordingly, Secretary (WR) convened an inter-Ministerial meeting comprising of representative from the Ministry of Industry, Ministry of Labour, Ministry of Finance and the Planning Commission on 18.5.1992 to consider the state of affairs of the company. It was decided therein that a comprehensive revival plan be formulated for the Company.

3. The Comprehensive revival plan was formulated by a Company of Chartered Accountants on behalf of the Nigam and it was approved in an another inter-Ministerial meeting taken by the Secretary (WR) on 18.8.1992 and it was decided therein that the proposal for each component of the revival plan be taken up with the concerned Organisations/Ministries. The main components of the revival plan were as under:

(i) Conversion of existing Government loan of Rs. 40.40 crores into equity.

(ii) Waiver of interest of Rs. 14.50 crores and penal interest of Rs. 2.10 crores due on Government loans upto 30.9.1992.

(iii) Interest free working capital fund loan of Rs. 15 crores repayable in 15 half yearly instalments commencing from September, 1997 to meet working capital requirement a term loan of Rs. 5 crores carrying interest @ 15% (with moratorium for 5 year) and repayable in 15 half yearly instalments beginning September, 1995 of modernisation of equipments.

(iv) Grant of Rs. 22 crores from national Renewable Fund to remove surplus manpower with benefits as admissible under Voluntary Retirement Scheme.

(v) Counter Government guarantee of Rs. 60 crores and US $ 1.75 million.

4. The proposal for conversion of the existing Government loans of Rs. 40.40 crores (as on 31.3.1992) into paid up capital and waiver of interest of Rs. 14.50 crores and penal interest of Rs. 2.10 crores thereon (upto 30.9.1992) was forwarded to the Ministry of Finance (CGA) in October, 1992.

5. The Ministry of Finance observed that the return on investments even after implementation of the revival package was extremely low and they suggested in April, 1993 liquidation of the Company in phases over a period of 4-5 years.

6. This was brought to the notice of the Hon'ble Minister (WR & PA) who in May, 1994 directed that a paper for Cabinet Committee on

Economic Affairs be prepared so that the matter could be taken to finality.

7. Accordingly, a draft note for Cabinet Committee on Economic Affairs had been prepared and sent to Ministry of Labour, Department of Public Enterprises and Department of Expenditure, Ministry of Finance in June, 1994 for obtaining their views/suggestions for the following three options available on future of Rashtriya Pariyojana Nirman Nigam Limited.

(i) Phasing out of the Nigam;

(ii) Immediate closure; and

(iii) Privatisation.

8. Secretary (WR) had discussed this with Secretary (Expenditure) who opined that this Corporation can not be revived because even after giving financial assistance, the return on income will be too low and it is not worthwhile to invest in a proposition where return is not ensured. It had further been suggested that after allowing time bound option for Voluntary Retirement approval of the Government may be sought for retrenching surplus staff to be followed by closure activity.

9. Ministry of Labour had suggested that in a situation where final solution emerges to be retrenchment, provision under chapter VA of the Industrial Disputes Act, 1947 may be complied with.

10. Department of Public Enterprises had suggested that Voluntary Retirement Scheme is meant to turn around sick Public Sector Undertaking. Once, the decision is to close Public Sector Undertaking in phases or immediately, Voluntary Retirement Scheme can not be applied and if the Government decision is to close down a Public Sector Undertaking, it may have to be implemented as quickly as possible because phased closure generally would be costly with considerable avoidable payments.

11. Accordingly, the draft note was revised on the basis of the comments/discussions held with various Ministries/Departments and put up in August, 1994 to Hon'ble Minister (Water Resources and Parliamentary Affairs) for approval. The modified draft note after approval of Hon'ble Minister (WR & PA) was circulated to the Ministry of Labour, Planning Commission, Department of Expenditure, Ministry of Finance, Department of Industrial Development, Department of Public Enterprises, and Department of Legal Affairs in January, 1995 for obtaining their comments. Comments have been received from the Ministry of Labour, Planning Commission, Department of Industrial

Development and Department of Legal Affairs. The Planning Commission has observed that the nature of projects likely to be executed by the Undertaking is such that it is unlikely to earn satisfactory rate of return even if the work culture improves and has suggested the phased closure as a better proposition. They have, however, agreed to revise their observations and requisite information has been furnished to them. The Ministry of Labour has observed that if the revival option is approved, the rationalisation of the workforce can be achieved through the Voluntary Retirement Scheme. However, if retrenchment of workers is resorted to, the legal provisions of the Industrial Dispute Act, 1947 will have to be complied with. The Department of Legal Affairs has observed that there was no legal point and it is for the Ministry of Finance to take a view about the financial fall out of the administrative Ministry's proposal in regard to revival and revitalisation of Rashtriya Pariyojana Nirman Nigam Limited. The Department of Industrial Development has supported the revival plan proposed for RPNNL and has recommended the grant of NRF assistance in this case. Additional information/clarifications sought by the Department of Public Enterprises, Department of Expenditure and the Planning Commisison had also been furnished to them.

12. For expediting the reaction of the Ministry of Finance, Department of Public Enterprises and the Planning Commission, the Minister of State (Water Resources) took a meeting with all the concerned officers on 12.6.1995. It was observed by the representative of the Finance Ministry that the draft note for consideration of the Cabinet Committee on Economic Affairs required some modifications. He suggested that a consultant may be appointed in consultation with the Bankers of the Rashtriya Pariyojana Nirman Nigam Limited to review the working of the Corporation and submit his report on the course of action to be taken for deciding the future of the Corporation. Based upon the report, the draft note for consideration of Cabinet Committee on Economic Affairs be revised and resubmitted. Department of Public Enterprises and Planning Commission have concurred with the views of the Ministry of Finance.

13. The Rashtriya Pariyojana Nirman Nigam Ltd. invited bids from short listed consultants. The bids were received from seven agencies. M/s S.R. Batliboi & Company have been appointed as Consultant on 2.9.95. The report of the Consultant is expected to be available during December, 1995.

14. The Standing Committee of Parliament on Agriculture while examining the budget proposal of this Ministry for the year 1994-95 has recommended that the Rashtriya Pariyojana Nirman Nigam Ltd. be revived and revamped.

15. Meanwhile, to keep the Company going a loan of Rs. 6.89 crores had been sanctioned to the Rashtriya Pariyojana Nirman Nigam Limited in February, 1995. This was meant for meeting short term working capital requirement of the Company especially to enable it to disburse salaries and wages to its employees which in some cases was outstanding for the last 5-6 months. A token provision of Rs. 1.00 crore has been made in the budget of the Ministry of Water Resources for the year 1995-96 to provide budgetary support to Rashtriya Pariyojana Nirman Nigam Limited. However, release of further money would depend upon the decision of the Cabinet Committee on Economic Affairs on future of the Company.

16. Further, Rashtriya Pariyojana Nirman Nigam Limited has been advised to encourage the surplus staff to opt for Voluntary Retirement. Necessary funds for incurring expenditure on Voluntary Retirement Scheme are being provided to the Company from National Renewal Fund (NRF). An amount of Rs. 16 crores has so far been released to the Company under this scheme. Since introduction of the scheme 1202 employees have availed of its benefits and an amount of Rs. 13.73 crores out of an amount of Rs. 16 crores released to the Company has been spent by them.

17. Rashtriya Pariyojana Nirman Nigam Limited has also been advised to make special efforts to have its outstanding dues released from different clients. This Ministry is also taking up the matter with the concerned State Governments/Ministries for release of its outstanding dues. As on 30.3.1994, an amount of Rs. 7501.35 lakhs was outstanding against the various clients. Out of this recovery for an amount of Rs. 2793.03 lakhs have been effected during the period 4/94 to 5/95.

18. The Rashtriya Pariyojana Nirman Nigam Limited is also making efforts to obtain new works. As on 1.4.95, 28 bids amounting to Rs. 9525.74 lakhs were under evaluation. Rashtriya Pariyojana Nirman Nigam Limited has submitted further 47 bids amounting to Rs. 38075.72 lakhs during the period 1.4.95 to 31.8.95 and it has secured 17 new contracts amounting to Rs. 2499.09 lakhs. 59 bids amounting to Rs. 45102.37 lakhs are still under evaluation.

19. Rashtriya Pariyojana Nirman Nigam Limited had executed works in Iraq for which payment was due from them. However, this could not materialise as the payment was deferred by the Iraq Government due to various reasons. The Exim Bank has now issued bonds amounting to Rs. 16.02 crores on 31.3.1995 in favour of Rashtriya Pariyojana Nirman Nigam Limited with interest of 12.2% per annum. Bonds are encashable in March, 2001 and interest is payable every

year. State Bank of Patiala, the banker of Rashtriya Pariyojana Nirman Nigam Ltd. have sanctioned a loan of Rs. 12.00 crores against these bonds. This coupled with recovery of outstanding dues has improved the financial status of the Company to some extent.

20. With the above scenario and the efforts being made by the management of Rashtriya Pariyojana Nirman Nigam Ltd., it may be possible for the Company to perform better.

21. The decision on the future of the Company is to be taken by CCEA after receipt of the report of the Consultant.

Conclusion

22. In view of the above, it would be seen that the ministry is vigorously pursuing the issue concerning Rashtriya Pariyojana Nirman Nigam Limited.

The Committee note with satisfaction the sincere step taken by the Ministry of Water Resources towards the revival of the Rashtriya Pariyojana Nirman Nigam Limited (RPNN Ltd.). They recommend that the Ministry of Water Resources should place their note as an item of high priority before the Cabinet Committee on Economic Affairs for urgent and immediate finalisation of the revival package. The Committee also desire that government should take up special efforts including minister level interactions with various agencies for the recovery of dues from various state governments and other agencies to impress upon them about the urgency of repayment of dues to RPNN Ltd :

Recommendation (Para No. 2.52)

5.6 The Committee are concerned to note that the funds earmarked for the Pilot Project for solar energy-based minor irrigation and water supply in rural areas for 1994-95 remained unutilised. They desire that the pilot project should be implemented without any further delay utilising the funds allocated complete during 1995-96.

Reply of the Government

5.7 A proposal for Indo-French Cooperation Programme on water management was mooted in 1989 at the time of the French Prime Minister's visit to India. Subsequently, the Ministry of Agriculture in consultation with the Minor Irrigation Wing of the Ministry of Water Resources formulated a proposal for development of water resources in small agricultural watersheds through installation of solar pumps. This proposal ultimately underwent transmutation as "Pilot Project on use of solar Pumps for Minor Irrigation and Water Supply in Rural Areas".

2. The agreement for cooperation was signed in May, 1993 between the Ministry of Water Resources (MI Wing), Asvin (a French NGO working in India) and TOTAL ENERGIE, a French Company.

3. The project envisages installation of 50 solar pumps in villages in Andhra Pradesh, Madhya Pradesh, Orissa and Bihar. Such villages are to be selected which either do not have supply of electricity or have eratic supply of power and are in such remote locations which make supply of diesel difficult.

4. The cost of the project is Rs. 5.46 crores. The French contribution is FRF 3.8 million as loan and FRF 2 million as grant (Rs. 2.96 crore, loan + grant). Indian contribution is Rs. 2.5 crore.

5. In the agreement it was decided that the scheme could be implemented during the period 1994-95 to 1996-97.

6. After circulating the project to the appraising agencies, the meeting of the Expenditure Finance Committee took place on 13.10.1994 under the Chairmanship of Secretary, Water Resources.

7. The Additional Secretary in the Department of Scientific and Industrial Research insisted that the pumps to be supplied by TOTAL ENERGIE should be tested in the laboratory of Ministry of Non-conventional Energy Sources to verify whether the performance of the pump was according to the rated capacity.

8. This decision of the EFC was conveyed to the French side and Prof. Pierre Amado of ASVIN. Subsequently this Ministry had two meetings with the French side and Prof. Amado. The French side suggested that instead of asking TOTAL ENERGIE to bring pumps to India for testing, the Ministry could satisfy itself by taking information from the agency which was using pumps supplied by TOTAL ENERGIE. They also said Tata Energy Research Institute had also prepared a note on the performance of the pumps which could also be referred to. Accordingly, an officer from Minor Irrigation Wing went to Tilonia where the pump supplied by TOTAL ENERGIE was being used for the purpose of irrigation (horticulture) and drinking water. Whatever data was maintained by the institution was obtained and analysed. On the basis of the data available, it was felt that the performance of the pump was according to the rated capacity. We had obtained the report of TERI, which, however, had not evaluated the pumps for their performance in field conditions.

9. On the basis of the data obtained from Tilonia a fresh memo for EFC was circulated and a meeting convened on 16.2.1995 under the chairmanship of Secretary, Ministry of Water Resources.

10. In this meeting of EFC also, DSIR strenuously objected to the data obtained from Tilonia. According to them, the pumps were not

being tested in Tilonia and therefore, this data could not be considered sufficient for the purpose of evaluation of performance. The planning Commission also supported the view of DSIR.

11. The proposal was approved subject to the condition that a pump is made available to Department of Science & Industrial Research (DSIR) for testing, using their facilities and, subject to satisfactory performance, DSIR and Ministry of Non-Conventional Energy Sources would review the performance test results and satisfy themselves.

12. Accordingly, the French side was informed about the decision taken in the meeting of the EFC and was requested to supply one pump for testing.

13. The Ministry had another meeting with an official of the French Embassy and Prof. Amado of ASVIN. Both the French Embassy official and Prof. Amado emphasised that ASVIN has commenced its work on the project after signing of the Agreement and imposition of fresh condition was quite unfair after the Agreement had been signed. However they agreed that they would consider testing of a pump after consulating TOTAL ENERGIE.

14. Subsequently, we have received a letter from Prof. Amado and also from a representative of TOTAL ENERGIE.

15. TOTAL ENERGIE has agreed for supplying one complete photovoltaic pumpset for testing by the Energy Centre of Ministry of Non-Conventional Energy Sources.

Conclusion

16. The representatives of TOTAL ENERGIE have been shown the testing facility also. The supply of pump from the Company is now awaited. The Ministry is vigorously pursuing the matter with the French side.

Recommendation (Para No. 2.69)

5.8 The Committee note that the Ministry has not done anything substantial to pupularise the above scheme and it has resulted in negligible allocation of Rs. 40 crores in the Central Sector to carry out the above scheme during VIII Plan and even these fund remained utilised all these years. The Committee had already highlighted the above phenomenon in its 10th Report. But going by the poor follow-

up-action by the Ministry, the Committee could not but conclude that the very purpose of the scheme has been defeated. The Committee strongly recommend to the Ministry to popularise and implement this scheme earnestly by exhausting all the remaining allocation earmarked under VIII Plan during the next two years itself.

Reply of the Government

5.9 An Approach paper on package for Flood Proofing Programme for solving the problem of floods in North Bihar was prepared by this Ministry, which was considered by the Committee of Secretaries in the meeting held on 16th October, 1990. It was decided that an amount of Rs. 100 crores be provided for this programme during the VIII Plan period. Against the proposal of Rs. 100 crores, there is an approved outlay of Rs. 40 crores during the VIII Five Year Plan. Committee of Secretaries also proposed setting up of a Steering Committee. Accordingly, a Steering Committee under the Chairmanship of Secretary (Water Resources) was set up under whose guidance this work will be implemented. In the first meeting, the Steering Committee, felt that "North Bihar being the most critical from the point of upsetting of civil life frequently was being taken; but other States of Uttar Pradesh, West Bengal and Assam prone to repeated onslaught of floods may also have to be considered later for being covered under similar programme to reduce the recurring expenditure on relief measures that are required to be undertaken when floods occur". An EFC memorandum of Rs. 19.56 crores for schemes on Flood Proofing has been prepared and is presently under examination by the appraising agencies, *viz.*, Planning Commissing and Ministry of Finance.

2. Considering the severe erosion problem and repeated requests from the State Governments of West Bengal, Uttar Pradesh and Bihar, *i.e,* Ganga Basin States, a provision of Rs. 30 crores was initially provided in the VIII Five Year Plan to take up anti erosion works in the critically affected areas. Similar erosion problem is experienced in the river Brahmaputra and its tributaries. Owing to financial constraints the Brahmaputra Basin States are not in a position to take up the construction of anti erosion schemes out of their own Plan funds. Therefore, the provision made for the Ganga basin States under the Head of "Critical Anti Erosion Works" is proposed to be extended to cover the Brahmaputra Basin also. The EFC Memorandum prepared for Rs. 19.90 crores for antio-erosion schemes in the Ministry is now proposed to assist the Ganga Basin States as well as the Brahmaputra Basin States. The same is presently under examination by the appraising agencies *viz.* Planning Commission and Ministry of Finance.

Conclusion

3. It would, thus, be evident that the Ministry is taking earnest steps in utilising substantial portion of the remaining allocation earmarked under VIII Plan during the next two years itself.

NEW DELHI;
14 December, 1995
23 Agrahayana, 1917 (Saka)

NITISH KUMAR,
Chairman,
Standing Committee on Agriculture.

APPENDIX—I

Minutes of the 92nd sitting of the Standing Committee on Agriculture held on 7th December, 1995 in Committee Room 'B'. Ground Floor, Parliament House Annexe, New Delhi

The Committee sat from 1530 hrs. to 1640 hrs.

PRESENT

Shri Nitish Kumar— *Chairman*

MEMBERS

Lok Sabha

2. Shri Ankushrao Raosaheb Tope
3. Shri Sarat Pattnayak
4. Shri Govindrao Nikam
5. Kumari Pushpa Devi Singh
6. Shri Tara Singh
7. Shri Rudrasen Chaudhary
8. Dr. Parshuram Gangwar
9. Dr. Gunwant Rambhau Sarode
10. Shri Ram Tahal Chaudhary
11. Shri Zainal Abedin
12. Shri Upendra Nath Verma
13. Shri Anantirao Deshmukh

Rajya Sabha

14. Dr. Bapu Kaldate
15. Shri Bhupinder Singh Mann
16. Shri Shiv Charan Singh
17. Shri Som Pal

At the outset Chairman (AC) welcomed the members to the sitting of the Committee and requested them to take up the adoption of the Draft

Report on the Rice Milling Industry (Regulation) Repeal Bill, 1995 and the Draft Action Taken Reports on the Demands for Grants 1995-96 in respect of the Department of Agricultural Research & Education, the Department of Animal Husbandry and Dairying and the Ministry of Water Resources.

2. The Draft Reports were considered one by one and adopted without modifications. The Members of the Committee, thereafter, authorised the Chairman to present the Report on the Rice-Milling Industry (Regulation) Repeal Bill, 1995 and the Action Taken Reports on Demands for Grants 1995-96 in respect of Ministry of Agriculture (Department of Agricultural Research & Education), Ministry of Agriculture (Department of Animal Husbandry & Dairying) and Ministry of Water Resources to the House on a date convenient to him.

The Committee decided that the next Committee for the year 1996-97 may consider and take up "Breeding Policy" as a separate subject for study and report.

The meeting then adjourned.

APPENDIX II

(*Vide* Introduction of the Report)

ANALYSIS OF ACTION TAKEN BY GOVERNMENT ON THE 22ND REPORT OF AGRICULTURE COMMITTEE (10TH LOK SABHA)

I.	Total number of Recommendations	13
II.	Recommendations/Observations which have been accepted by Government : Para Nos. 2.19-2.20, 2.38-2.39, 2.47, 2.49 and 2.66.	
	Total	5
	Percentage	38.46
III.	Recommendations/Observations which the Committee do not desire to pursue in view of Government's reply : Para Nos. 2.13 and 2.76	
	Total	2
	Percentage	15.38
IV.	Recommendations/Observations in respect of which final replies of Government have not been accepted by the Committee : Para No. 2.22-2.23 and 2.27-2.28	
	Total	2
	Percentage	15.38
V.	Recommendations/Observations in respect of which replies of Government are awaited : Para Nos. 2.7, 2.30-2.31, 2.52 and 2.69	
	Total	4
	Percentage	30.76