

# **PUBLIC ACCOUNTS COMMITTEE (1972-73)**

**(FIFTH LOK SABHA)**

## **SIXTY-THIRD REPORT**

**[Action taken on the Recommendations of the Public  
Accounts Committee contained in their Third Report  
(Fifth Lok Sabha) on Exploratory Tubewells Orga-  
nisation (Now Central Ground Water Board)]**



**LOK SABHA SECRETARIAT  
NEW DELHI**

*December, 1972/Agrahayana, 1894 (Saka)*

*Price : Rs. 0.90 Paisa*

# **LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA SECRETARIAT PUBLICATIONS**

Sl. No.	Name of Agent	Agency No.	Sl. No.	Name of Agent	Agency No.
<b>ANDHRA PRADESH</b>					
1.	Andhra University General Cooperative Stores Ltd., Waltair (Visakhapatnam)	8	12.	Charles Lambert & Company, 101, Mahatma Gandhi Road, Opposite Clock Tower, Fort, Bombay.	30
2.	G.R. Lakshminpathy Chetty and Sons, General Merchants and News Agents, Newpet, Chandragiri, Chittoor District.	94	13.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1.	60
			14.	Deccan Book Stall, Ferguson College Road, Poona-4.	63
<b>ASSAM</b>					
3.	Western Book Depot, Pan Bazar, Gauhati.	7	15.	M/s. Usha Book Depot, 585/A, Chitra Bazar, Khan House, Girigaum Road, Bombay-2 B.R.	5
<b>BIHAR</b>					
4.	Amar Kitab Ghar, Post Box 78, Diagonal Road, Jamshedpur.	37	<b>MYSORE</b>		
			16.	M/s. Peoples Book House, Opp. Jaganmohan Palace, Mysore-1.	16
<b>GUJARAT</b>					
5.	Vijay Stores, Station Road, Anand.	35	<b>RAJASTHAN</b>		
6.	The New Order Book Company, Ellis Bridge, Ahmedabad-6.	63	17.	Information Centre, Government of Rajasthan, Tripolia, Jaipur City.	38
<b>HARYANA</b>					
7.	M/s. Prabhu Book Service, Nai Subzmandi, Gurgaon, (Haryana).	14	18.	Swastik Industrial Works, 59, Holl Street, Meerut City.	2
<b>MADHYA PRADESH</b>					
8.	Modern Book House, Shiv Vilas Palace, Indore City.	13	19.	Law Book Company, Sardar Patel Marg, Allahabad-1.	48
<b>MAHARASHTRA</b>					
9.	M/s. Sunderdas Gianchand, 601, Girgaum Road, Near Princess Street, Bombay-2.	6	<b>WEST BENGAL</b>		
10.	The International Book House (Private) Limited, 9, Ash Lane, Mahatma Gandhi Road, Bombay-1.	22	20.	Granthaloka, 5/1, Ambica Mookherjee Road, Belgharia, 24 Parganas.	10
11.	The International Book Service, Deccan Gymkhana, Poona-4.	26	21.	W. Newman & Company Ltd., 3, Old Court House Street, Calcutta.	44
			22.	Pitua K.L. Mukhopadhyay, 6/1A, Banchharam Akur Lane, Calcutta-12.	82
			23.	M/s. Mukherji Book House, 8-B, Duff Lane, Calcutta-6	4

## CONTENTS

		PAGE
COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE		(iii)
INTRODUCTION		(v)
CHAPTER I	Report	1
CHAPTER II	Recommendations/observations that have been accepted by Government	8
CHAPTER III	Recommendations/observations which the Committee do not desire to pursue in view of the replies of Government	32
CHAPTER IV	Recommendations/observations/ replies to which have not been accepted by the Committee and which require reiteration	35
CHAPTER V	Recommendations/observations in respect of which Government have furnished Interim Replies	
APPENDIX	Summary of main Recommendations/conclusions	38

Corrigenda to Sixty-Third Report of Public  
Accounts Committee (Fifth Lok Sabha)  
presented on the 21st February, 1973.

<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>For</u>	<u>Read</u>
4	1.12	3	have	has
5	1.16	1	enquire	enquired
11	Action Taken	10	proceeding	preceding
13	Action Taken	6	this	its
14	-	13-14	construction	construct
38	1.7	12	net	note

PARLIAMENT LIBRARY  
(Library of the House of Commons)  
Clerk of the House of Commons

A. C. 23-2-73 CONTENTS

	PAGE
COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE	(iii)
INTRODUCTION	(v)
CHAPTER I Report	I
CHAPTER II Recommendations/ observations that have been accepted by Government	8
CHAPTER III Recommendations/ observations which the Committee do not desire to pursue in view of the replies of Government	32
CHAPTER IV Recommendations/ observations replies to which have not been accepted by the Committee and which require reiteration	35
CHAPTER V Recommendations/ observations in respect of which Government have furnished Interim Replies	
APPENDIX Summary of main Recommendations/ conclusions	38

## **PUBLIC ACCOUNTS COMMITTEE**

**(1972-73)**

### **CHAIRMAN**

**Shri Era Sezhiyan**

### **MEMBERS**

2. Shri Bhagwat Jha Azad
3. Shri R. V. Bade
4. Shrimati Mukul Banerji
5. Shri Jyotirmoy Bosu
6. Shri K. G. Deshmukh
7. Shri Tayyab Husain
8. Shri Debendra Nath Mahata
9. Shri Mohammad Yusuf
10. Shri B. S. Murthy
11. Shri S. A. Muruganantham
12. Shri Ramsahai Pandey
13. Shri H. M. Patel
14. Shrimati Savitri Shyam
15. Shri Ram Chandra Vikal
16. Shri M. Anandam
17. Shri Golap Barbora
18. Shri Bipinpal Das
19. Shri P. S. Patil
20. Shri Kalyan Roy
21. Shri Swaisingh Sisodia
22. Shri Shyam Lal Yadav

### **SECRETARIAT**

**Shri B. B. Tewari—*Deputy Secretary.***

**Shri T. R. Krishnamachari—*Under Secretary.***

## INTRODUCTION

1, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Sixty-third Report on action taken by Government on the recommendations of the Committee contained in their Third Report (Fifth Lok Sabha) relating to Exploratory Tubewells Organisation (now Central Ground Water Board).

2. On the 6th June, 1972 an 'Action Taken' Sub-Committee was appointed to scrutinise the replies received from Government in pursuance of the recommendations made by the Committee in their earlier Reports. The Sub-Committee was constituted with the following Members:

Shri B. S. Murthy—*Convener*

### *Members*

2. Shri Ramsahai Pandey
3. Shri M. Anandam
4. Shrimati Savitri Shyam
5. Shri H. M. Patel
6. Shri Shyam Lal Yadav
7. Shri Bhagwat Jha Azad

3. The Action Taken Sub-Committee of the Public Accounts Committee (1972-73) considered and adopted this Report at their sitting held on the 28th November, 1972. The Report was finally adopted by the Public Accounts Committee on the 16th December, 1972.

4. For facility of reference the main conclusions' recommendations of the Committee have been printed in thick type in the body of the Report. A statement showing the summary of the main recommendations' observations of the Committee is appended to the Report.

5. The Committee place on record their appreciation of the assistance rendered to them in this matter by the Comptroller and Auditor General of India.

NEW DELHI;

January 11, 1973.

Pausa 21, 1894 (Saka).

ERA SEZHIYAN,

Chairman,  
Public Accounts Committee.

## CHAPTER I REPORT

This Report of the Committee deals with action taken by Government on the recommendations contained in their Third Report (Fifth Lok Sabha) on Exploratory Tubewells Organisation (now Central Ground Water Board).

1.2. Action Taken Notes have been received in respect of all the 29 recommendations contained in the Report.

1.3. The Action Taken Notes/Statements on the recommendations have been categorised under the following heads:

(i) *Recommendations/observations which have been accepted by the Government.*

S. Nos. 2—19 and 21—26.

(ii) *Recommendations/observations which the Committee do not like to pursue in view of the replies of Government.*

S. Nos. 20, 27, 28 and 29.

(iii) *Recommendations/observations replies to which have not been accepted by the Committee and which require reiteration.*

S. No. 1.

1.4. The Committee will now deal with the action taken by Government on some of the recommendations.

*Continuance of the Central Tubewells Organisation without proper planning—paragraph 1.8 (S. No. 1)*

1.5. Commenting on the continuance of the Central Tubewells Organisation (now Central Ground Water Board) without proper planning and clear programme, the Committee observed as follows in paragraph 1.8:

“The Exploratory Tubewells Organisation set up in 1954 undertook groundwater exploration under Operational Agreement No. 12 with the Technical Cooperation Mission of the Government of U.S.A. The Agreement expired on the 30th June 1959. At that stage no perspective plan was drawn up covering the period upto which the Organisation was likely to exist, but it was continued on a three-year basis. Indiscriminate movements of field divisions

took place in the absence of predetermined areas of operation and planned execution of work. Proper maintenance of machinery and stores from the long range point of view was neglected. Further the Organisation could not attract and hold competent technical men on account of the indefiniteness of its continuance. The continuance of the Organisation in this fashion without proper planning and clear programme was hardly conducive to its efficient working and it is no wonder that the overall performance and operational efficiency suffered badly as noted by the Committee in the succeeding sections of this Report. The Committee would like to know why an assessment of the extent of work to be done with a view to determining the life and character of the Organisation could not be made immediately well before the termination of the Operational Agreement No. 12 in 1959."

1.6. In their note dated the 26th October, 1971 the Ministry of Agriculture (Department of Agriculture) has stated:

"The Exploratory Tubewells Organisation was set up in 1954-55 for undertaking groundwater exploration through deep drilling as well as hydrogeological investigations. This was the first venture of its type in the country. Exploratory Tubewells Organisation executed this Project with American assistance received under TCA Programme (O.A-12). For this programme 17 areas—all alluvial sedimentary—had been selected. The Exploratory Tubewells Organisation remained purely drilling Organisation during this period and hydrogeological work was left to the Geological Survey of India officers entirely. The technical assistance was provided by M/s. Ralph M. Parsons Company, California, U.S.A. who supplied the requisite know-how through their experts drillers, engineers and hydrologists. After executing this specific project in 1959 the Exploratory Tubewells Organisation was still not in a position to undertake similar programmes throughout the rest of the country entirely on its own. As such no long range view of the work to be done in different parts of the country could be made at that time. However, the Organisation was allowed to continue and operate in Upper Assam, Bhabbar area of U.P., Western Rajasthan, Coastal area of Saurashtra, Bankura and Midnapore areas of West Bengal. It was also allowed to create its own



rules, the first method of selection is by promotion of our own senior engineers and failing which by transfer on deputation from other Central Organisations and the States and failing both of which by direct recruitment. But even in case of deputationists, only those who have adequate drilling experience would be eligible. There is thus no question of appointing any retired engineer to the post of Chief Engineer, Central Ground Water Board. UPSC have been requested to select Chief Engineer by direct recruitment."

1.10. Asked as to when the recruitment rules for the post of Chief Engineer were amended and when the post was expected to be filled up, the Ministry stated as follows in their note dated 10th December, 1971:

"27th February, 1971. The post of Chief Engineer is expected to be filled up shortly."

1.11. The Ministry stated the following in their further note dated 26th/27th September, 1972:

"On the advice of the U.P.S.C. the Recruitment Rules have been further amended. Notification was issued on 14th August, 1972. This time the post is to be filled up by direct recruitment and the U.P.S.C. has already advertised this post."

1.12. The Committee note that the recruitment rules for the post of Chief Engineer for the Organisation have been amended and that action have been taken to fill up the post which is lying vacant since September, 1968, by direct recruitment through the UPSC. The Committee trust that the post would have been filled up by now.

1.13. The Committee would also like to know the measures taken to train the staff in exploration and drilling work in the interest of improving their performance.

*Review of the working of the Organisation—Paragraph 6.12 (S.No 23)*

1.14. Suggesting a periodical review of the working of the Organisation to be undertaken, the Committee observed as follows in paragraph 6.12:

"The Committee note that the cost per footage drilled suddenly increased from Rs. 16.87 in 1965-66 to Rs. 33.08 in 1966-67

and further went up to Rs. 43.75 in 1968-69. The Committee were informed that as a result of various steps taken in 1969-70 including acquisition of new rigs the cost could be reduced to Rs. 17.29. In the opinion of the Committee, there should be some arrangement in the Ministry in future to have a periodical review of various aspects of the working of the Organisation."

1.15. In a note dated the 26-10-1971, the Ministry of Agriculture (Department of Agriculture) state:

"This is already being done. The working of the Central Ground Water Board is being periodically reviewed in the Ministry by holding meetings of the senior officers of the Central Ground Water Board. These meetings are presided over by the concerned Joint Secretary who is also the Chairman of the Central Ground Water Board. All the important decisions in regard to the working of the Central Ground Water Board are taken in these meetings and its performance is also reviewed."

1.16. The Committee enquire whether apart from holding periodical meetings of the Central Ground Water Board to review its work, the Ministry got the cost analysis reviewed periodically. The Ministry stated as under in their note dated 10-12-1971:

"Efforts are being made to economise as much as possible on the drilling and construction of tubewells. It may, however, be stated that the cost of drilling and construction of tubewells depends on a number of factors and varies from place to place depending on terrain, strata encountered, depth etc. More attention will, however, be given to this aspect."

1.17. The Committee note that the working of the Central Ground Water Board is being periodically reviewed by the Ministry. The Committee desire that the cost of drilling in various regions should also be specifically reviewed by the Ministry with a view to effecting economy.

#### General

1.18. The Committee are glad that after they examined the Exploratory Tubewells Organisation, a number of organisational and functional changes have been effected to improve its working. The following are the major changes effected:—

- (1) The Organisation has been replaced by the Central Ground Water Board which is now being treated as a permanent body.

- (2) The Head-quarters of the five divisions have now been located on permanent basis.
- (3) The recruitment rules for the post of Chief Engineer have been revised and the post which had been vacant since 1938 is being filled up through the U.P.S.C.
- (4) 80 per cent of the temporary posts which had been in existence for the last 3 years have been made permanent.
- (5) A draft perspective plan for the decade, 1970—80, has also been prepared.
- (6) The Ground Water Wing of the Geological Survey of India has been merged with the Central Ground Water Board with effect from the 1st August, 1972.
- (7) A decision has been taken that the Board should concentrate on exploratory work and avoid constructing production tubewells as much as possible and that drilling operations should be extended to hard-rock areas also.
- (8) Action has been initiated in regard to data collection and data analysis to assess the extent of actual utilisation of created potential of tubewells and the resultant increase in agricultural production which would help to evaluate the impact of the Organisation.

1.19. The Committee hope that as a result of the above steps, the working of the Organisation will show marked improvement. They would like to watch the future progress of the Organisation. In order to enable them to do so, they would suggest the following:

- (i) The draft perspective plan of the Central Ground Water Board for the decade 1970—80 should be finalised expeditiously and published for information of all concerned.
- (ii) The collection and compilation of data in regard to the extent and actual utilisation of the potential for additional tubewells created and area irrigated as well as the resultant increase in agricultural production should be expedited. The data in this regard should be specifically mentioned in the Annual Reports of the Central Ground Water Board.
- (iii) The Annual Reports of the Board should be laid on the Table of both Houses of Parliament so that Parliament is kept informed of the progress made in this vital sector without undue delay. The Reports should inter alia give details of the achievements of the Board vis-a-vis the

perspective plan, deployment of drilling rigs, cost per footage drilled, action taken to develop and exploit water resources for agricultural and domestic purposes with a view to facilitating appraisal of the work done by the Organisation and its impact on socio-economic development of the country.

- (iv) The first Annual Report of the Board should contain an assessment of the entire work done prior to its creation. Thereafter the successive reports should give a detailed assessment of the work done by the Board with all the necessary supporting data.

## **CHAPTER II**

### **RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT**

#### **Recommendation**

It was only in 1968 that Government recognised the above shortcomings and remitted the problem to a technical team. The Team has recommended *inter alia* grant of permanent status to the Organisation. The Committee desire to know the decision of Government in this regard. The Committee would urge that the location of headquarters of the fifth Division which was stated to be under consideration should be decided upon without further delay.

[Sr. No. 2 (Para 1.9) of Appendix VIII of 3rd Report to Fifth Lok Sabha]

#### **Action taken**

Central Ground Water Board which has been set up in place of the Exploratory Tubewells Organisation is now being treated as a permanent Organisation. The Headquarters of the fifth Division, have been fixed at Ranchi. This Division is responsible for all drilling work in the Eastern Region.

[Ministry of Agriculture (Department of Agriculture) O.M. No. 5-18/71—MI(A) dt. 26-10-1971].

#### **Further Information**

The Central Ground Water Board was set up in place of the Exploratory Tube-wells Organisation on 3-10-1970. It is not necessary to issue a formal notification to declare a Department as permanent one. But as in case of all other permanent departments, 80 per cent of the temporary posts which had been in existence for the last three years have been made permanent. This decision was taken on 23-2-1971.

[Ministry of Agriculture D.O. No. 5-18/71—MI(A) dt. 10-12-1971].

#### **Recommendation**

From 1962-63 to 1967-68, there was a progressive decline in the exploratory activities of the Organisation. During evidence the

Committee were informed that Government decided in 1961 to take up production drilling also for irrigation purposes as many of the States had no arrangements of their own and that there were years of drought which necessitated sinking of more production wells. While the Committee appreciate the need for production drilling, they are of the opinion that the exploratory work should not have suffered such a serious setback during the period 1965-66 to 1967-68 when there was little or no exploratory drilling for which the Organisation was primarily meant.

[Sr. No. 3 (Para 2.12) of Appendix VIII to 3rd Dept. (5th Lok Sabha)].

#### **Action taken**

Views of the Committee have been noted for future guidance. Kindly also see reply to the next para.

[Deptt. of Agriculture O.M. No. 5-18/71—MI(A) dt. 26-10-1971].

#### **Recommendation**

The Committee learnt that the State Government are being encouraged to have their own production arrangements and that the Organisation has restored the balance in favour of the exploratory wells since 1969-70. Till the end of 1968 the Organisation covered only an area of 10,000 sq. miles. In view of the vast ground yet to be covered, the Committee hope that the Organisation would concentrate on the exploratory work in future leaving the exploitation to the State Governments and private sector.

[Sr. No. 4 (Para 2.14) of Appendix VIII to 3rd Report (Fifth Lok Sabha)].

#### **Action taken**

This is also the view of the Government and the Central Ground Water Board is now concentrating on exploratory work and avoiding construction of production tubewells as much as possible. In fact a firm policy decision has already been taken that the construction of production wells should be taken up only in the following cases:—

- (a) Either when there is surplus drilling capacity in a given situation and it suits Central Ground Water Board to keep the rigs and staff usefully occupied.
- (b) Or when neither State Organisations nor private contractors can undertake jobs which need to be executed in the public interest (e.g., drinking water wells in difficult

areas). The nature of public interest involved is determined carefully in each case and generally we take up such works only when State agencies or private contractors are not in a position to undertake such works. A copy of the order dated 9-9-1970 issued in this connection is enclosed as Annexure 'A' (not printed).

[Department of Agriculture O.M. No. 5-18/71—MI(A) dt. 26-10-71].

### **Further Information**

The Committee desired to know the date when Government decided that construction of production wells by the Central Ground Water Board should be taken up in certain cases. The Department of Agriculture said "9-9-1970" in their D.O. letter No. 5-18/71—MI(A) dt. 10-12-1971.

### **Recommendation**

The Organisation, not being equipped to explore hard rock areas has so far been confining its activities to the non-hard rock areas only. As there is an urgent need to assess the ground water potential in chronic drought affected areas which are mostly hard rock areas, the Committee would suggest that the ETO should be equipped to undertake exploratory work in these areas only.

[Sr. No. 5 (Para 2.14) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### **Action taken**

Realising this fact Government have already decided that Central Ground Water Board should operate in the whole country—in hard-rock and non-hard rock areas alike. As a first step towards this, a project for the quantitative assessment of the groundwater resources of a hard-rock area has been taken up with Canadian assistance. The project covers an area of about 3,000 sq. miles mostly around Hyderabad town in Andhra Pradesh and a small part of it in districts Bidar and Gulbarga of Mysore. From 1972-73 two more projects are to be taken up in the hard-rock areas (in Maharashtra and Mysore respectively) with USAID assistance. A few more projects are likely to be taken up in the coming years. Central Ground Water Board is also procuring rigs suitable for drilling in hard-rock areas.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71].

### Further Information

To a question as to when the Government decided the Central Ground Water Board should operate in the whole country—in hard rock and non-hard rock areas alike. The Deptt. of Agriculture has stated:

Almost at the same time when the Central Ground Water Board was set up in place of the Exploratory Tubewells Organisation.

[Deptt. of Agriculture D.O. letter No. 5-18/71-MI(A) dt. 10-12-1971].

### Recommendation

Quantitative assessment of groundwater resources is an important aspect of exploration to which the ETO should address itself in the coming years. The Committee would commend the work done by the United Nations Development Project in the Jalore region as a Model for the work to be done in the rest of the country.

[Sr. No. 6 (Para 2.15) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### Action taken

The Government is fully in agreement with the views expressed by Public Accounts Committee. In fact, three new projects have been taken up from this year for the quantitative assessment of groundwater resources of three different representative areas. One project has been taken up with UNDP assistance for the quantitative assessment of groundwater resources of certain arid and semi-arid areas of Rajasthan and Gujarat. The second project has been taken up for the study of the water resources of the alluvial areas of the Narmada River basin in Madhya Pradesh as well as in Gujarat. The third project, as mentioned in the proceeding para, covers certain hard-rock areas of Andhra Pradesh and Mysore and is being executed with the Canadian assistance. Six such projects are to be taken up from 1972-73.

[Deptt. of Agriculture O.M. No. 5-18/71—MI(A) dt. 26-10-1971].

### Recommendation

The ultimate aim of the ETO is to have a detailed map for the entire country which would show the possibilities of striking water and a quantitative assessment of all the groundwater aquifers



which would indicate the safe limit for pumping. The Committee would like a perspective plan to be drawn up defining priorities in consultation with the Geological Survey of India and the State Governments with a view to cover the whole country.

[S. No. 7 (Para 2.16) of Appendix VIII to 3rd Report (5th Lok Sabha).]

#### **Action taken**

A draft Perspective Plan for the Central Ground Water Board for the decade 1970-80 has been already prepared. This draft Perspective Plan would be finalised very soon. It may be mentioned that the annual programme of the Central Ground Water Board is always finalised in consultation with the States. Sites for exploratory boring are always selected in consultation with the Geological Survey of India.

[Deptt. of Agriculture O.M. No. 5-18/71—MI(A) dt. 26-10-1971].

#### **Further Information**

When asked to state the date when Government prepared a draft perspective plan for the Central Ground Water Board for the decade 1970—80, the Deptt. of Agriculture stated:

March, 1971. This draft is, however, being revised in view of the amalgamation of the Groundwater Wing of the GSI with the CGWB.

[Deptt. of Agriculture D.O. No. 5-18/71—MI(A) dt. 10-12-1971]

#### **Further Information**

The Ground Water Wing of G.S.I. has since been merged with C.G.W.B. with effect from 1-8-72. Detailed proposals for V Plan are being formulated now. Perspectivt Plan would also be revised

[Deptt. of Agriculture u/o No. 5-18/72—MI(A) dt. 26/27-9-1972]

#### **Recommendation**

That the Organisation has not given a good account of itself will be evident from the fact that as against a target of 1297 exploratory tubewells, only 763 could be drilled upto the end of 1969-70. The target and achievement in relation to production tubewells were 1662 and 1314 respectively. The Committee would like to know the specific reasons for the failure to reach the targets which must have obviously been fixed from year to year taking into account all the limitations of the Organisation.

[S. No. 8 (Para 3.15) of Appendix VIII to 3rd Report (5th Lok Sabha)]

### Action taken

In the first year of its operations i.e. 1955-56, the Exploratory Tubewells Organisation did 30 exploratory tubewells and the target was fully achieved. In 1956-57, 57 exploratory tubewells could be completed against the target of 91. There was thus some shortfall but it is to be remembered that the Organisation was then still in this infancy and whereas it worked only in one State i.e. Madhya Pradesh in 1955-56 it had to work in four different States in 1956-57, which involved considerable movement of rigs, equipment etc. This also involved working in different hydrogeological settings, calling for employment of different evaluation techniques. The shortfall in the achievement was also due to the late arrival of the rigs and equipment from U.S.A. Also in 1956-57 the Organisation had to work in difficult areas in Gujarat and Rajasthan. In 1957-58 Exploratory Tubewells Organisation could complete 95 exploratory tubewells against the target of 108. Thus, there was not much shortfall and a number of exploratory tubewells constructed this year was more than three times the number of tubewells constructed in the first year of its working. Also, the Organisation had extended its activities to nine States. In 1958-59, the Exploratory Tubewells Organisation could complete 87 exploratory tubewells against the target of 81. The performance was, therefore, quite satisfactory. In 1959-60 the Exploratory Tubewells Organisation could complete only 57 tubewells against the target of 99. In this year the achievement was definitely below the target, but the Organisation had extended its activities even to a difficult State like Assam. Also, during this year rigs had to be shifted from a number of places and sites in Rajasthan and Gujarat were also in difficult areas. In West Bengal, the Exploratory Tubewells Organisation operated in coastal areas which were more difficult than other areas and the exploratory work called for a number of tests in view of the sea water intrusion into the fresh water aquifers. Number of rig-days were lost in the shifting operations particularly shifting of rigs through railway wagons. This year there was also a target of construction of 64 deposit wells but this work was not taken up. In 1960-61 the Exploratory Tubewells Organisation constructed 55 exploratory and 10 deposit wells against the target of 62 exploratory and 5 deposit wells. Progress appears to be satisfactory. In 1961-62, the Exploratory Tubewells Organisation, completed 52 exploratory and 69 deposit wells against the target of 137 exploratory and 90 deposit wells. This was the first year when the construction of production tubewells was taken up on a big scale and as such the

exploratory programme suffered to some extent. In 1962-63 the Exploratory Tubewells Organisation did 74 exploratory and 122 deposit wells against the target of 99 exploratory and 149 deposit wells. The targets could not be achieved fully. This year the Exploratory Tubewells Organisation had to undertake construction of two deep tubewells in Calcutta town for augmenting the drinking water supply. This took a lot of time and of the two rigs used for this purpose one could not do any other work for six months because of fishing operations. But, for the first time, the Exploratory Tubewells Organisation could construct 196 tubewells in a year and drilling was done up 2000 ft. Thus, though there is slight shortfall in the achievements the overall performance is quite satisfactory. In 1963-64 the Exploratory Tubewells Organisation could construct 65 exploratory and 67 deposit wells against the target of 102 exploratory and 88 deposit. The shortfall in achievement is again mainly because of the shifting of the rigs as this year we had to undertake work in Madras, Mysore and Maharashtra where no work had been done in the previous year. Also, in Bihar more work had to be done and for this also rig had to be sent from other State. In 1964-65 the Exploratory Tubewells Organisation had constructed 212 deposit wells and 10 exploratory wells against the target of 250 deposit wells and 90 exploratory wells. The slight shortfall in the achievement is again because of the shifting of rigs and construction of tubewells in difficult arid and semi-arid regions of Rajasthan and Gujarat. In this year 85 tubewells were constructed in Rajasthan and 47 in Gujarat. Thus, though there is slight shortfall in the achievement the overall performance is quite satisfactory. It has also to be kept in mind while fixing the targets we only go by the number of tubewells and not by the depth of tubewells and the total footage to be drilled, because when the targets are formulated it is not possible to have a precise idea of the depth of drilling required in case of each tubewells. Also, the targets are fixed, we do not know in advance as to how many quality tests of water sample will have to be performed at the time of exploratory work. Thus, deeper drilling, construction of tubewells in difficult areas and quality tests delay operations and it may not be always possible to achieve targets fully in respect of the number of wells. Some difference can there be and keeping these considerations in view the performance during 1964-65 appears to be satisfactory. In 1965-66 the Exploratory Tubewells Organisation constructed 63 exploratory and 257 deposit wells against the target of 10 exploratory and 295 deposit wells. In this year also, the construction of tubewells in difficult areas of Rajasthan and Gujarat continued and the slight shortfall in the achievement is because of this consideration. In Bihar, a lot of time was taken by the State Government in giving us

the sites and this also delayed our operations. Even then difference between the targets and achievements is not much and on the whole the performance can be considered as satisfactory. In 1966-67 we constructed 189 deposit wells against the target of 161. The performance was thus quite satisfactory although no exploratory work could be included in the programme because of the urgent need for the construction of production tubewells in the drought affected areas. In 1967-68, two exploratory and 155 deposit wells were constructed against the target of 17 exploratory and 205 deposit wells. The main reason for the shortfall is the delay caused by the U.P. Government in giving sites for the construction of production tubewells. In 1968-69, 63 exploratory and 106 deposit wells were constructed against the target of 237 exploratory and 160 deposit wells. The shortfall in the achievements was because of two reasons. First, of the two rigs expected from the UNDP one was received very late and the second was received in the next year. Secondly, the targets had been framed in the expectation that we would be able to procure our own 9 rigs which were actually received in 1969-70. Thus, at the time of the formulation of the targets we were expecting 11 new rigs but only 1 was received in that year and that too also towards the end of the year. In view of this, the construction of 106 deposit and 63 exploratory tubewells would appear to be rather satisfactory. In 1969-70, we constructed 127 deposit and 113 exploratory tubewells against the target of 195 deposit and 205 exploratory. As compared to the target, there is some shortfall in the achievements but the overall progress achieved during this year was significant. First, 9 new rigs purchased by us and 2 rigs obtained from the UNDP had been fully commissioned. The trend towards the construction of more production tubewells was effectively checked and reversed. This year 113 exploratory tubewells were constructed—more than the previous record performance of 95 tubewells in 1957-58. The Organisation was again geared to the exploratory work. A number of very deep tubewells were constructed and in Gujarat we discovered an artisan belt in the semi-arid region of Banaskantha. The total footage drilled was 1,69,126. The original target for deposit wells was 195 including 30 in Rajasthan. Later on, it was decided not to do any further production drilling work in Rajasthan. Thus, the Organisation again started giving more importance to the exploratory work.

From the above it is clear except in the years 1959-60, 1960-62, 1967-68 and 1968-69, the targets were either fully achieved or over-achieved or the achievements were only slightly below the targets. In these years the shortfall in the achievements was because of the

shifting of rigs, expansion of our activities in a number of States, drilling in difficult areas, delay taken in the giving of sites by the States, late arrival of rigs, time taken in repairs etc. etc.

[Deptt. of Agriculture O.M. No. 3-18/71-MI(A) dt. 26-10-1971]

### **Recommendation**

Of the wells drilled only 316 exploratory and 1076 production wells proved to be successful. As the production tubewells are sunk only in proven areas the Committee do not understand the reasons for the failure. As regards exploratory tubewells, the Committee hope that an effective coordination with GSI would be established so that there may not be such larger scale failures involving infructuous expenditure.

[Sr. No. 9 (Para 3.16) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### **Action taken**

Normally, construction of production tubewells is taken up only in proven areas, but because of drought, production tubewells had to be sunk even in those areas of Rajasthan and Bihar where no exploratory work had been done. 240 production tube wells which did not prove successful, most of them are in those areas where ETO had not previously done any exploratory work. So far as exploratory tubewells are concerned, sites are always selected in consultation with the Geological Survey of India. The CGWB will continue to maintain close coordination with GSI, even though it has been decided to merge the Groundwater Wing of GSI with CGWB. Such coordination will be achieved automatically because the Director General, GSI is an ex-officio member of the Board.

[Deptt. of Agriculture O.M. No. 5-18/71-MI (A) dt. 26-10-1971]

### **Recommendation**

Out of the 316 successful exploratory wells sunk, only 251 were handed over to State Governments. The Committee note that some of the tubewells constructed in Rajasthan were not being commissioned and put to use by the State Government. This points to

the need for proper consultation with the States before selecting sites for exploration as they are the ultimate users of the tubewells.

[Sr. No. 10 (para 3.1) of Appendix VIII to 3rd Report (5th Lok Sabha)].

#### **Action taken**

In addition to 251 wells already handed over to States, 20 more have been handed over, States are being persuaded to take over the remaining wells. The exploratory programme is always formulated in consultation with the States.

[Deptt. of Agriculture O.M. No. 5—18/71—MI(A) dt. 26-10-1971].

#### **Further Information**

The delay is on the part of the State authorities on account of non procurement of pumps. non-acceptability of wells due to lower discharge, poor quality of water, etc. The remaining cases are being vigorously followed up. 29 wells in Rajasthan are yet to be handed over to the State Government. The State Government have not yet taken over these wells on account of poor discharge and high salinity. In certain cases drilling was done even in unimproved areas because of drought conditions. After the wells are handed over, these are to be commissioned by the State Government.

[Deptt. of Agriculture D.O. No. 5—18 71—MI(A) dt. 10-12-1971].

#### **Further Information**

Five more wells have been handed over. We are pursuing this matter with States for handing over the remaining 40 wells.

[Deptt. of Agriculture u/o No. 5—18/72—MI(A) dt. 26/27-9-1972].

#### **Recommendation**

During evidence the Committee were informed that tubewells that yielded 20,000 gallons per hour were at present regarded as successful and handed over to State Governments on payment of cost. The Committee desire that mutually acceptable terms in regard to minimum yield and payment of cost be settled in future between the Organisation and State Governments before undertaking drilling so that the entire cost of wells with yields less than 20,000 gallons per hour may not go waste.

[Sr. No. 11 (Para 3.18) of Appendix VIII to 3rd Report (5th Lok Sabha)].

#### **Action taken**

The States have to pay full cost (including overheads) only for those tubewells which give a discharge of more than 20,000 IGPH. The unsuccessful tubewells giving a discharge between 15000 to 20000 IGPH are given to the States only on actual cost (without overheads). Tubewells giving a discharge of less than 15,000 IGPH are given to States only on payment of actual cost of pipes minus the cost of extraction which would have to be done if the tubewell is not accepted by the State Government. Thus, for unsuccessful tubewells States have to pay at reduced rates and we are persuading States to take over these unsuccessful tubewells. In most of the cases the difficulty in taking over the tubewells is not only because of the lesser yield but also of the water quality. Therefore, in difficult areas we try to settle terms regarding minimum yield and the water quality before starting drilling operations.

[Deptt. of Agriculture O.M. No. 5-18/71—MI(A) dt. 26-10-1971].

#### **Recommendation**

The Committee are concerned to find that according to the Technical Team "development of wells is not given adequate attention and the job is done rather in a haphazard manner." In some cases wells drilled even in proven areas gave very low discharge as compared to surrounding wells with the result that the work had to be redone at the insistence of State Government at extra cost. The Committee expect that such specific instances of lack of proper care and supervision would be dealt with severely. In this connection the Committee hope that in order to bring down the number of abandoned wells detailed scientific studies would be initiated to evolve proper wells designs for different areas as suggested by the Technical Team.

[Sr. No. 12 (Para 3.19) of 3rd Report (5th Lok Sabha)].

#### **Action taken**

With the introduction of the better capacity rigs and the availability of well screens indigenously, it has now been possible to introduce better well designs for different areas. Even in the problematic semi-arid areas of Gujarat and Tarai, good deep tubewells with improved designs have been constructed. Government has, however, taken note of the Comomittee suggestion regarding the

need for more attention being paid to "tubewell design" and will initiate suitable action.

[Deptt. of Agriculture O.M. No. 5-18/17-MI(A) dt. 26-10-71]

### **Recommendation**

The Committee take a serious view of the findings of the Technical Team that "Inspection of field operation both by the senior officers at the headquarters and even the Executive Engineers in the Field Divisions were far too inadequate resulting in poor operational efficiency and overall achievements." The Committee trust that such laxity in supervision will not be allowed to continue.

[Sr. No. 13 (Para 3.20) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### **Action taken**

Norms for inspections to be carried by different officers have already been fixed. A copy of our order issued in this connection on 13-1-1970 is enclosed as Annexure 'B' (not printed). These norms of inspection are being strictly followed.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971]

### **Recommendation**

The Committee note that till the end of 1968 a potential has been created for additional 12,000 tubewells which may irrigate 2.5 million acres. The system of data collection and data analysis should forthwith get into an assessment of the extent of actual utilisation of the created potential and the resultant increase in agricultural production if the Organisation is to justify its existence.

[Sr. No. 14 (Para 4.10) of Appendix VIII to 3rd Report (5th Lok Sabha)]

### **Action taken**

The Central Ground Water Board will take up this work soon.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71]

### **Further Information**

The data on the utilisation of the successful exploratory tubewells handed over to the State Governments is being collected from the State Governments. A standard proforma has been circulated for



this purpose. The data will be compiled after information from all the State Governments has been received,

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26/27-9-71]

### **Recommendation**

The Committee are distressed at the abnormal loss of operational days ranging from 37 per cent to 63 per cent of the total working days during the years 1966-67 to 1969-70. Apart from the loss of operational days, the rigs do not appear to have worked at the optimum level of efficiency. All these resulted in poor overall performance and high cost of operation. To put it in the words of a representative of the Ministry, "no proper maintenance of rigs took place and no proper preplanning of each year's activity seems to have been done in those years. Otherwise the results would have been better." The Committee hope that suitable corrective measures would be taken to put the Organisation on efficient footing.

[Sr. No. 15 (Para 5.25) of Appendix to 3rd Report (5th Lok Sabha)]

### **Action taken**

Views of the Committee have been noted for future guidance. It may, however, be pointed out that as a result of the number of steps already taken by us the Organisation is now giving much better performance. In 1970-71 we constructed 148 exploratory and 118 deposit wells with a total footage of 1,94,883 ft. The Organisation has extended its activities even to hard rock areas and the emphasis now is on exploratory work, particularly the quantitative assessment of the ground water resources of different areas to indicate limits of safe pumping. For this three projects have been taken up from this year and six projects are to be taken up from the next year.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71]

### **Recommendation**

The number of rigs which individually suffered loss of operational days in excess of 120 days in a year during the period 1966-67 to 1969-70 was 14 due to off-season, 9 due to waiting, 2 due to transit and 8 due to repairs out of 27 rigs employed on an average. Although maximum off-season period is only 3 months in a year the loss suffered went up to as much as 235 days in one case. The Committee would like Government to examine in details all such cases of heavy

losses of operational days with a view to take effective remedial action.

[Sr. No. 16 (Para 5-26) of 3rd Report (5th Lok Sabha)]

#### **Action taken**

In this particular case 235 days were lost because of 90 days in off-season and 145 days for major repairs. This rig has been working with us since the inception of the ETO and before that it had worked even in the Central Ground Water Organisation which was wound up in 1949. The rig was quite old and needed major repairs. As a result of the number of steps already taken by us there are no such cases of heavy loss of operational days now and the CGWB is giving much better performance. However, the views of the Committee have been noted for future guidance.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971]

#### **Further information**

The total loss of operational days was 235 in this case. This includes normal off-seasonal period of 90 days.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 10-12-1971]

#### **Recommendation**

The Committee cannot find any justification for the long waiting for site, material and equipment, staff and last but not the least instructions and decision from higher officers. A need for better planning and coordination is clearly indicated.

[Sr. No. 17 (Para 5-27) of Appendix VIII to 3rd Report (5th Lok Sabha)]

#### **Action taken**

There is now much better planning and coordination in the activities of the Central Ground Water Board as reflected by its performance for the last two years. However, the views of the Committee have been noted for future guidance and the Organisation is striving hard to give better performance every year.

[Deptt. of Agriculture U/O No. 5-18/72-MI(A) dt. 26-10-1971]

### **Recommendation**

Now that the jurisdiction of each field division has been clearly defined, the Committee trust that there would be no more of criss-cross movements of rigs involving avoidable loss of time and shifting charges as in the past.

[Sr. No. 18 (Para 5.28) of 3rd Report (5th Lok Sabha)]

### **Action taken**

Views of the Committee have been noted for future guidance.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71]

### **Recommendation**

Admittedly repairs were taking place and rigs were moved during the working season there by increasing the total loss of operational days. The Committee would suggest that repairs and movement of rigs should be done as far as possible during off-season.

[Sr. No. 19 (Para 5.29) of Appendix VIII to 3rd Report (5th Lok Sabha)]

### **Action taken**

On the whole this has been our practice right from the beginning and now we are very strictly adhering to it.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71]

### **Recommendation**

An important deficiency in the Organisation is the lack of adequate trained personnel which is understandably responsible for the efficiency being at a low ebb. The Committee note that some of the better men left the Organisation because there was uncertainty about its permanent set up. The Committee would like Government to take a firm decision about the role, status and functioning of the Organisation at an early date as recommended elsewhere in this Report.

[Sr. No. 21 (Para No. 5.31) of Appendix VIII to 3rd Report (5th Lok Sabha)]

### Action taken

As already pointed out the ETO has been superseded by the Central Ground Water Board which is a permanent organisation and which is now to become an apex national body dealing with all aspects of groundwater exploration, assessment, development and scientific management as a result of the amalgamation of the Groundwater Wing of the Geological Survey of India with the Central Ground Water Board. Annexure 'C' gives the functions of the Central Ground Water Board and Annexure 'D' explains its organisation. (Annexures I and II).

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-71]

### ANNEXURE I

#### FUNCTIONS AND RESPONSIBILITIES OF THE CENTRAL GROUND WATER BOARD

The Board will act as the apex body at the National level in respect of all matters relating to the exploration, assessment, development, scientific management, and regulation of the country's ground water resources. The discharge of this responsibility will specifically involve work of the following nature:

1. The acquisition and employment of the latest techniques (including remote sensing, geophysical and aero-magnetic surveys) for the location of the country's ground water resources in the shortest possible time.
2. Exploratory drilling through the fleet of 37 rigs inherited from the Exploratory Tubewells Organisation (a few more sophisticated rigs are being added to this fleet) in areas which geophysical surveys indicate are likely to be ground water worthy. Such drilling has also to be carried out in areas taken up for detailed assessment studies.
3. Quantitative resources assessment studies by collection and interpretation of data relating to precipitation, evapo transpiration, consumption by vegetation, surface run off percolation, presence and lateral movement of ground water in geological formations, pump-tests, retrun flows, etc. such studies are necessary to determine the recharge capacity of aquifers (and therefore th safe limits of pumping) and will have to be undertaken in any case by the Central Ground Water Board on a basin-wise basis in areas which cut across State boundaries. Even in basins which are situated entirely within

a State, such studies will have to be undertaken by the Central Ground Water Board till such time as State Ground Water Organisations (which are in the process of being set up) acquire the necessary expertise.

4. Acquisition for its own use as well as for the use of State Ground Water Organisations of the latest expertise in undertaking quantitative assessment studies. Such expertise will include the use of analog-models and systems-analysis techniques. This is being attempted by undertaking Projects with foreign assistance from UNDP, USA, Canada etc. as well as by arranging for training fellowships for Central and State officers.

5. Assessment planning from the point of view of the country's requirements in respect of drilling machinery and equipment of various kinds as well as of pumping sets, pipes etc.

6. Assistance and advice in respect of the technical appraisal of proposals entertained by the ARC, AFC, REG, and other similar institutions for loans for the development of ground water resources on a compact area basis.

7. Assistance and advice to State Governments in matters relating to the setting up an efficient functioning of State Ground Water Organisations. This will include advice with regard to the proper utilisation of drilling rigs (which are by and large grossly under-utilised at present), as well as extension services for farmers and the collection for such basic hydrogeological data as will be the responsibility of State Governments. Technical advice regarding the design and construction of tubewells, the deepening and boring of dug wells in various geological situations will also be given by the Central Ground Water Board to the appropriate State authorities.

8. Planning at the national level of the allocation of financial resources, including credit for ground water development in various parts of the country.

9. Negotiating with the world bank and other international agencies for financial and technical assistance in support of the development of ground water in various States. In this connection it may be mentioned that loan agreements in respect of four States have already been concluded with the World Bank and two more are under negotiation. Several more loans of this kind are projected.

10. The organisation and co-ordination of research in problems of ground water assessment and management as well as in tubewell

~~design and construction.~~ Of particular importance in this connection is the conducting of research in methods of artificial recharge of ground water aquifers, a subject which is beginning to attract a great deal of importance abroad. The publication and dissemination of the results of such research.

11. The utilisation of the Board's specialised drilling capability in exceptional cases, for the construction of production tubewells in difficult areas and situations where no other agency is available to undertake work, which is considered to be important in the public interest.

12. To initiate and co-ordinate training programmes, both within and outside and country for technical staff engaged in ground water work.

13. To advise and assist State Governments in matters relating to the legal and administrative steps to be taken for controlling and regulating the exploitation of ground water resources. Such regulation is necessary if infructuous investments are to be avoided. In this connection a Model Bill for the Regulation and Control of Ground Water Development has been already circulated to all State Governments. (copy attached).

## ANNEXURE II

### ORGANISATION OF THE CENTRAL GROUND WATER BOARD

The Central Ground Water Board, which is responsible for the exploration, assessment, development, scientific management and regulation of the country's groundwater resources seeks to give due representation and importance to the various disciplines concerned. The Board is at present functioning under the Chairmanship of the Joint Secretary in charge of the Land and Water Division in the Department of Agriculture and it has been decided that it will have the following full-time and ex-officio members:

#### FULL TIME MEMBERS

(A) *Member-Engineering (Chief Engineer)*

(Rs. 1800—2000).

He will be responsible for all drilling operations, the procurement, maintenance and repair of machinery, stores and spare parts, the construction of production tubewells, wherever necessary as well as

all matters relating to the design of tubewells and improvement of dug-wells. (This post exists and the choice of a suitable incumbent is under the consideration of the Government and U.P.S.C. For the present, the Superintending Engineer is holding the charge of this post).

**(B) Member-Hydrogeology (Chief Hydrogeologist) (Rs. 1800—2000)**

He will be responsible for all Hydrogeological work (including remote-sensing, geo-physical and auro-magnetic surveys) and application of techniques like analog-models and systems-analysis. He would also supervise all quantitative resource assessment projects as well as the technical appraisal of groundwater development schemes posed to lending institutions like ARC, AFC, REG., etc. (This filled up shortly. For the present, the Superintending Hydrogeologist is holding the charge of this post).

**(C) Member-Development: (Rs. 1800—2000)**

The officer has been hitherto functioning as the Joint Commissioner (Minor Irrigation) in the Department of Agriculture and is responsible for watching the progress of groundwater development schemes in different States, maintaining effective liaison with State Ground Water Organisations and for generally giving them advice and guidance with regard to various technical matters. As member Development he will be responsible for maintaining effective liaison with ARC, REC, State Electricity Boards and other concerned institutions with the object of ensuring that compact area development schemes are formulated and implemented efficiently and that any bottlenecks which appear are removed expeditiously. He will also be responsible for assessment from time to time of our requirements in respect of drilling machinery and equipment of various kinds as well as of pumping sets, pipes etc.

**(D) Member Administration-cum-secretary C.G.W.B.**

He is the concerned Deputy Secretary in the Department of Agriculture and is responsible for all administrative work pertaining to the Board.

**EX-OFFICIO MEMBERS**

**(E) Member-Finance:**

Director, Internal Finance in the Department of Agriculture is an ex-officio member of the Central Ground Water Board and as such

is responsible for advising the Board with regard to all financial matters including creation of the new posts.

**(F) Member-Geology:**

Since the Geological Survey of India is responsible for the Geological mapping of the country and has also done some work in the field of groundwater the Director-General, G.S.I. has been made an ex-officio member of the Central Ground Water Board. This arrangement will ensure that there is fullest liaison between the Geological Survey of India and the Central Ground Water Board and that no duplication of effort takes place.

**(G) Member—Surface Water:**

As the collection and interpretation of data relating to surface water flows constitute an important part of our quantitative resource assessment projects, the concerned member of the CW&PC has been made an ex-officio member of the Central Ground Water Board.

**(H) Member—Hydrometeorology:**

As the study of data relating to precipitation is also a part of our quantitative resource assessment projects, Director-General, Observatories has also been made an ex-officio member of the Board.

2. As the factions of the Board expand and its work grows in value a few more members might have to be added to look after items such as research, training and publications.

3. In the field, the Central Ground Water Board is today operating through five Divisional Offices (Situated at Ambala, Ahmedabad, Madras, Varanasi and Ranchi) and three Resource Assessment Projects (situated in Rajasthan Gujarat, Andhra Pradesh, Mysore and Madhya Pradesh—Gujarat), all of which are being undertaken with foreign assistance. Next year another six Resource Assessment Projects are expected to be put on the Ground (in the States of Mysore, Maharashtra, Punjab, Haryana, Uttar Pradesh and Bihar) of which three will be in collaboration with foreign agencies. Thus, we will soon have five Divisional offices and nine Resource Assessment Projects. It is proposed in due course to place all this activity under five Regional Directorates.

**Recommendation**

It is surprising to learn that this important Organisation was run with retired or inexperienced personnel which the Committee



strongly deprecate. What is more surprising is that the Organisation was going without a Chief Engineer from September, 1968. The Committee would urge that the appointment to the post should be made soon. Sustained measures should also be taken to train staff in exploratory and drilling work in the interest of improving performance.

[Sr. No. 22 (Para 5.32) of Appendix VIII to 3rd Report (5th Lok Sabha)].

#### **Action taken**

The recruitment rules for the post of Chief Engineer have already been amended. Under the revised recruitment rules, the first method of selection is by promotion of our own senior engineers and failing which by transfer on deputation from other Central Organisations and the States and failing both of which by direct recruitment. But even in case of deputationists, only those who have adequate drilling experience would be eligible. There is thus no question of appointing any retired engineer to the post of Chief Engineer, Central Ground Water Board. UPSC have been requested to select Chief Engineer by direct recruitment.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971].

#### **Further information**

When asked as to when the recruitment rules for the post of Chief Engineer had been amended and when the post of the Chief Engineer was expected to be filled up, the Ministry stated:

27-2-71. The post of Chief Engineer is expected to be filled up shortly.

[Deptt. of Agriculture S.O. No. 5-18/71-MI(A) dt. 10-12-1971].

#### **Further information**

On the advice of the U.P.S.C. the Recruitment Rules have been further amended. Notification was issued on 14th August, 1972. This time the post is to be filled up by direct recruitment and the UPSC has already advertised this post.

[Deptt. of Agriculture U.O. No. 5-18/72—MI(A), dated 10-12-1972].

#### **Recommendation**

The Committee note that the cost per footage drilled suddenly increased from Rs. 16.87 in 1965-66 to Rs. 33.08 in 1966-67 and fur-

ther went up to Rs. 4375 in 1968-69. The Committee were informed that as a result of various steps taken in 1969-70 including acquisition of new rigs the cost could be reduced to Rs. 17.29. In the opinion of the Committee, there should be some arrangement in the Ministry in future to have a periodical review of various aspects of the working of the Organisation.

[Serial No. 23 (Para 6.12) of Appendix VIII to 3rd Report (5th Lok Sabha)]

#### **Action taken**

This is already being done. The working of the Central Ground Water Board is being periodically reviewed in the Ministry by holding meetings of the senior officers of the Central Ground Water Board. These meetings are presided over by the concerned Joint Secretary who is also the Chairman, of the Central Ground Water Board. All the important decisions in regard to the working of the Central Ground Water Board are taken in these meetings and its performance is also reviewed.

[Deptt. of Agriculture, O.M. No. 5-18/71-CI(A), dated 26-10-1972].

#### **Further information**

Efforts are being made to economise as much as possible on the drilling and construction of tubewells. It may, however, be stated that the cost of drilling and construction of tube-wells depends on a number of factors and varies from place to place depending on terrain, strata encountered, depth, etc. More attention will, however, be given to this aspect.

[Deptt of Agriculture D.O. No. 5-18/71-MI(A) dated 10-12-1971].

#### **Recommendation**

The Committee understand that the E.T.O. holds a virtual monopoly of drilling in difficult areas. As there is not as yet any effective competitor in the field, the Committee feel that there should be a stricter self-imposed control on cost.

[Serial No. 24 (Para 6.13) of Appendix VIII to 3rd Report (5th Lok Sabha)].

#### **Action taken**

Views of the Committee have been noted for future guidance.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dated 26-10-1971].

### Recommendation

From the material placed before them, the Committee have come to the inescapable conclusion that there has so far been no control in the Organisation on procurement, maintenance and repair of machinery and equipment. The Technical Team has brought out a number of vital deficiencies in this regard. While the Committee hope that Government will attend to those deficiencies expeditiously, they would in particular like the following to be considered in right earnest:—

- (i) There should be a proper planning and provisioning of spares in the Organisation and the headquarters should, in particular, endeavour to embark on 'Import substitution' in consultation with Ministry of Industrial Development and the DGTD. Indigenous rigs should be procured as far as possible to meet future requirements; and
- (ii) The Organisation should attempt to 'standardise' the machinery and equipment progressively in future in order to avoid difficulties in procuring spare parts and assemblies for different makes and models.

[Serial No. 25 (Para 7.12) of Appendix XIII to 3rd Report (5th Lok Sabha)].

### Action taken

Action has already been initiated in this direction. Import requirements are being reduced every year and indigenous rigs would also be procured, if these can meet our requirements of deep drilling for exploratory purposes in different areas.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971].

### Recommendation

The Committee understand that an Executive Engineer has been deputed to understand a survey of all the existing machines and equipment with a view to taking action for the disposal of all such items as have already outlived their useful life and/or are beyond economical repairs. The Committee hope that this work would be completed expeditiously and replenishments wherever necessary would be made with due regard to import substitution and standardisation.

[Serial No. 26 (Para 7.13) of Appendix VIII to 3rd Report (5th Lok Sabha)].

**Action taken**

Absolute and unserviceable items are being disposed of regularly and new equipment, vehicles, spares, etc., are purchased according to our requirements.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dated 26-10-1971].

**Further Information**

The survey of the equipment was completed. Government have authorised replacement against absolute and un-serviceable items. Disposal action is in progress.

[Deptt. of Agriculture D.O. No. 5-18/71-MI(A), dated 10-12-1971].

**Further Information**

Out of the 62 vehicles surveyed off 57 have been sold through D.G.S. & D. Disposal action for the remaining 5 vehicles and other items surveyed off is being taken. However, as the surveying off of machines and equipment and the disposal of unserviceable items is a continuous process, the progress in the matter is constantly under watch.

[Deptt. of Agriculture U/O No. 5-18/72-MI(A) dated 26/27-9-72].

### **CHAPTER III**

#### **RECOMMENDATIONS/OBSERVATION WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE REPLIES OF GOVERNMENT**

##### **Recommendation**

A comparison of performance of rigs in 1966-67 with that in 1968-69 would show that with almost twice the number of operational days the footage drilled was only marginally more in 1966-67. From the rig-wise details of drilling furnished by the Ministry, the Committee find that there is scope for better performance. The Committee suggest that norms for drilling operations in terms of average footage per rig per day may be evolved in the interest of keeping a contemporaneous watch over performance and taking remedial measures, as necessary.

[Serial No. 20 (Para 5.30) of Appendix VIII to 3rd Report (5th Lok Sabha)].

##### **Action taken**

Though the performance of rigs has definitely improved during the last two or three years and we hope to give even better results in the coming years, it would not be possible to evolve norms for drilling operations in terms of average footage per rig per day. We have to work in different areas with different types of rigs. In our exploratory drilling operations, we come across different geological formations and time taken varies from site to site. Also the time taken in performing water quality tests, electric logging of the bore holes, lowering of the test-well assembly, gravel packing and initial development of the well cannot be the same in all cases. And while performing some of these tests, drilling operations have to be suspended temporarily and the rig has to remain idle for some time. Thus, by more streamlining we hope to achieve better results, but it is not possible to fix any norms for drilling operations in terms of average footage per rig per day.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971].

### **Further information**

When asked to state the practice in States, private sector and in other countries in respect of norms for drilling operations in terms of average footage per rig per day. The Ministry has stated as follows:

There are no norms prevailing in the States and in private sector in this regard. So far as we have been able to ascertain, same is the case in other countries.

[Deptt. of Agriculture D.O. No. 5-18/71-MI(A) dated 10-12-1971].

### **Recommendation**

The Committee note that the Exploratory Tubewells Organisation had referred the defects noticed to the Ministry for discussion in the departmental committee which had recommended purchase of the rigs. The Committee would like to know the outcome of the discussion.

[Serial No. 27 (Para 8.11) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### **Action taken**

As all the defects had been rectified by the firm at its own cost, there was no need for the departmental committee to go further into this matter. All the rigs are working satisfactorily.

[Deptt. of Agriculture O.M. No. 5-18/71-MI(A) dt. 26-10-1971].

### **Recommendation**

During evidence the Committee were informed that "some delay certainly took place in erection of the rigs." The Committee would like to know whether the liability of the firm to pay compensation for the loss sustained by Government due to delay in the erection of the rigs was examined.

[Sr. No. 28 (Para 8.12) of Appendix VIII to 3rd Report (5th Lok Sabha)].

### **Action taken**

The delay was caused because all the rigs were received in the knock-down condition and rigs are generally shipped in this condition. As such some time was taken in re-assembling the rigs and

removing whatever minor defects had been noticed. Some time was also taken in transporting rigs to the various sites. All the defects had been removed by the firm at its own cost. As such, the firm was not liable to pay any compensation to the Government.

[Deptt. of Agriculture, O.M. No. 5-18/71—MI(A), dated 26-10-1971].

#### **Recommendation**

As regards sending the engineers for training at the Principal's Works in USA, the Committee cannot help feeling that they should have been sent before the rigs had been received in India especially in view of the fact that the rigs imported were of new design with which the engineers in the EIO were not familiar.

[Sr. No. 29 (Para 8.13) of Appendix VIII to 3rd Report (5th Lok Sabha)].

#### **Action taken**

Four officers of the Central Ground Water Board have received this training in December, 1970 at the Principal's Works in U.S.A. The contractual obligation in this respect has thus been fulfilled by the firm.

[Deptt. of Agriculture O.M. No. 5-8/71—MI (A) dt. 26-10-1971].

## **CHAPTER IV**

### **RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION**

#### **Recommendation**

The Exploratory Tubewells Organisation set up in 1954 undertook groundwater exploration under Operational Agreement No. 12 with the Technical Cooperation Mission of the Government of U.S.A. The Agreement expired on the 30th June 1959. At that stage no perspective plan was drawn up covering the period upto which the Organisation was likely to exist, but it was continued on a three-year basis. Indiscriminate movements of field divisions took place in the absence of predetermined areas of operation and planned execution of work. Proper maintenance of machinery and stores from the long range point of view was neglected. Further the Organisation could not attract and hold competent technical men on account of the indefiniteness of its continuance. The continuance of the Organisation in this fashion without proper planning and clear programme was hardly conducive to its efficient working and it is no wonder that the overall performance and operational efficiency suffered badly as noted by the Committee in the succeeding sections of this Report. The Committee would like to know why an assessment of the extent of work to be done with a view to determining the life and character of the Organisation could not be made immediately well before the termination of the Operational Agreement No. 12 in 1959.

[Sr. No. 1 (Para 1.8) of Appendix VIII to 3rd Report (Fifth Lok Sabha)].

#### **Action taken**

The Exploratory Tubewells Organisation was set up in 1954-55 for undertaking ground-water exploration through deep drilling as well as hydrogeological investigations. This was the first venture of its type in the country. Exploratory Tubewells Organisation executed this Project with American assistance received under TCA Programme (O.A.—12). For this programme 17 areas—all alluvial sedimentary—had been selected. The Exploratory Tubewells Organisation remained purely drilling Organisation during this period and



hydrogeological work was left to the Geological Survey of India officers entirely. The technical assistance was provided by M/s Ralph M Parsons Company, California, USA who supplied the requisite know-how through their experts drillers, engineers and hydrologists. After executing this specific project in 1959 the Exploratory Tubewells Organisation was still not in a position to undertake similar programmes throughout the rest of the country entirely on its own. As such no long range view of the work to be done in different parts of the country could be made at that time. However, the Organisation was allowed to continue and operate in Upper Assam, Bhabbar area of U.P., Western Rajasthan, Coastal area of Saurashtra, Bankura and Midnapore areas of West Bengal. It was also allowed to create its own geological wing. Thus, although no firm decision could be taken about the life and character of the Organisation before the O.A. 12 expired in 1959, it had been allowed to undertake operations in other areas and there was no dislocation or disruption in its activities. The Organisation had been continuously engaged in its exploratory work right from 1954-55 when it was set up although firm decision for giving it a permanent status was taken much later.

[Ministry of Agriculture (Deptt. of Agriculture) O.M. No. 5-18/71—  
MI (A) dated 26-10-1971].

**CHAPTER V**

**RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF  
WHICH GOVERNMENT HAVE FURNISHED  
INTERIM REPLIES**

—NIL—

NEW DELHI:  
*January 11, 1973.*  
*Pansa 21, 1894 (S).*

**ERA SEZHIYAN,**  
*Chairman,*  
*Public Accounts Committee.*

.. ..

## .. APPENDIX

### Summary of main Recommendations/Conclusions

Sl.No.	Para No.	Ministry/Department Concerned	Recommendations/Conclusions
1	2	3	4
1	1.7	Ministry of Agriculture (Deptt. of Agriculture)	<p>The Exploratory Tubewells Organisation set up in 1954 undertook ground-water exploration under Operational Agreement with the Technical Cooperation Mission of the Government of U.S.A. which expired on the 30th June, 1959. Commenting on the continuance of the Organisation without proper planning and clear programme of work which was responsible for the poor overall performance and operational efficiency, the Committee had desired to know why an assessment of the extent of work to be done with a view to determining the life and character of the Organisation could not be made well before the termination of the operational agreement. The explanation of the Ministry in this regard is, to say the least, unsatisfactory. The Committee, however, not that after they examined the Organisation, its deficiencies have been remedied, as mentioned elsewhere in this Report. At this stage, they would content themselves with the observation that this should have been done much earlier.</p>
2	1.12	—do—	<p>The Committee note that the recruitment rules for the post of Chief Engineer for the Organisation have been amended and that</p>

action has been taken to fill up the post which is lying vacant since September, 1968, by direct recruitment through the UPSC. The Committee trust that the post would have been filled up by now.

3        1.13        —do—

The Committee would also like to know the measures taken to train the staff in exploration and drilling work in the interest of improving their performance.

4        1.17        —do—

The Committee note-that the working of the Central Ground Water Board is being periodically reviewed by the Ministry. The Committee desire that the cost of drilling in various regions should also be specifically reviewed by the Ministry with a view to effecting economy.

39

5        1.18        —do—

The Committee are glad that after they examined the Exploratory Tubewells Organisation, a number of organisational and functional changes have been effected to improve its working. The following are the major changes effected:—

(1) The Organisation has been replaced by the Central Ground Water Board which is now being treated as a permanent body.

(2) The Head-quarters of the five divisions have now been located on permanent basis.

---

- (3) The recruitment rules for the post of Chief Engineer have been revised and the post which had been vacant since 1968 is being filled up through the U.P.S.C.
- (4) 80 per cent of the temporary posts which had been in existence for the last 3 years have been made permanent.
- (5) A draft perspective plan for the decade 1970-80, has also been prepared.
- (6) The Ground Water Wing of the Geological Survey of India has been merged with the Central Ground Water Board with effect from the 1st August, 1972.
- (7) A decision has been taken that the Board should concentrate on exploratory work and avoid constructing production tubewells as much as possible and that drilling operations should be extended to hard-rock areas also.
- (8) Action has been initiated in regard to data collection and data analysis to assess the extent of actual utilisation of created potential of tubewells and the resultant increase in agricultural production which would help to evaluate the impact of the Organisation.

6.

1.19

Ministry of Agriculture  
(Deptt, of Agriculture)

The Committee hope that as a result of the above steps, the working of the Organisation will show marked improvement. They would like to watch the progress of the Organisation. In order to enable them to do so, they would suggest the following:

- (1) The draft perspective plan of the Central Ground Water Board for the decade 1970-80 should be finalised expeditiously and published for information of all concerned.
- (2) The collection and compilation of data in regard to the extent and actual utilisation of the potential for additional tubewells created and area irrigated as well as the resultant increase in agricultural production should be expedited. The data in this regard should be specifically mentioned in the Annual Reports of the Central Ground Water Board.
- (3) The Annual Reports of the Board should be laid on the Table of both Houses of Parliament so that Parliament is kept informed of the progress made in this vital sector without undue delay. The Reports should *inter-alia* give details of the achievements of the Board *vis-a-vis* the perspective plan, development of drilling rigs,, cost per footage drilled, action taken to develop and exploit water resources for agricultural and domestic purposes with a view to facilitate appraisal of the work done by the Organisation and its impact on socio-economic development of the country.

---

1

2

3

4

---

- (4) The first Annual Report of the Board should contain an assessment of the entire work done prior to its creation. Thereafter the successive reports should give a detailed assessment of the work done by the Board with all the necessary supporting data.
-

Sl. No.	Name of Agent	Agency No.	Sl. No.	Name of Agent	Agency No.
<b>DELHI</b>			33.	Oxford Book & Stationery Company, Scindia House, Connaught Place, New Delhi-1.	68
24.	Jain Book Agency Connaught Place, New Delhi.	11	34.	People's Publishing House, Rani Jhansi Road, New Delhi.	76
25.	Sat Narain & Sons, 3141, Mohd. Ali Bazar, Mori Gate, Delhi	3	35.	The United Book Agency, 48, Amrit Kaur Market, Pahar Ganj, New Delhi.	88
26.	Atma Ram & Sons, Kashmiri Gate, Delhi-6.	9	36.	Hind Book House, 82, Janpath, New Delhi.	95
27.	J. M. Jain & Brothers, Mori Gate, Delhi.	11	37.	Bookwell, 4, Sant Narakol Colony, Kingsway Camp, Delhi-9.	96
28.	The Central News Agency, 23/90 Connaught Place, New Delhi.	15	<b>MANIPUR</b>		
29.	The English Book Store, 7-L, Connaught Circus, New Delhi.	20	38.	Shri N. Chaoba Singh, News Agent, Ramlal Paul High School Annexe, Imphal	77
30.	Lakshmi Book Store, 42, Municipal Market, Janpath, New Delhi.	23	<b>AGENTS IN FOREIGN COUNTRIES</b>		
31.	Bahree Brothers, 188, Lajpatrai Market, Delhi-6.	27	39.	The Secretary, Establishment Department, The High Commission of India, India House, Aldwych LONDON W.C.—2.	59
32.	Jayana Book Depot, Chaparwala Kuan, Karol Bagh, New Delhi.	66			



---

© 1972 BY LOK SABHA SECRETARIAT

PUBLISHED UNDER RULE 382 OF THE RULES OF PROCEDURE AND CONDUCT OF  
BUSINESS IN LOK SABHA (FIFTH EDITION) AND PRINTED BY THE  
MANAGER, GOVERNMENT OF INDIA PRESS, MINTO ROAD, NEW DELHI.

---

