CHAPTER – III

BHAKTAVATSALAM AS MINISTER FOR PUBLIC WORKS, IRRIGATION, FOOD AND AGRICULTURE

(1946 – 1962)

India is basically an agricultural country. The large mass of the population depends on agriculture. With the tropical and arid climate the country receives monsoon rains only for a few months in a year. The agriculturist is always in tension, as he has to depend on unpredictable rain. After independence, the Government devoted itself to major irrigation projects involving huge capital outlay and human labour. Fillip to agriculture is closely linked with the economy of the country also.

Under the Government of India Act 1935, Irrigation became a Transferred Subject and the Provincial Governments got full powers over irrigation works. ¹

In olden days farmers dug well to irrigate their fields. But as the society grew, collective systems like canal net work and small tanks for distribution of stored water at crop period developed. Prior to independence all irrigation systems were only division works because

¹ A.Mohana Krishnan, Selected Papers on Irrigation, Irrigation Management Institute, Trichirapalli, May 1990, p.62.
construction on sandy rivers posed problems and they went for diversion arrangements using spikes and poles. After independence, construction of major projects with high dams and reservoirs began.

The three renowned dynasties that ruled South India were the Cheras, Cholas and Pandyas. They ruled in Periyar Valley, Cauvery valley and Vaigai valley respectively. The Chola king Karikala built the Grand Anaicut across the Cauvery and excavated many irrigation channels. The Parantaka Chola constructed the famous Veeranam Eri.\(^2\) The Pallava period carried on irrigation with tanks, wells and canals. Mahendravarman created the first large irrigation work called “Mahendra Tataka” at the northern part of Tamilnadu.\(^3\) The tank was enormously large and the bunds were very high. The tank of Kaveripakkam was constructed by Nandivarman III (A.D 846 –A.D. 869).\(^4\) The Kongunadu though watered by the rivers Cauvery, Bhavani and Amaravati still it remains as a water scarcity area. The ancient Tamils in this area were experts in breaking the rocks and sinking deep wells.

Sir Arthur Cotton was a pioneer British Engineer who constructed several modern works in Tamilnadu. He was in charge of Cauvery works

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\(^2\) [Gazetters of South Arcot 1906, Government of Tamilnadu, Chennai, p.132](#)


\(^4\) [Ibid; p.22](#)
in 1830.⁵ He planned the Upper and Lower coloron anicuts. The permanent prosperity of Thanjavur is to be attributed to Cotton for the construction of Upper Coloron anicut. The Dowleshwaram anicut at Godavari was planned and completed by him at a record time. Arthur Cotton was in praise for our ancient engineers, when he wrote “We learnt from the native engineers of India how to secure a foundation in loose sand. With this lesson we built bridges, weirs, aqueducts and every hydraulic works we are indebted to them”.⁶

In 1901 an irrigation commission was appointed under Colin Scott Moncrief.⁷ The commission recommended a large number of projects to be undertaken. It also suggested bringing more land under cultivation. Thus the Madras state had done pioneering works in irrigation and they bear testimony to the engineering skill of Tamil Nadu.

Under the Government of India Act 1935 general elections were held in 1937 in Madras Presidency Congress won the elections and Rajaji formed the first Congress Ministry.⁸ But this ministry was a short – lived one. At the wake of Second World War Congress advised all provincial

⁵ A.Mohanakrishan, Op.cit., p.121
⁶ Ibid., p.120
governments to resign. Hence Rajaji laid down office in 1939. The proclamation issued in 1939 under sec. 93 of Government of India Act 1935 was in force till April 30, 1946. The Second General Election to the Provincial Assembly was held in March 1946. Congress won the elections with 163 seats out of 215 seats. After a gap of 7 years Congress regained the power.

Shri Prakasam was made the Chief Minister and his cabinet took charge on 1.6.1946. Bhaktavatsalam was in charge of Public Works, Irrigation and Highways. Congress party men brought a no-confidence motion against Prakasam and he resigned on March 14, 1947. Subsequently O.P. Ramaswamy Reddiar took over as Chief Minister and Bhaktavatsalam was entrusted with the same portfolios. From 1946 to 1962, he was in charge of Public works, Irrigation, Food and Agriculture under various Chief Ministers.

When he took charge as Public Works Minister in 1946-47, it was estimated that Madras was short to the tune of two million tons of rice. The state of Madras had to import and pay subsidy to the tune of Rs 14 Crore. The then existing irrigation facilities were not sufficient to meet the food requirements of the province. At the close of the British

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9 Ibid., p.625
period chief irrigation systems in Madras State are shown in the table below.\textsuperscript{12}

<table>
<thead>
<tr>
<th>Name</th>
<th>Year Completed</th>
<th>Irrigated Area in thousand hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cauvery Delta System</td>
<td>1889</td>
<td>425</td>
</tr>
<tr>
<td>2. Srivaikuntam Anicut</td>
<td>1889</td>
<td>17</td>
</tr>
<tr>
<td>3. Lower Coloron Anicut system</td>
<td>1903</td>
<td>104</td>
</tr>
<tr>
<td>4. Sethiatope Anicut</td>
<td>1893</td>
<td>21</td>
</tr>
<tr>
<td>5. Cheyyar</td>
<td>1896</td>
<td>12</td>
</tr>
<tr>
<td>6. Palar</td>
<td>1896</td>
<td>39</td>
</tr>
<tr>
<td>7. Periyar Cananal</td>
<td>1897</td>
<td>59</td>
</tr>
<tr>
<td>8. Lower Coloron</td>
<td>1903</td>
<td>54</td>
</tr>
<tr>
<td>9. Kodayar</td>
<td>1906</td>
<td>23</td>
</tr>
<tr>
<td>10. Kattalai</td>
<td>1926</td>
<td>38</td>
</tr>
<tr>
<td>11. Mettur – Cauvery Project</td>
<td>1934</td>
<td>104</td>
</tr>
</tbody>
</table>

But those irrigation projects could not answer to the needs of the state since the growing population assumed staggering proportion and to cope up with the alarming food situation the government had to think of massive irrigation plans and execute them as early as possible.

The British policy on irrigation works was conservative in nature and founded on the idea of getting definite return from the capital invested on them. They classified the irrigation works as Productive works, Protective works and Minor works. The Parliament of England in 1879 decided that results of irrigation works are to be tested by their financial returns. This is known as "Productivity Test".\textsuperscript{13} But after independence the Government being welfare, return from investment was considered secondary. Bhaktavatsalam was of the opinion that food production projects should be free from the test of productivity. In almost every new project the estimated revenue would be in deficit of the interest on capital. But according to Bhaktavatsalam this deficit could be set off against the continued cost of import of food and subsidy.\textsuperscript{14} The larger idea of making the Madras presidency as a whole self-sufficient can be accomplished by executing major irrigation schemes in quickest possible time. It is also not possible for each and every district to be self-sufficient in food because each district cannot have a major river. Both major and minor projects together should be designed to give fruit with in five to fifteen years.

\textsuperscript{13} R.C.Majumdar, H.C.Ray Chaudhuri, Kalikinkar Datta, \textit{An Advanced History of India}, Macmillan India Limited, Madras, 1996, p.928

\textsuperscript{14} \textit{Madras information}, October 1947, p.27
Rapid improvements in food production was possible by execution of major irrigation schemes like the Tungabhadra, Ramapada Sagar, Lower Bhavani, Malampuzha, Manimuthar and Amaravathi and they bear testimony to the engineering skill of Tamilnadu. These projects were the pride of Madras state and crowning glory to the tenure of Bhaktavatsalam as Public Works Minister.

By the implementation of the above schemes, assured supply of water was provided to agriculturists who used to depend on uncertain monsoons. The present states of Andhra, Karnataka and Kerala should be thankful and deeply indebted to Bhaktavatsalam as most of their reservoirs and irrigation systems were planned and executed during Bhaktavatsalam’s period. After the reorganisation of states on linguistic basis, Tungabhadra, Ramapada Sagar, and Malampuzha went to the benefit of Karnataka, Andhra Pradesh and Kerala states respectively. Political and Language barriers did not prevent him from executing a scheme when best possible utilisation of a river was considered. The following table shows the irrigation projects completed.\(^{15}\)

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\(^{15}\) *Madras Information*, February, 1959, p.75.
<table>
<thead>
<tr>
<th>Scheme</th>
<th>Year Completed</th>
<th>Cost in Rupees(Lakhs)</th>
<th>Irrigated Area (in hectares)</th>
<th>District Benefited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Bhavani</td>
<td>1955</td>
<td>1000</td>
<td>207003</td>
<td>Coimbatore</td>
</tr>
<tr>
<td>Araniar</td>
<td>1957</td>
<td>104.12</td>
<td>3000</td>
<td>Chengleput</td>
</tr>
<tr>
<td>Sathanur</td>
<td>1958</td>
<td>289.28</td>
<td>15300</td>
<td>North Arcot</td>
</tr>
<tr>
<td>Krishnagiri</td>
<td>1958</td>
<td>202.43</td>
<td>6500</td>
<td>Salem</td>
</tr>
<tr>
<td>Amaravathi</td>
<td>1958</td>
<td>324.40</td>
<td>21000</td>
<td>Coimbatore</td>
</tr>
<tr>
<td>Manimuthar</td>
<td>1958</td>
<td>505</td>
<td>20000</td>
<td>Tirunelveli</td>
</tr>
<tr>
<td>Metturcanal</td>
<td>1959</td>
<td>1183</td>
<td>17200</td>
<td>Salem</td>
</tr>
<tr>
<td>Vaigai Project</td>
<td>1959</td>
<td>330</td>
<td>13000</td>
<td>Madurai</td>
</tr>
</tbody>
</table>

The Tungabhadra Project

This project is one of the grandest that has ever been conceived in the country. The districts of Bellary, Cuddappa, Kurnool and Anantapur were worst drought affected areas. The rainfall is as low as 8" in a year. Once in five years these areas will be famine ridden. The Government had to spend crores of rupees for famine relief. To eliminate this the Tungabhadra project was conceived. It was the joint concern of the Madras and Hyderabad states and was inaugurated in 1945. The share of Madras in the cost worked out to ten to seventeen crores of rupees. The entire
length of the dam was 8000 feet and the maximum height was 126 feet. The road way was 22 feet.\textsuperscript{16}

In 1946 headwork circle was formed at Hospet to ensure quick progress. Quarters were constructed for officers, staff and workers. Designs tunnels and bridges were settled by the end of 1946.\textsuperscript{17} Excavation for foundation began in 1947.\textsuperscript{18} Masonry works were completed rapidly. Speculative buying of lands in Tungabadra project area at low prices with the hope to sell at profit later was prevented by the Madras Act XIII of 1947. As per the terms and provisions of the Act, no person can acquire more than 50 acres of land in this area without Government's approval.\textsuperscript{19}

Between 1949-1950, 90% of excavation work was completed. In 1950 – 1951, nearly one lakh acres of land were brought under cultivation after the completion of the project.\textsuperscript{20}

\begin{footnotes}
\item[16] Madras Information, December, 1947, p.34
\item[17] Madras Administration Report 1946, Volume I, Chapter 1,p.2
\item[18] Madras Administration Report 1947, Part I, p.72
\end{footnotes}
Lower Bhavani Project

The river Bhavani rises in the Silent Valley forests of Kerala. It receives Siruvani, a stream from Kerala and then reaches Coimbatore. Then it flows through Avinashi, Satyamangalam and Gobichettipalayam and joins Cauvery near the town of Bhavani. Moyar is Bhavani’s main tributary and joins it at Satyamangalam. Arthur Cotton first proposed a dam across the river Bhavani.\(^\text{21}\)

When Lower Bhavani Project was discussed in the cabinet, the Revenue Minister Karanth, disapproved the plan and sent it back to the Chief Minister Prakasam. Bhaktavatsalam explained the project and pleaded for its inclusion in the budget. He also assured that he would not spend without the cabinet’s approval and assured to give all relevant information on demand. After a long discussion, the Governor Archbold realised the validity of Bhaktavatsalam’s arguments and asked the Chief Minister why this project could not be approved. Finally the scheme was approved.

This valley project was sanctioned in 1947 as a post war construction scheme at a cost of rupees seven crore to irrigate 2.07 lakhs

of acres. The project is the largest scheme sanctioned by the Government since it came to power in 1946. The project consisted of

1) Construction of a reservoir of 27460 million cubic feet capacity at Bhavani sagar

2) Excavation of a main canal 90 miles long but later extended to 122 miles, the extended canal irrigating 25000 acres in Dharapuram.

Lands were acquired and the town was laid with modern facilities. The project consisted of a dam partly masonry and partly earth, about 5.5 miles long on the Bhavani river below the junction of Bhavani and Moyar. Bhavani is a tributary of the river Cauvery and has a major portion of its course at Coimbatore. The bridge across Bhavani was completed and opened for traffic on August 20, 1949. The dam runs about 10 miles upstream of satyamangalam. Though estimated at a cost of seven crore of rupees it was completed at a cost of Rs ten crore in 1955. About 207000 acres of most dry crops and cotton were irrigated. The project was taken up during the first plan period and was almost completed at the end of the first plan itself. There were 60 bridges on the

25 Madras Administration Report 1951-52, Volume 1, Chapter XI, p.208
main canal and were thrown open to traffic in 1951. The project also ensured adequate supply of cotton to cotton mills around Coimbatore. Economic standard of Coimbatore rose because of this project.

MALAMPHAZHA PROJECT

This project was for the construction of 27

1. A dam 6066 feet long across Malampuzha River, a tributary of Bharatpuzha, about 5 miles from Olavacod in Palghat district,

2. A storage reservoir with a capacity of 8000 million cubic feet.

3. A main canal 20 miles long.

The beneficiary of this project was Malabar district. The project was sanctioned in 1949 at a cost of 3.8 crore of rupees and inaugurated on March 27, 1949. 28 It was expected to produce additional 11500 tons of rice and stabilize irrigation over 46000 acres of second crop.

Manimuthar project

Manimuthar is a principal tributary of Tambarabarani in Tirunelveli district. The river Tambarabarani is the chief source of irrigation in Tirunelveli. The project was for construction of a reservoir

27 Madras Information, September 1955, p.10.
28 Madras Administration Report 1948–1949, Chapter VI, p.204
across the river Manimuthar at a place about 3 miles from its confluence with Tambarabarani, with a view to conserve the waters of the river.\textsuperscript{29} The dam comprised of partly earth and partly masonry, 12000 feet in length, maximum height being 137 feet. The working design was prepared at Madras. The capacity of the reservoir was 551 million cubic feet. It would irrigate 2000 acres of land and stabilize supply to 83000 acres of land already under Tambarabarani irrigation system.\textsuperscript{30} It was also proposed to fill up 300 rain fed tanks of Ambasamudram, Nanguneri, and Tiruchendur by means of a canal, 30 miles long with twelve distributaries.\textsuperscript{31} Extra quantity of 20000 tons of paddy is to be achieved by the project. Total cost estimated was 505 lakhs of rupees. The project was inaugurated by Bhaktavatsalam on November 29, 1950 and commissioned on January 3, 1958 for the entire area.\textsuperscript{32}

**Ramapadasagar project**

Waters of Godavari and Krishna were flowing into the sea uselessly while on the fertile part crops could not be grown for want of water. Sri Arthur Cotton built weirs across Godavari and Krishna and forged the prosperity of the deltas. Year after year plentiful crops were

\textsuperscript{29} *Administration Report of the Public Works Department, Madras State 1951–1952, (Irrigation Report)* Part II, p.29.

\textsuperscript{30} *Ibid.*, p.29

\textsuperscript{31} *Ibid.*

grown and these deltas became thickly populated and became surplus areas. The Madras Government also realised the importance of bringing more land under cultivation under the rivers Godavari and Krishna.

Ramapadasagar project consisted of construction of a dam across Godavari at Polavaram, which is 70 miles above the mouth of the river and 25 miles above the weirs built by Cotton. This dam was a mile long and 200 feet above the bed of river. Reservoir capacity is 16 to 19 million.\textsuperscript{33} The aim of the project was multi purpose as to irrigate 27.5 lakh acres for production of 1 to 1.5 million tons of rice and for generation of electricity. Investigations were done for six years. Electric power of 214300kw generated increased the industrial establishments. The availability of labour, production of electricity, transport facilities were added advantage to this area.

The river Godavari is famous for whirlpools and rapids and hence navigation was impossible. After the construction of reservoirs the river became main artery of navigation and there was no danger of navigation. The turbulent waters of Godavari were tamed for inland navigation from Vizag to Central Province.

Normally a reservoir behind a dam gets silted and its utility is reduced gradually. But in the case of Ramapada Sagar project, the dam

\textsuperscript{33} \textit{Madras Administration Report 1947},p.72.
was located at the last dam site of the river. Below this it is not possible to construct any dam. So when more dams are constructed at upper Godavari, silt will not go to Ramapada Sagar.

**Mettur Canal Scheme**

The scheme was sanctioned in 1949 as post war reconstruction scheme.\(^{34}\) The proposal was to dig a canal from Mettur reservoir for irrigating 45000 acres in Coimbatore and Salem district. (Salem – 27000 acres. Coimbatore – 18000 acres) Cost of the scheme was Rs 266.85 lakh.\(^{35}\) Additional food production was expected to be 17400 tons of food grain. It also generated 30000 Kilowatt of hydroelectric power. Excavation work started in 1949 and 26.5 miles length canal was completed in 1959.\(^{36}\)

**Minor Irrigation schemes**

In addition to the Major schemes, 298 minor schemes scattered all over the 25 districts in the Madras Presidency at a cost of five crore of rupees were taken up under the Grow More Food Schemes.\(^{37}\)

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\(^{34}\) Madras Administration Report 1948 – 1949, p.204

\(^{35}\) Madras Information, September 1955, p.11

\(^{36}\) Madras Information, February 1959, p.75.

\(^{37}\) Madras Information, October 1947 p.26
Grow More Food Scheme

There was an acute food deficit in the country following the stoppage of import of rice from Burma and Far East countries during Second World War. After independence the Government’s policy was to improve the lot of agriculturist’s as well as to increase food production. The Grow More Food campaign was launched in 1942 – 43 to increase food production by way of

1) Extensive cultivation – bringing more area under cultivation.\textsuperscript{38}

2) Intensive cultivation – increasing the yield by improved seed and manure.

In 1949 Government announced the stoppage of import of food grains from 1951. All the Grow More Food schemes were integrated in to a three year plan of intensive cultivation.

Tanks Improvement Scheme

Maintenance and repair woks of irrigation projects are as important as the construction works. In olden days while the Government undertook emergent and major works, the village communities paid attention to smaller works like slit clearance, renewing outlet plugs etc., Removal of

\textsuperscript{38} Madras Information, January 1955, p.29
slit periodically is essential as otherwise the opening would get choked. Breaches in tank bunds due to heavy rains and floods have to be done. Wanton damages to irrigation works have to be constantly watched.

As tanks are potential source of food production in our province Irrigation tanks have to be maintained and repaired periodically. In the year 1949 there were 30000 tanks scattered all over the district irrigating 3.6 million acres of land and yielding a revenue of rupees one crore. \(^{39}\) Tanks restoration schemes were recommended as early in 1878 by the famine Commission of 1878 – 1880.\(^{40}\) The Indian Irrigation Commission also saw vast possibilities in this scheme. (1901–1903).\(^{41}\)

1. By remodeling of channels in Eastern Godavari delta system 113527 acres of land were cultivated in the year 1946.\(^{42}\)

2. Breaches were closed in Krishna delta system and hence even after heavy rains in 1946 no damage to crops occurred. \(^{43}\)

3. Slit clearance in several irrigation channels and tank supply channels in Tanjore and were done in the year 1947.\(^{44}\)

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\(^{39}\) B.S. Baliga, Studies In Madras Administration, Volume II, India Press, Government of Madras, Madras, 1960, p.199

\(^{40}\) Ibid., p.200

\(^{41}\) Ibid.

\(^{42}\) Madras Administration Report 1946, Chapter-I, p.2

\(^{43}\) Ibid.

\(^{44}\) Madras Administration Report 1947, Part-I, p.70
4. In Cauvery delta system, Narasinga Cauvery scheme was completed in 1948 and the new channel was opened on June 30, 1948. Additional 15000 acres were brought under cultivation.\textsuperscript{45}

5. In the same year restoration of Sivalaperi tank in Tirunelveli was sanctioned.\textsuperscript{46}

6. In the year 1949 under Madras Irrigation Tanks Improvement Act 1949, Madras Act XIX of 1949 was passed which enabled the Government to increase the capacity of all irrigation tanks by raising their levels or otherwise. If the owner of any property suffers loss on account of this he would be compensated as determined by the District Collector.\textsuperscript{47}

7. In the year 1950, under tank restoration scheme, 99719 sq. miles were investigated and 86115 square miles were completed and 41 works at Rs 2.31 lakh sanctioned.\textsuperscript{48}

8. Under Tank Improvement Scheme 227 works were completed to benefit 7975 acres yielding 5334 tons of food grains. In the

\textsuperscript{45} Madras Administration Report 1948, Part –I, p.90

\textsuperscript{46} Ibid.

\textsuperscript{47} Madras Administration Report 1949 –1950, Part II, and Madras Act XIX of 1949 (Madras Irrigation Tanks Improvement Act 1949.)

year 1950,454 new schemes were sanctioned at a cost of Rs. 32,56,062 and 410 schemes were executed. ⁴⁹

SINKING OF WELLS AND TUBE WELLS

Along with the irrigation works steps were taken to utilise the under ground water resources also. Farmers were given subsidies for construction of wells. The scheme was in operation up to 1952. During the period 1949 – 1950 to 1951 – 1952, 45000 wells were subsidised and total amount of Rs.264 lakh was disbursed as loan.⁵⁰

A new scheme “Filter Point Tube Well Scheme” was introduced in the year 1951 – 1952. This scheme helped to expand the cultivation of paddy, cotton and other crops during the summer months.⁵¹

In addition to all the above measures, improved seeds and manures were provided to the ryots. All the municipalities in the state started manufacturing compost manure.

The Government also provided the agriculturists with mechanical aids for cultivation. Finance was provided to them through cooperative organisations.

⁴⁹ Ibid.
⁵⁰ Madras Information, January 1955, p.30
⁵¹ Ibid, p.31
A Soil Conservation Board was constituted in 1951 to coordinate schemes for soil conservation in the State. The Agriculture minister was its chairman.\textsuperscript{52}

The Madras Government did its best for improvement of agriculture under the leadership of Bhaktavatsalam as Food and Agriculture Minister during 1952 – 1957.

**High Ways Department**

Roads are the arteries of economic life facilitating trade and transport, education and culture and instrumental for communication and mobility. A fifteen fold increase on new works and eight fold increase on old works during Bhaktavatsalam's period shows the importance given by the Government to communications.

The High Ways Department was reorganised in April 1946. Roads in the state are being maintained by different authorities. While National Highways were being maintained by the Union Government, Provincial Highways and major District roads were looked after by the State Government. Other district roads and village roads were taken care of by the District Boards. The main work consisted of

1) Adding to the existing mileage of roads and

\textsuperscript{52} Ibid., p.34.
2) Develop and maintain existing roads.

The following table shows the work done.

<table>
<thead>
<tr>
<th></th>
<th>1950-51(^{53})</th>
<th>1951-52(^{54})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt. Roads</td>
<td>92 Miles</td>
<td>62 Miles</td>
</tr>
<tr>
<td>Cement – Concrete</td>
<td>372 miles</td>
<td>637 miles</td>
</tr>
<tr>
<td>Blacktopped</td>
<td>60</td>
<td>49</td>
</tr>
<tr>
<td>Bridges and culverts</td>
<td>Rs 15 Lakh</td>
<td>Rs 15 Lakh</td>
</tr>
</tbody>
</table>

During these years bridges across Pugalur, Pennar, Palar, Coloron were in Progress.

A post war development plan was drawn in 1945 of the Chief Engineers conference at Nagpur. From out of this, a five-year post war road plan (other than national high ways) was approved by the Government in 1947-48. After discussion with the Planning Commission the State Government in 1951 allotted Rs.5 crore to Madras which was distributed as under.\(^{55}\)

\(^{53}\) Madras Administration Report 1951-1952, p.1

\(^{54}\) Madras Administration 1951-1952, Volume I, Chapter XI, p.222

State Roads – Rs.245.451 Lakh

Other Road – Rs. 130.00 Lakh

Purchase of Tools – Rs. 124.55 lakh

During the year 1952, Government gave full grant to Anantapur, Chittoor, Cudapa, South Canara, Kurnool, Malabar, and Nellore for their road projects. The bridging of the rivers in south canara undertaken by Bhaktavatsalam made travel in south canara easy and pleasant.56

Other Miscellaneous Works

1. Walajapet water supply scheme came in to operation in 1946.

2. Communication branch of Public Works Department was reconstituted in April 1946 as High Ways Department and was reorganised on February 1, 1947 to effect economy.

3. Construction of Nurses home for staff of General Hospital in Madras City in the year 1951 – 1952.


5. Under General Road Fund Scheme Rs 26.56 lakh was spent.

6. Additional buildings for Muslim Colleges, Queen Mary’s College, Lady Willington Training College were taken up in 1947.

Thus the period 1947 – 1957 witnessed an allround progress in the field of Public Works and Irrigation, which founded the basis for future progress of the Madras State, Andhra Pradesh, Karnakta and Kerala. As for Madras State is concerned, great strides were made in respect of major and minor irrigation systems. At present the mutual good will and co-operation of our neighbouring states is required to increase the food production for feeding the terming millions of the state.

By a planned system of road development during Bhaktavatsalam’s period as Public Works Minister, transport of raw materials to industrial areas market places was made possible. Hence it will be no exaggeration to say that the foundation for the prosperity of the state was laid by Bhaktavatalam.

**Food and Agriculture: 1954-1962**

During the Second World War all available food materials were diverted to defense forces depleting the reserves of grain, leading to acute shortage of food grains. After independence partition took place which resulted in separation of food surplus areas to Pakistan. By the end of 1951,
Government of India decided to stop all imports of food grains from Burma and Far East countries and the food problem became more acute\textsuperscript{57}.

The Grow More Food Campaign was launched in the year 1942-43 to increase the food production both by extensive and intensive cultivation. Extensive cultivation was to bring more areas under food crops, increasing double crop cultivation and off-season cultivation. This depended on irrigational facilities and soil quality. Intensive cultivation was about increasing the yield by the use of improved seeds, better manure, fertilisers and implements.

The Agricultural policy of Madras State was improving the lot of agriculturists and increasing the food grains production to meet the food deficit of the state. In 1949, all the Grow More Food Schemes were enlarged in scope and integrated in to a three-year plan of intensive cultivation. In 1951-1952 all the intensive cultivation schemes were continued under the First Five Year plan. The following table shows the number of schemes undertaken between the years 1947 to 1952 and the areas irrigated by the schemes.

\textsuperscript{57} B.Natarajan, \textit{Food and Agriculture in Madras State}, Director of Information and Publicity, Government of Madras, Madras,1951, p.35
New Plans Sanctioned

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Schemes</th>
<th>Amount (Lakhs of rupees)</th>
<th>Acres Irrigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>15</td>
<td>33.49</td>
<td>11794&lt;sup&gt;58&lt;/sup&gt;</td>
</tr>
<tr>
<td>1948</td>
<td>54</td>
<td>90.33</td>
<td>68374&lt;sup&gt;59&lt;/sup&gt;</td>
</tr>
<tr>
<td>1949</td>
<td>47</td>
<td>121.49</td>
<td>37570&lt;sup&gt;60&lt;/sup&gt;</td>
</tr>
<tr>
<td>1950</td>
<td>45</td>
<td>127.64</td>
<td>50200&lt;sup&gt;61&lt;/sup&gt;</td>
</tr>
<tr>
<td>1951</td>
<td>44</td>
<td>68.23</td>
<td>37127&lt;sup&gt;62&lt;/sup&gt;</td>
</tr>
<tr>
<td>1952</td>
<td>99</td>
<td>84.82</td>
<td>46052&lt;sup&gt;63&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

In Madras extensive cultivation was not possible because there was very little extra land that could be cultivated. Hence the Government concentrated on intensive cultivation by

1. Distribution of improved seeds of paddy, millets and pulses.
2. Distribution of fertilisers both chemical and green manure.
3. Providing water supply through installation of oil engines, electric motors and filterpoints.

<sup>58</sup> Madras Administration Report 1947, Chapter XI, p.71  
<sup>59</sup> Madras Administration Report 1948, Part I, p.90  
<sup>60</sup> Madras Administration Report, 1948-1949, p.205  
<sup>62</sup> Madras Administration Report 1950-1951, Part-I, Chapter XI, p.119  
<sup>63</sup> Madras Administration Report 1950-1951, Part-II, Chapter XI, p.119
4. Providing new tools and tractors

5. Undertaking plant protection schemes for pest control and diseases.

Every year targets were fixed for additional production and Government supported the agricultural trusts by financial assistance.

Thus the Second Five Year Plan aimed at a production of 80 million tons of food grain\textsuperscript{64} and an additional production of 12.79 lakh tons\textsuperscript{65}. Additional production achieved was 5.96 lakh tons for the year 1958 - 1959. In oil seeds production while the target for additional production was 1.66 lakh tons, achievement was 0.67 lakh tons. In sugar cane production as against the target of 10 lakh tons of additional production, 6.3 lakh tons was achieved. In Cotton production additional 64755 bales of cotton was produced\textsuperscript{66}.

**Improved Seeds**

Improved seeds of paddy and millets were supplied to the farmers through the seed farms. For this purpose, new seed farms numbering to 102 were opened in the years 1956 to 1961.

\textsuperscript{64} Madras Information, February 1957,p.15
\textsuperscript{65} Madras Administration Report, 1958-59,p.92
\textsuperscript{66} Ibid.
Fertilizers, Green Manures and Compost:

Next to water and seeds ryots need manures. Use of manure increased from 23000 tons in 1948 to 1.2 lakh tons in 1956 - 57. As green manure is cheaper than chemical fertilisers, due attention was paid to the development of green manure sources. They also supply organic matter for increasing the yield of crops and build the soil fertility. Green manure seeds were supplied to farmers at reduced rates. In the year 1960, 1530 tons of green manure seeds were supplied to agriculturist. The Agriculture department introduced various green manures. Special bonus was given to ryots who had sown and supplied green manure seeds.

Another valuable source of manure is compost. Farmers were trained in compost preparation and conservation of farm yard manure. Compost week was organised by local municipalities and town panchayats. In the year 1960, 61 municipalities and 280 Panchayats under took manufacture of compost from urban waste. 3.37 lakh tons of compost was made in this year.

The use of chemical fertilisers also increased. The off take of nitrogenous fertiliser increased by 140% during the period 1960-61 to

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67 Madras Information, February 1959,p.9  
68 Madras Administration Report, 1960,p.180  
69 Ibid., p.181  
70 S. Perumalswamy, Economic Development of Tamilnadu, S.Chand and Co, New Delhi,1985,p.184
1964-65. The use of phosphatic fertiliser increased by 230% in the same period. Fertilisers were distributed to farmers through co-operative societies.

**New tools and implements**

The agricultural department devised a number of manually and power operated implements to make cultivation easy and more profitable. Such implements were bullock drawn pump, power operated paddy thresher and rice huller.

The Government provided the agriculturist with mechanical aids for cultivation. Tractors were given on hire purchase scheme for reclaiming new lands and for ploughing and cultivating in larger estates. Bulldozers were provided for leveling, clearing and bunding of waste lands. In the year 1960, 74 tractors were hired and 11816 acres of lands were brought under cultivation. Number of tractors used in 1951 was 327. It rose to 934 in the year 1961. At the end of the third plan 5.18 lakh of improved ploughs were in use.

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71 Madras Administration Report, 1960, p.184

72 N.Rajalakshmi, Tamilnadu Economy, Business Publication Inc, Mumbai, 1999, p.27
Pest Control and Plant Protection

Pesticides and insecticides in sufficient quantities and sprayers are required for plant protection. The Agriculture Department kept stock of these and supplied them at half cost to the farmers. The Department also demonstrated remedial measures to the ryots in their own fields. In 1961, a special scheme of "Aerial Spraying of Insecticides" was undertaken to control the spread of caterpillar in ground nut crops of Pollachi.\(^{73}\) Under this scheme 10000 acres of lands were sprayed

Water Supply

In addition to the major irrigation schemes like lower Bhavani, Malampuzha, Minor works like Mettur Canal Scheme, and Tank improvement schemes were continued to ensure water supply to agriculture. Side by side with the irrigation works, under ground water resources were utilised. Bore wells, Filter point tube wells and artisan wells were sunk. Government of India also offered assistance to this scheme. Thus 458 borewells and 27 artisan wells were sunk in the year 1961.\(^{74}\) 273 filter point tube wells were sunk in the year 1959.\(^{75}\) Oil engine pump sets and electric motors were installed. Up to December 1964,

\(^{73}\) G.O. No 132, Food and Agriculture, 10\(^{th}\) April 1961
\(^{74}\) Madras Administration Report 1961, p.151
\(^{75}\) Madras Administration Report 1959, p.92
\(^{76}\) Madras Information, January 1965, p. 1A
lakh pumpsets were connected in rural areas. The revolution of rural electrification in Madras State reduced the drudgeries of the life of farmers. They were no longer required to lift water from wells as electric motors were fixed. The extra time made available to the farmer was utilised for other occupations. This reduced the migration of rural population of urban areas.

Under the Panchayat Administration programme, the village Agricultural Production programme was framed in the year 1961. Under this scheme, each village was to prepare local manures and improved seeds. The panchayat can also take up any method for increasing the food production. The time frame given for this programme was three years. Most of the works were completed by this time.

A planned and vigorous tree planting programme was followed in the state. Vanamahotsava (Tree planting programme) was celebrated in the state every year from 1958 and it was made compulsory. Importance of tree planting and after care of trees was stressed. Seedlings were planted by students, public and agriculturists during functions in villages.

The shrub jungles of Vandalur and Kattur in Chengalput districts were transformed into money spinning cashew plantations. The raising of

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77 Madras Information, January 1961, p. IA
78 G.O. No. (Madras) 1946, Food and Agriculture, dated 31.5.1958
79 Madras Information, July 1957, p.22
cashew in these areas was sanctioned in Second Five Year Plan. This was the first project in India where cashew was raised as a first plantation.  

**Agricultural Education and Research**

To meet the dearth of trained hands in agricultural fields, admission to B.Sc., (Agriculture) in Coimbatore Agricultural College was increased to 158 in the year 1960. Further to provide postgraduate training in Horticulture and Plant Breeding, new courses were started in Coimbatore. A refresher course for young farmers was also conducted in 1960.

Thus the Madras Government did its best to improve the agriculture in the state under Bhaktavatsalam as Agriculture Minister during the years 1954 - 1962. The agricultural prosperity of the state was due to the welfare measures under taken by the Government as well as the enthusiasm of the cultivators. They produced more crops for their benefit and for and benefit of their community.