cations of Monsoon Rains for the Agricultural Economy

The prosperity of Indian agriculture depended on the success or failure of monsoons. This was because 80 percent of the total cropped area in the country depended on rains. If the rains failed, the agricultural operations got derailed and thereby the entire economy was in a shambles. That is why it was said, “Indian agriculture is the gamble of the monsoons.” The cultivation of less rainfall and drier parts are managed by stored supplies of rain from wells, tanks, and reservoirs. Agriculture and related activities provide employment for about 70% of the population and success or failure of agricultural production depends on the timely arrival of the monsoon. A good monsoon results in good harvest and prosperity. The monsoon in 19th century context had a significant impact on the commercial crops like cotton and groundnut.

The failure of rain was attributed by superstitious Indians to some failure to attend to certain duties. The peasants in Hampi attributed the famines to the failure to drag the temple car in its full circuit. Auary in Salem attributed it to some kind of sin. The peasantry expected the Collector of Ilveli paid 600 churcums in December 1811 for rain-making ceremonies performed in the important temples of the districts with the view to inspiring

Wheeler, Hand Book to the Cotton Cultivation in the Madras Presidency (Madras: 1817).

Sael, Geography (Madras: 1997), p.35.
people to proceed with the preparation for cultivation. On 13.8.1821, W. Cooke, the Collector of Madras, wrote to the Board of Revenue: "rain failed... Loyts find very difficulty... relieve work be sanctioned. As some encouragement to the cultivators with their practice... to premise the vernajapum and kudra bishakum, a custom that I find has occasionally being resorted to in this district on the failure of the rains. This charge which according to the entry in the koyenzabitah of this Zillah for fasli 1228 amounted to rupees 1400 for the performance of the ceremonies in each taluk of the district..."\(^3\)

**Seasonal Fluctuation and Its Effects on Commercial Crops**

The dry region with a rainfall under 30 inches covered parts of Salem and Tiruchirapalli, most of Coimbatore, and the eastern portions of Madurai and Tirunelveli. Here rainfall in both monsoons falls was occasional showers. The moisture region, with a rainfall over 30 inches, comprised Chengalpattu, North and South Arcot, Thanjavur and parts of Salem, the eastern slopes of the Nilgiris, Tiruchirapalli and Madurai. The Northeast monsoon brought rain in October and November. In 1846-47 the cotton crop failed due to the failure of both the monsoons. On the contrary, in the year 1847-48 the cotton crops failed in consequence of extreme wet with the Southwest Monsoon commenced in April.

---

with copious showers. The lands were ploughed and seeds were sown at the end of June. The crops were fine till October. Then the Northeast Monsoon brought rain, which never ceased for three days. The crops were altogether lost.⁴

In the year 1828 the Collector of Tirunelveli, recorded the damages done by the flood in Srivaikundam for the agriculture. In order to show the extent of loss incurred in consequences of the inundation as soon as water had subsided he Collector visited Srivaikundam and Alwartirunagari⁵. But on the contrary, John Orr, Collector of Salem, wrote that crop suffered for want of rain⁶. J. Black Burn, the Collector of Madurai, also wrote that monsoon failed and the crops were perished at the moment of attaining maturity⁷. However the ruin of area under cotton Cultivation was not given explicitly in any of the statistics. But it could be inferred that the failure of agriculture crop in one area or the other due to famine, flood, and scarcity of rain, implied the failure of commercial crops too:—

The region including North Arcot and Madras was considered the least favourable for the cotton and commercial crops.⁸ Failure of rain destroyed vast tracts of cultivated lands in the Presidency. On 15-10-1821, R. Peter, the Collector

---


⁵Board of Revenue Consultation, dated 14-2-1828, vol.1157, p.1600.

⁶Board of Revenue Consultation, dated 18-3-1830, vol.1232, p.3338.


⁸Proceedings of Board of Revenue, dated 13th July 1963, pp.3969, 5352.
Madurai, wrote to the Board of Revenue "...Out of 105559 cawnies of
ltivation of Nunjah and Punjah, due to the failure of rain only 65647 cawnies
ave been survived...". It was reported that all experiments failed due to the
favourable seasons. Owing to good season in 1893, the area under cotton
ltivation expanded in Tirunelveli and Coimbatore by 27.9 percent. But it was
ortlived. During the year 1881 – 82, owing to the failure of rain in the
esidency, cotton cultivation decreased as such as 25.5 percent in acres. Since
season was not favourable during the year 1877 – 88, the cotton cultivation
creased to a greater extent. Usually heavy rain was harmful as it affected the
mination of groundnut, injured the tender crops and damaged the crops of
oundnut. Heavy rain in the cotton tracks of land led to shedding of the buds and
all bolls of cotton.

Moderate rain was useful for groundnut cultivation. But even
timely rain damaged and harmed the cotton plants. It spoilt the quality of cotton
icking. Insufficient rain reduced the yields of groundnut and cotton. If there
as no sufficient rain at the time of sowing, the area under groundnut and cotton

---

1 Board of Revenue Consultation, dated 15-10-1821, vol 898, p.9357.
4 Report on the Administration of the Madras Presidency During 1887 – 88, p.64.
5 Report on the Administration of the Madras Presidency During 1881 – 82, p.69.
ropes decreased drastically. Most of the time insufficient rain reduced acres of
nd under cultivation of groundnut, and cotton in the districts of Tirunelveli,
oimbatore, Salem, South Arcot, North Arcot and Trichy.

Early in the 19th century when British had acquired considerable parts of
South India, little was done to restore and preserve the numerous reservoirs and
tanks constructed for irrigation by old native rules and chiefs of South India. When
ryotwari system was introduced in the Madras Presidency in 1820 A.D, the
responsibility of irrigating land under ryotwari fell solely on the shoulders of the
government. The ryotwari system placed the Government in the position of
lords and also laid more obligations on them to promote works of irrigation.
ll irrigation works, except a few works in Thanjavur and Tiruchrappalli districts,
erere in a bad shape. The tanks lacking inadequate sluices and proper calingulahs
ere considered unfit for storage purposes. The supply channels to the tanks had
come choked up and so were the irrigation channels. When Arthur Cotton
isted South Arcot in 1826, large number of mirasdars represented the ruinous
ate of irrigation works pointing out that the fields, which were once paddy land
ere covered with jungles. Arthur Cotton himself recorded the deterioration of all
igation tanks

Sivasankaran A, “History of the Public Works Department in the Madras Presidency, 1858-
47, A.D.” PhD., thesis submitted to the University of Madras, 1985, pp. 57-60
istence of Old Irrigative Sources and the Negligence of the British

Though we read that the Chola King Karikala built Kallanai in the vicinity of river Kaveri near Tiruchirappalli, no authentic information exists regarding the history of irrigation till we come to the British time. However on the 4th April 1800 A.D. Dr. Buchanan started from Madras towards west on his tour statistical inquiry. He mentioned a number of old pre-British irrigation facilities found in his tour area. They were:

1. **Condatura** (Kunrathur): A large reservoir of an old irrigation work of 8 miles length and 3 miles width.

2. **Sriparmatura** (Sriperumpudur (or) Thiruperumbur): A reservoir irrigated 2000 acres of rice land alone.

3. **Conjeevaram** (Kanchipuram): A reservoir, which was said to have been constructed by Nawab Mohomed Ali, irrigated about thousand acres of rice land.

4. Palar river and irrigated land between Uthiramerur and Oulur.

5. Reservoir at Kaveripakkam in Arcot of 8 miles long, 3 miles broad (from Kaveripakkam to Arcot was barren).

6. In Baramahal area (Salem) when visited on 10.5.1800, Buchanan found that many small irrigation works and reservoirs were being neglected. This, he thought, was due to 4/10 of cultivators being driven out from their home following the recent wars.
7. At Madurai, a large reservoir built by Vishnu Vardhana Raya around 700 years earlier, irrigated hundreds of acres of land around. 

8. In Colegala (Kollegal) District of Coimbatore alone more than 50 large reservoirs, existed for irrigation. Some of them were repaired by the Company’s servants, after the district had come under the possession of the company. Sivaha- Samudra reservoir formed by Ganga Raja in 1200 A.D. Sategala, Mathully and Kaveripura reservoir needed special mentions.

9. Along Tumbula, a tributary of cauvery river, 5 old reservoir existed, but all burst out 50 years before and never been repaired.

10. Dam on Bhawani river irrigated hundreds of acres of land through canal irrigation. Noyyal river canal irrigated hundreds of acres of land under rice, cotton and tobacco cultivation.

11. In Erode a canal constructed by Kalinga Raya 400 years ago irrigated 3459 acres of land.

12. At Codomudi, (Kodumudi) a canal from Kaveri river irrigated large tracts of lands.

13. In Caruru (Karur) several canals from Amaravathi and two canals from Kaveri irrigated thousands of acres of land.


Ibid., pp. 153-158.
Buchanan's data prove that Tamilnadu had already a number of old tanks irrigating thousands of acres of land under the cultivation of rice, sugarcane, tobacco, indigo etc. J.S. Kanwar writes "Indian irrigation is as old as agriculture. It is a means to mitigate the impact of irregular, uneven and inadequate wide fluctuation in rainfall from year to year".

**British Investment on the Repair and Construction Work of Irrigation**

In the beginning the British did not show much interest on the irrigation work and its preservation in India. Even the company servants had to cad even for a small amount for the repair work. Edward Greenial on 15.2.1801 wrote to William Petrie the President of Board of Revenue, "... Monsoon had passed without injuring the Madurantakam Tank. The water rose in the course of the 28th December 1800 A.D. and measuring on 9th December to more than 5 feet above the level of the Calingaloo... which is higher than ever it reached before... Utable material for forming the Dam amounted to pagodas 13.11.57... beg government to sanction the amount... other tanks in the Jagheer are all safe and

---

7. also see T. Govindaiah, Tank Rehabilitation and Irrigated Rural Development (Bangalore, 1994), pp.6-9.
generally full..." 18 The uncertainty of the monsoon destroyed the productivity of agriculture and its related income to the British trade.19

On 30.4.1801 the Secretary to Government wrote to Edward Reenway, the Collector of Cuddalore sanctioning pagodas 167, fanams 6, andrish 40 for the construction of a new dam in Cuddalore in consequence of pagodas ' 3.12 for repairing the dam across the Gundlement river in Cuddalore.20 In 3.8.1801 the Government sanctioned Pagodas 6746-34-75 for the additional expenses incurred on account of repair in Tanjavur.21 On 15.1.1803 the Governor Council approved the permission granted to the Collector of Madras to strengthen the banks of the several tanks granting 90 star Pagodas.22

The Collector of Triuchirapalli wrote to the Board, "Trichinopoly vision experienced... very uncommon drought season... and little hope for any in... no water in the tank... dry cultivation of 2118000 cownies of punjah landive failed... suffer from want of water... "23

__________

Board of Reservation Consultation, dated 15.2.1801, Nos.25, 26, pp.1280-82.
Board of Revenue Consultation, dated 30.4.1801, vol.2, p.4.
Board of Revenue Consultation, dated 13.8.1801, vol.8, p.6481.
Board of Revenue Consultation, dated 15.1.1803, vol.16, p.429.
Board of Revenue Consultation, dated 7.1.1805, Vol.401, p.124-126.
C. Robert, the Collector of North Arcot, wrote to the Board of Revenue on 24.1.1803 “… deterioration of the land revenue due to severe drought and total failure of the usual rain… notable to sow dry crops… Tanks, Channels… npt… all dry crops failed… loss of the cattle for want of water… Ryots sold eir crops at low price…”24 The Collector of Tiruchirapalli wrote to Edward ampwell of Board of Revenue on 29.4.1805 “…my farm of Chedambrum… Wallace fixed the rent… on an average of the two preceding seasons… every anch of agriculture that required supplies of water have this year almost totally iled… exceedingly dry, no rain having fallen in… drought and hot weather… as prejudicial to paddy crops… sugarcane… a more hardy plant… what then mained uncut was entirely dried…after the failure of the cane and paddy. couraged the inhabitants to plant Indigo and Cotton which from want of habit ey were averse to …”25

Usually the large tanks were maintained by the state Government d the smaller ones were in charge of the local revenue officials. Repair of them ere generally carried out by the cultivators themselves by a traditional system of aintenance known as “Kudi maramathu”.26 In the latter half of the 19th century a ramut cess was collected separately. T.Clarke, Collector of Madurai, wrote to

---

26 B. Rajannan, Encyclopaedia of Salem, P.306.
e Board of Revenue in 1835, "... 2 annas per cawny was fixed on the all the
devoted lands... maramut cess was levied separately... The cost of repair
(aaramut) met either by the levy of a small sum annually or by each innamdar to
by a certain quota of the sum expended in repairs..." J. Hepburn the Collector
Chengalpettu reported the repair work done in the Chembarumbakkam and
adurantakam tank. On 21.5.1805, "... the tank Chembarumbakkam having been
ll of water for the two last seasons prevented the work from being conveniently
dertaken, but as the dryness of this year is favourable for the construction of
sonry... I request the Board will allow me to take measures for commencing
repair.... Large mass of building as the principal Muddagoo of that Tank
ould be exposed as long as possible to the sun to dry it... and Board ordered for
commencement of work... The total expense of Madurantakam lake from 27th
ly 1803 to 31st March 1804 was 700 Starpagodas. 28

In the year 1806 the Board sanctioned the expense incurred on the
pair works of water course and Tank in Tirunelvelli district itself (Table: III: 1).

---

1 'Board of Revenue Proceeding', dated 7.7.1860, No. 145, P. 42.
### Table: III: I

**Expenditure for the Repair of Tanks and Water Courses in Tirunelveli Region, Fasli 1206.**

<table>
<thead>
<tr>
<th>Places in Tirunelveli</th>
<th>Tank repair p.f.c</th>
<th>Repair of water Courses p.f.c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheranmahadevi</td>
<td>744-0-0</td>
<td>1300-0-0</td>
</tr>
<tr>
<td>Kadayam</td>
<td>520-0-0</td>
<td>900-0-0</td>
</tr>
<tr>
<td>Nedugramman</td>
<td>440-0-0</td>
<td>400-0-0</td>
</tr>
<tr>
<td>Nellyamculum</td>
<td>160-0-0</td>
<td>170-0-0</td>
</tr>
<tr>
<td>Palayamkottai</td>
<td>120-0-0</td>
<td>150-0-0</td>
</tr>
<tr>
<td>Thatchanallur</td>
<td>80-0-0</td>
<td>180-0-0</td>
</tr>
<tr>
<td>Malunogum</td>
<td>480-0-0</td>
<td>800-0-0</td>
</tr>
<tr>
<td>Tenkasi</td>
<td>480-0-0</td>
<td>900-0-0</td>
</tr>
<tr>
<td>Srivilliputhur</td>
<td>960-0-0</td>
<td>2600-0-0</td>
</tr>
<tr>
<td>Sankarankovil</td>
<td>400-0-0</td>
<td>1200-0-0</td>
</tr>
<tr>
<td>Gangaikondan</td>
<td>480-0-0</td>
<td>1000-0-0</td>
</tr>
<tr>
<td>Srivaikuntam</td>
<td>400-0-0</td>
<td>450-0-0</td>
</tr>
<tr>
<td>Athur</td>
<td>160-0-0</td>
<td>350-0-0</td>
</tr>
<tr>
<td>Tuticorin</td>
<td>56-0-0</td>
<td>200-0-0</td>
</tr>
<tr>
<td>Kalakkad</td>
<td>1200-0-0</td>
<td>2500-0-0</td>
</tr>
<tr>
<td>Alwar</td>
<td>800-0-0</td>
<td>700-0-0</td>
</tr>
<tr>
<td>Tirunelveli</td>
<td>400-0-0</td>
<td>1000-0-0</td>
</tr>
<tr>
<td>Carsary</td>
<td>120-0-0</td>
<td>200-0-0</td>
</tr>
<tr>
<td>Punjamahal</td>
<td>8000-0-0</td>
<td>15000-0-0</td>
</tr>
</tbody>
</table>

**Source:** Board of Revenue Consultation, Vol.425, dated 21.4.1806, p.2238
In Tiruchirappalli district major part of the irrigation was done by river channel, due to the confluence of Cauvery River. 46% irrigated directly from river channel. 21% irrigated directly by tanks. 30% irrigated directly by wells. In 1825 it came under the control of the Board of Revenue. In 1838 whole presidency was rearranged into Maramath each under a Civil Engineer.

In 1805 the Collector of South Arcot estimated that three thousand tanks were under repair. The Tahsildars estimated the expenses at pagoda 40793... at the Board sanctioned only 30000 pagodas. "The increase of cultivation if the infall plentiful will replay this disbursement in one year... besides improving greatly the cultivation of other land already cultivated".

Rought and Famine

Because of oppressive land revenue policy many small and marginal cultivators abandoned cultivation and as a consequence of which the country was hunted by periodic outbreak of famines. Famine inflicted hopelessness, degradation and even death on human life. In 1801-02 famine affected the stricts of Madurai, Ramanathapuram and Dindugal severely. The villages lay in


Board of Revenue Consultation, dated 9.5.1805, vol.409, p.3214-17.

Famine again visited in 1805-07 the severity was most felt in the districts of North and South Arcot, Madurai, Dindugal, Chengalpattu, Thanjavur and Tiruchirappalli. No accounts were available of the extent of mortality, but in Madras alone more than 17,000 perished and the loss of cattle was very heavy. With the exception of those of 1802-04 and 1812, the famines in the first half of the nineteenth century were comparatively restricted in area. Famines affected the Madras Presidency in the years 1817-19, 1824-26 and 1833. The famine that broke out in 1837 was a severe one. Only after 1860 a systematic account of the story of the famine was kept. However famines have been at the heart of most peasants as a structure as well as an event.

Though for several years there were many unfavourable seasons, the famine of 1823-24 affected the whole area causing extreme distress. Innumerable instances of death occurred on account of starvation. People were found to be selling their children into slavery. The poor rushed into shops and houses and

---


evoured the grain and stores. In 1833 the worst famine again struck the lives. The loss of cattle was immense and the agriculturists became entirely destitute of the means of living. In Nellore the roads were filled with corpses and around 0,000 persons were fed in the town. Large numbers of people swarmed into Madras in such an exhausted condition that people were dying in the street everyday. Lot of cattle also died in the Presidency.
The Occurrences of Famine and Seasonal Fluctuations of Rainfall in the Madras Presidency during 1800-1900.

<table>
<thead>
<tr>
<th>Drought/Famine Season</th>
<th>not Moderate</th>
<th>Rainfall</th>
<th>Good Season</th>
<th>Flood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>Years</td>
<td>Years</td>
<td>Years</td>
<td>Years</td>
</tr>
<tr>
<td>1801, 1803</td>
<td>1806, 1814</td>
<td>1826, 1835</td>
<td>1834, 1935</td>
<td>1821</td>
</tr>
<tr>
<td>1805, 1807</td>
<td>1811, 1819</td>
<td>1836, 1838</td>
<td>1836, 1843</td>
<td>1843</td>
</tr>
<tr>
<td>1812, 1817-19</td>
<td>1824, 1828</td>
<td>1839, 1841</td>
<td>1844, 1850</td>
<td>1879</td>
</tr>
<tr>
<td>1824-26</td>
<td>1832, 1835</td>
<td>1842, 1875</td>
<td>1869, 1879</td>
<td>1893</td>
</tr>
<tr>
<td>1832, 1833</td>
<td>1839</td>
<td></td>
<td>1880, 1883</td>
<td>1900</td>
</tr>
<tr>
<td>1837-38</td>
<td>1840, 1853</td>
<td></td>
<td>1884, 1887</td>
<td></td>
</tr>
<tr>
<td>1854, 1857</td>
<td>1863, 1864</td>
<td></td>
<td>1893, 1894</td>
<td></td>
</tr>
<tr>
<td>1866-67</td>
<td>1865, 1876</td>
<td></td>
<td>1900</td>
<td></td>
</tr>
<tr>
<td>1876-78</td>
<td>1882, 1889</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1892, 1895</td>
<td>1890, 1891</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1897, 1899</td>
<td>1898, 1899</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When agriculture failed owing to the failure of rain and drought, the 
at incurred from them fell on the shoulder of the poor ryots. It was all the 
ue with regard to the failure of commercial crops. Frederick Henry in his 
1 Narrative of the Drought and Famine records the implications of erratic 
for cotton crops. He writes "what is the point of rain when the crops 
lived up. If the rain falls in September, woman can afford to wear golden 
s, but if rain falls at September and October it ruined the cotton, it harms 
plants, its flowers fall down..." 

Thus commercial crops and any other crops cultivated were under the 
nts influences of season. And so when the monsoon failed, or over-flooded, 
ith of the crops and yielding capacity had been affected. It was more so 
e occurrences of famine. The famine had devastated not only the crops and 
but also took a heavy toll of people through various diseases and scarcities.

Frederick Henry, A Narrative of the Drought and Famine Which Prevailed in the Northern 
ces During the Years 1868,1869 and the Beginning of 1870 (Allahabad: 1871), pp.19-20.