

CHAPTER IV

AGRICULTURE AND IRRIGATION

I Land reclamation and Utilisation

Land utilisation :

Of the Territory's total area of 480 sq. km. as much as 46,822 hectares of land are accounted for in terms of land use. The region-wise area of the Territory according to the Survey of India and the village papers is given below :

(In hectares)

Details		Pondi-cherry	Karaikal	Mahe	Yanam	Territory
<i>Total geographical area according to :</i>						
1. Survey of India	..	29,000	16,100	900	2,000	48,000
2. Village papers	..	29,377	14,920	841	1,684	46,822*

The region-wise classification of land in the Territory (1970-71) is shown below :—

(In hectares)

Details		Pondi-cherry	Karaikal	Mahe	Yanam	Union Territory
<i>Land not available for cultivation :</i>						
1. Forests	..	Nil	Nil	Nil	Nil	Nil
2. Land put to non-agricultural uses	..	7,664	2,398	88	239	10,389
3. Barren and uncultivable lands	..	101	36	17	70	224

* Between 1956-57 and 1959-60, the total area of the Territory had slightly diminished from 46,867 ha. to 46,822 ha. This decrease in the area is said to have occurred as a result of soil erosion in Yanam region.

Details	Pondi-cherry	Karaikal	Mahe	Yanam	Union Territory
<i>Other uncultivated land excluding fallows:</i>					
4. Permanent pastures and other grazing lands ..	5	94	—	347	446
5. Land under miscellaneous tree crops and grove not included in the net area sown ..	1,276	637	2	74	1,989
6. Culturable waste ..	479	641	—	150	1,270
<i>Fallow land :</i>					
7. Other fallow lands ..	188	2	—	—	190
8. Current fallows ..	632	159	—	—	791
9. Net area sown ..	19,032	10,953	734	804	31,523
Total ..	29,377	14,920	841	1,684	46,822

It may be seen that as much as 67.3 per cent. of the total area of the Territory was under crops. The land put to non-agricultural uses accounted for 10,389 hectares constituting 22.2 per cent. of the total. Area under barren and uncultivable land represented 0.5 per cent. of the total area while permanent pastures and other grazing lands occupied 1.0 per cent. of the total area. In all 4.2 per cent. of the total area was under miscellaneous tree crops and groves not included in the net area sown, and the culturable waste accounted for 2.7 per cent. The current fallows represented 1.7 per cent. of the total area while the area under other fallows accounted for 0.4 per cent. of the total area. The region-wise percentage of net area sown to total cropped area is given in the following table :

Region	Percentage of net area sown to total area (970-71)	
Pondicherry	..	63.4
Karaikal	..	58.6
Mahe	..	86.2
Yanam	..	75.1

The details of land use between 1956-1976 are furnished below :

	1956-57	1959-60	1964-65	1969-70	1972-73	1975-76
1. Forests	.. Nil	Nil	Nil	Nil	Nil	Nil
2. Land not available for cultivation *	.. 9,325	8,997	10,040	10,667	10,952	11,023
3. Other uncultivated land excluding fallows †	4,476	4,696	4,655	3,888	3,202	3,029
4. Fallow lands ‡	.. 764	515	868	1,155	1,853	1,596
5. Net area sown	.. 32,302	32,614	31,259	31,112	30,815	31,174

The disappearance of forests in the Territory appears to be a recent phenomenon. François Martin who acquired Kalapet village, then famous for its timber from Nawab Dawood Khan in 1703, is reported to have used the wood from its forest for building houses in the town newly founded by him. The origin of ravines in Kalapet may perhaps be attributed to this process of depletion. Moreover, as late as in the year 1956-57 an area of 404 hectares was reported to be under forests in the Territory. A large part of this area was found to be in Yanam. However, since 1958-59, the Hand-books of Statistics do not indicate any area as being under forests.

* Land not available for cultivation includes land put to non-agricultural uses, besides barren and uncultivable land.

† Other uncultivated lands include all unculturable waste, permanent pastures and other grazing land, besides miscellaneous tree crops and groves not included in the net area sown.

‡ Fallow land includes also current fallows.

The table above also shows that land not available for cultivation had been increasing from year to year. This may be explained by the fact that the increase represent the requirements of housing, development and construction. But at the same time the extent of fallow land has also increased and has grown more than three times between 1959-60 and 1972-73. Another disturbing fact is that the extent of other uncultivated lands, which include permanent pastures and other grazing crops, has also sharply declined. This may have an adverse impact on the development of animal husbandry and horticulture in the Territory.

In 1965 the National Council for Applied Economic Research (N.C.A.E.R.), which placed the total area under fallows at 470 ha.*, pointed out that as irrigation facilities increased and as other improved techniques of cultivation were adopted, the area under fallows may shrink to less than 100 ha. by 1975-76. But according to the Statistical Hand-books the area under fallows increased from 515 ha. in 1960 to 1,853 ha. during 1972-73. The area under fallows, however, declined to 1,319 ha. during 1973-74 and subsequently increased sharply to 1,789 ha. during 1974-75.

Steps were taken to lease out the available fallow land to ex-servicemen and harijans etc. the details of which are furnished below :

No. of persons benefited		Total extent leased out		
		H.	A.	C.
76	..	30	75	72
88	..	35	61	36
164	..	66	37	08

As for fallow lands belonging to private land-owners, there is no enactment in force in the Territory, which would facilitate the government to take them over. The question of passing an order similar to the Madras Land Utilization Order has, however, been under the consideration of the Administration.

* According to the Statistical Hand-book, however, the area under fallows in 1965 was 868 ha.

The N.C.A.E.R. estimated the culturable waste land in 1965 at 850 ha. lying mainly in Pondicherry and Karaikal regions.¹ The lands under this category lie scattered in small patches all over and belong to the Government, Municipalities and private land-owners. The first two agencies are said to own about 25 per cent of this. In the absence of any survey, it cannot be stated what the nature of this land is and how it could be reclaimed. Nevertheless the Council suggested that heavy tractors and bulldozers could be acquired, if necessary, by the Government to reclaim 600 ha. of culturable waste lands in the Territory. It was further estimated that the total cost of the scheme would amount to Rs. 15 lakhs. The N.C.A.E.R. also suggested that some of the area 'under culturable waste' and 'under culturable land' should be made pastures wherever there was such a possibility.² As it is, there is not much culturable waste in the Territory which leaves little scope for bringing such lands under cultivation.

The question of giving lands to freedom fighters came up for consideration some years ago. This, however, brought to the fore the fact that there was not enough land for free distribution to the landless. Moreover, no proper data of the lands available for such distribution was then available. The Deputy Collectors (Revenue) were, therefore, directed to collect data of all culturable waste lands available with the Government.

The region-wise details of land utilisation on the basis of the settlement accounts introduced with effect from 1 July 1973 are given below :

To the nearest hectares

Lands		Pondi- cherry	Karaikal	Mahe Yanam		Total
1.	Forests ..	Nil	Nil	Nil	Nil	Nil
2.	Lands under wet and dry cultivation ..	22,103	12,570	120	1,043	35,836
3.	Lands put to non-agricultural uses ..	6,830	3,092	95	439	10,456
4.	Barren and uncultivable lands	10	—	—	—	10
5.	Grazing grounds ..	9	7	—	—	16
6.	Cultivable waste lands ..	436	314	2	672	1,424
7.	Garden lands ..	—	—	653	—	653
Total ..		29,388	15,983	870	2,154	48,395

It may be added that lands under miscellaneous tree crops and groves, as mentioned in the first statement, are included in lands under wet and dry cultivation in the above statement. The object of the settlement scheme was mainly to divide the wet and dry lands into groups and classes according to their productive capacity based on the nature and quality of their soil and the facilities available for cultivation and irrigation. Another objective of the settlement operation was to identify and restore all government lands.

Land reclamation and soil conservation:

Although it would be necessary to carry out a survey to identify all fallows and culturable wastes in any particular area before embarking on a result oriented reclamation and soil conservation programme, such a survey does not appear to have been undertaken in the Territory so far.

Soil conservation work was first taken up in the Territory only during the III Plan period and continued during the period of Annual Plans. Attempts at soil conservation in the Territory included measures to prevent soil erosion in easily erodible lands and to prevent fertile lands from becoming saline due to ingress of sea water. This kind of work seem to fall within the domain of the Public Works Department.

An estimated area of 240 ha. (600 acres) in Karaikal region was under water-logged condition. Efforts were made by the ryots themselves to bring an area of about 80 ha. (200 acres) under cultivation.

It was further decided to construct a protective bund along the sea coast and a regulator for protecting wet lands from submersion of salt water etc. Under this programme, irrigation was sought to be stabilised over an area of about 240 hectares. The construction of a coastal bund from Kil Vanjiyur to Chandrapadi covering a distance of 18 km. in Karaikal region was taken up in the middle of the III Five Year Plan. It was estimated that, once completed, the project would protect an area of about 3,280 ha. (8,200 acres). Of this, 2000 ha. (5000 acres) were to be stabilised and 1,280 ha. (3,200 acres) to be brought under cultivation.³

Under the soil conservation programme, the Public Works Department carried out stabilisation works to fill up the six-metre deep ravines near Dhanwantari-nagar. The Public Works Department also took up the construction of regulators at Odaively and Mullodai.⁴

Furnished below is a statement of plan provision for soil conservation and land reclamation works undertaken by the P.W.D., the actual expenditure incurred and details of works undertaken :

(Rs. in lakhs)		
Plan	Plan provision	Actual expenditure
III Plan 1961-66 ..	12.00	1.99
Annual Plan 1966-69 ..	5.15	5.21
IV Plan 1969-74 ..	17.00	12.53

The construction of a coastal bund from Kil Vanjiyur to Chandrapadi was the chief work carried out during the III Plan period. Protecting the coastal bund in different reaches at Karaikal, raising a casuarina plantation within the campus of the T.B. Sanatorium at Dhanwantarinagar, providing earthen bund to prevent sea-water eroding the land at Pudukkuppam near Manappattu village, providing check-dams near Dhanwantarinagar, protecting the road margin and regulating the flood waters at Dharmapuri village were the works carried out under the IV Plan.

Although in the beginning, soil conservation work was the sole concern of the P.W.D., the Directorate of Agriculture appears to have entered the arena in 1966. In order to implement the scheme vigorously departmental candidates were sent for training at Dehra Dun, Hazaribagh, and Ootacamund. On their return, soil and land use capability surveys were conducted. Under the IV Plan, an annual target of 303 ha. under contour bunding and 1,457 ha. under soil and land use survey was fixed. By April 1972 land use survey of the entire area of dry tracts in Pondicherry region was completed.

Details of localities in which land use surveys were conducted together with the area covered, classification of land, treatment required and the year during which the treatment was carried out are furnished in the following statement :

Localities in which land use surveys were carried out.	Area covered (in hectares) under land use survey	Classification.	Treatment required.	Treatment carried out.	Year on which work was carried out.
(1)	(2)	(3)	(4)	(5)	(6)
1. Kalapet—Laspettai—Gorimedu	1,040	Dry tract	Contour bunding	Contour bunding	1966-67 onwards

(1)	(2)	(3)	(4)	(5)	(6)
2. Muttirapalaiyam	240	„	„	„	1970-71 & 1971-72 1969-70
3. Sedarappattu— Karasur— Tuttippattu area	720	„	„	„	
4. Thengathittu— Murungappakkam— Tavalakuppam ..	650	„	Prevention of sea- water intrusion and reclamation of saline and alkaline lands.	—	—
5. Bahur-Kirumam— bakkam area ..	492	„	—	—	—
6. Abhishekapakkam— Thimmanayacken- palayam ..	690	„	Reclamation of sal- ine and alkaline lands and land levelling.	Land levelling	1974-75
7. Suttukanni	160	„	„	—	—
8. Lingareddipalayam	250	„	Contour bunding	Contour bundings	1971-72

The progress of soil conservation work done under the aegis of the Directorate of Agriculture will be evident from the following statement :

(In hectares)

Year	Area surveyed		Area covered by soil conservation work
1966-67	..	..	240.00
1967-68	..	..	422.40
1968-69	..	..	524.00
1969-70	..	..	1,496.80
1970-71	..	..	1,463.00
1971-72	..	..	1,476.00
1972-73	..	..	1,444.00
1973-74	..	..	1,545.00

No soil conservation work has been carried out in Mahe and Yanam till the end of 1974.

The programme proposed for the Fifth Plan includes land levelling, water management practices such as channel lining (400 ha.), construction of percolation tanks (25 ha.) and water saving floors, stabilisation of ravines and protection of table lands (22 ha.), reclamation of saline, alkaline and water-logged lands (400 ha.), protection of stream banks and farm forestry. These measures are expected to cover both rainfed as well as irrigated lands.⁵

It is to be noted that no legislation has so far been introduced in the Territory to make it obligatory for farmers to resort to soil conservation measures. The work is being carried out departmentally with the consent of the land-owners. Although these measures benefit the land-owners they do not share the expenditure incurred for such works. Moreover, no evaluation study has been carried out either to assess [the beneficial effects of these schemes or to find out the reason for the steady increase in the extent of fallow land in the Territory.

As for reclamation work, the Directorate of Agriculture acquired three bulldozers, two in 1969 and one in 1971, to help ryots level up and reclaim their culturable waste lands. The Directorate also acquired two crawler tractors and six tractors which were hired out to ryots for reclaiming and ploughing operations.

The progress of work done under land reclamation will be evident from the following statement :

(In hectares)

Year			Area reclaimed	Area ploughed
1966-67	..	..	18.00	110.00
1967-68	..	..	100.00	99.20
1968-69	..	..	20.40	624.60
1969-70	..	..	20.00	600.00
1970-71	..	..	66.70	1,317.00
1971-72	..	..	104.00	1,509.00
1972-73	..	..	93.50	1,923.00
1973-74	..	..	55.50	2,554.00

With the provision of better irrigation facilities and the adoption of improved techniques of cultivation and the implementation of land reclamation and conservation schemes, the extent of fallow land in the Territory was expected to decline. In fact the net area sown in the Territory was expected to go up from 32,617 ha. in 1961-62 to 33,695 in the year 1975-76. On the contrary, the extent of land lying fallow in the Territory seems to have doubled between 1959-60 and 69-70. However, no adequate explanation for the sharp increase in the extent of fallow land is available.

The Approach Paper to the Fifth Plan indicates that about 1,200 ha. (3,000 acres) of culturable waste and 760 ha. (1,900 acres) of current fallows will be reclaimed during the Fifth Plan period.⁶

II. Irrigation

Introductory :

Pondicherry having been almost a cradle of civilisation for not less than two thousand years, it is not surprising that in the days of the Pallavas, there were special committees known as *eri variya perumakkal* for the management of irrigation tanks like Bahur.⁷ The construction of channels for feeding and distributing water from rivers and tanks respectively and the digging of large wells for purposes of irrigation was strictly under administrative control. Even so, enough encouragement was given to private individuals to construct works of irrigation. Each *brahmadeya* and *devadana* village received not only permission to construct works of irrigation free of charge, but also necessary implements and lands to aid such undertaking. The Brahmans, according to the Kasakkudi plates, were provided with *kolkalam* and *puludi padu*-iron implements and dry lands, for cutting out channels.

The inscriptions tell us a great deal about the care and attention bestowed on the maintenance of irrigation works during the Chola days. There is particular mention about the Bahur lake, the origin of which may be traced to the Pallava period from available evidence. The primary care of the village assemblies was to get the silt removed every year from the tanks under their control in time for them to secure the proper depth needed to store the full supply for the rest of the season before the rains set in. Often special endowments were created in relation to each tank to safeguard the irrigation interests from the neglect or