

Housing Board : With the tremendous impact of urbanisation the housing situation in Pondicherry turned out to be a matter of grave concern. It was also realised that the problem could be met only by constituting a Housing Board equipped with statutory powers for unifying all activities, connected with housing, town planning and allied matters. The Pondicherry Housing Board Act 1973 (No. 7 of 1974) modelled after the Tamil Nadu Act was passed in 1974 and brought into force with effect from 26 May 1975. ⁶¹ An 8-member Housing Board with the Chief Secretary as Chairman was constituted on 26 May 1975, with statutory powers to deal with the problem of housing and to raise sufficient institutional finance for housing and urban development from the Central Government as well as other financial institutions. Under section 129 of the said Act, the Pondicherry Housing Board Rules, 1975 were notified in the Gazette of 7 June 1975. ⁶² The Housing Board was reconstituted on 1 October 1975. ⁶³

IV. Public health

Introductory :

It is certain that from the XVIII century, most of the functions connected with the maintenance of public hygiene was the responsibility of the police. Even after the restoration of the territory to the French in 1816 these functions continued to be performed by the police. The **ordonnance** of 21 August 1826 made provision for the inspection of public places like restaurants, maintenance of cleanliness of roads, street watering and so on. ⁶⁴

The **ordonnance** of 25 May 1827, dealt with measures to be taken to maintain the cleanliness of the town. The public were required to throw the sweepings only at specified spots. House-owners were required to water the open space in front of their houses. Butchers, bakers and merchants of consumable articles were strictly forbidden to sell items of low quality. ⁶⁵ Attention was paid in 1844 to protect the well waters of Muttirapalayam from pollution. ⁶⁶ With the inauguration of local self-government in 1880, functions touching upon public health devolved upon the municipalities. The **décret** of 12 March 1880 did not however spell out these functions in detail. For want of resources, many of the municipal functions were performed by the Government itself. Thus problems connected with public health came to be dealt with by separate legislative measures. The **décret** of 31 May 1905 stipulated the measures to be taken in times of epidemics. ⁶⁷

Service Municipal d'Hygiène : The *décret* of 16 July 1936 promulgated by the *arrêté* of 15 February 1937 was an important measure in that it sought to consolidate all the different regulations touching upon public hygiene into a single law and to spell out in much greater detail municipal functions touching upon public hygiene and urbanisation. '*Service Municipal d'Hygiène*' was placed under the authority of the Mayor. The '*Chef du Service de Santé*' exercised technical control over the service. The *Service Municipal d'Hygiène* also compiled health statistics, carried out vaccinations, exercised control over city water-supply, dealt with issues of graveyards and inhumation, school hygiene, cattle welfare, inspection of slaughter houses and market places, etc. In order to carry out the functions assigned to this service, offices known as *Bureau municipal d'Hygiène* were set up at Pondicherry, Karaikal, Chandernagore, Mahe and Yanam. In other communes, it was known as *Office municipal d'hygiène*. These establishments were placed under the technical control of the senior surgeon appointed for each '*circonscription sanitaire*' except in Pondicherry where the '*Bureau d'hygiène*' was under the direction of a specialist.

The strict application of sanitary regulations under the supervision and technical direction of the sanitary authorities was made the responsibility of the Mayor by the *décret* of 17 July 1936. 68 Precautionary measures to check the spread of contagious diseases, the cleanliness of thoroughfares, dwelling places, schools, workshops, industries, hospitals, slaughter houses and other public places, prescription on hygienic food, drinking water, removal of refuses, destruction of animals and insects found dangerous for public health were also part of the Mayor's duties. Mayors were bound to ensure the execution of the measures prescribed by the Government within six months. In times of emergency, the Governor may order immediate execution of the measures prescribed.

Some of the very interesting features of this legislation may be mentioned here. Parents or guardians were responsible for having their children vaccinated. Whenever the death rate in any particular commune exceeded the average mortality rate for the entire region, the Governor was required to order an enquiry into the sanitary conditions of that particular commune. The findings of such an enquiry were to be communicated to the municipal authorities for taking necessary remedial measures. In case any municipality failed to remedy the situation, such measures could be executed by the Government and the expenditure incurred was to be debited to the account of the municipality. The owners of buildings were under obligation to whitewash their

houses at least once in two years. The *décret* specified the diseases which were obligatory to be notified to the authorities and also those which were optional. Home refuses and the sweepings were to be deposited in front of the house before 7 a.m. to enable the conservancy staff to remove them. The deliberation of 7 March 1940 prohibited the throwing of garbage on the roads after 8 a.m. Hotels, lodges, choultries and industrial units could be established only with the approval of the municipality. Private clinics or dispensaries were allowed to function only if they fulfilled certain conditions in respect of its location, hygienic condition, other facilities available for the treatment of patients and the qualification of those concerned with the management of these institutions. Slaughter houses, dog pounds, markets as well as the disposal of dead animals fell within the realm of the municipalities. All these functions are now performed by the Municipalities and Commune Panchayats in accordance with the provisions of the Pondicherry Municipalities Act, 1973 and the Pondicherry Village and Commune Panchayats Act, 1973 and the rules made thereunder.

Water supply :

In the absence of a Public Health Engineering Unit in the Territory the provision of drinking water supply in towns may be taken as the responsibility of the Public Works Department, while in rural areas that of the Commune or Village Panchayats. However a proposal was mooted in 1973 to have a separate Public Health Division to be attached to the Public Works Department to be in charge of all public health engineering schemes in the Territory. This proposal was later approved by the Ministry of Health as well.⁶⁹

Besides the Public Works Department and the local bodies, the Community Development Blocks also entered the field subsequently. As part of the Harijan Welfare Programme, wells were dug and overhead tanks were constructed in harijan localities by the Government. These were handed over to the municipalities for maintenance.

Pondicherry Town : The first attempt to supply drinking water to the Pondicherry Town was made in 1863. The water from Mutturapalaiyam was brought to the town through a brick masonry canal and supplied by means of public taps to about one-third of the total population. The water could not be supplied to the high level areas of the town. Constructed in the year 1863 according to a plan drawn by Lamaisse, an engineer of the then Public

Works Department, this canal stretched over a length of 6,000 ms. from the well at Muttirapalayam upto the fountain in **Place du Gouvernement**. Although this scheme assured supply of 300 cubic metres of water per day, the volume of water obtained in 1909 did not exceed 150 cubic metres due to the deteriorated condition of the canal. The remaining two-thirds of the population used water from wells. The water in most of these wells contained a high percentage of sodium chloride because of the proximity of the sea. Moreover the wide use of water from pools was responsible, particularly during the rainy season, for contamination which coincided with the outbreak of epidemics. The question of drinking water supply to the entire town received the attention of the Government again in 1905. Incidentally, it may be pointed out that the scheme formulated earlier by one Poilay in 1887 to harness the water resources of Lawspet was given up since the water there was found unsuitable by the **Comité Consultatif d'hygiène** in France.⁷⁰ Finally, after a study of the underground water resources in various parts in the region. Muttirapalayam was selected for the purpose. Four wells were sunk for harnessing the water which was brought to a reservoir through a 300 mm. diameter pipe-line of 805 m. length so designed as to keep the water always fresh and pure. The water was then brought to the town through a 350 mm. diameter pipe-line capable of supplying 65 litres per second, the distance between the reservoir at Muttirapalayam and the Boulevard being 5 kms. This served the important agglomerations of Saram, Shanmukhapuram, Pillaitottam, Delasupet (Delarchepet), etc. In order to ensure uninterrupted supply of water, another pipe-line of 200 mm. diameter was laid in 1917. The second pipe-line taking off from the water works at Muttirapalayam, ran a distance of 6 km. to join the 200 mm. pipe-line laid in rue de Bussy (now called rue Lal Bahadur Sastri). This line served the important agglomerations of Ozhukarai, Reddiyarpalayam and Nellitoppu.

The water thus brought to the town along the Villianur and Valudavur roads, was carried from one end of the town to the other through pipes of 350 mm., 300 mm., and 250 mm. to cater to the entire town with necessary pressure to get the water elevated to storeys. An annular pipe-line of 200 mm. divided into six reaches (biefs) carried water to all parts of the town. These pipe-lines with a length of 65 km. and more completed the network. The network consisted of pipe-lines of 100 mm., 75 mm. and 50 mm. taking off from the main arteries, provided with taps and stopcock. The outflow was ensured through 108 taps, 59 openings for hose pipes (**bouches d'arrosage ou d'incendie**), 995 private connections, and 176 connections in public buildings.

According to later reports, water was drawn from five open wells and five tube wells. Later, two more borewells were added. Subsequently, water was obtained from six borewells and three open wells. In 1966 one borewell was sunk at the Muttirapalaiyam pumping station. During 1969-70, five experimental borewells were sunk to supplement the source. In 1970 two more borewells were sunk. But the water was found unfit for drinking purposes due to excess of iron content. At present 19 tube wells and four wells are in operation. The present set up is more than sixty years old and it was established to meet the requirements of the then population. Now that the population has increased considerably, the system is hardly adequate to meet the present requirements. Further so many connections were taken from the line which connected the headworks at Muttirapalaiyam to the network of the town area to supply water to the villages en route. So the pressure inside the town became so low creating problems for the supply of water within the town.

The problem of water pollution was studied in 1961 and 1963 through bacteriological examinations of samples of tap water, ice, ponds, tanks and drains which showed the presence of harmful organisms. A quick survey of 65 samples from eight communes in Pondicherry region showed that water in Pondicherry and Mudaliyarpetai showed pollution. There was no regular system for checking, cleaning and disinfecting overhead tanks in the Territory.⁷¹ The wells in Muttirapalaiyam were also found to function under very insanitary conditions.⁷²

The procedure of chlorinating the water was also found far from satisfactory. There was no chloronome for automatic chlorination of water and facilities for storage of bleaching powder were unsatisfactory with the result a sample of bleaching powder was one-third of the desired standard. The water sample from the reservoir did not even show a trace of residual chlorine. Chlorination is being carried out by dissolving bleaching powder in water and injecting this to the sucking pipe. The chlorinating units installed during the French period have become old and could no more be repaired for want of spare parts. Hence a new chlorinating unit was fixed at Muttirapalaiyam pumping station.

Under the National Water Supply and Sanitation Programme a comprehensive drinking water supply scheme estimated to cost Rs. 99.25 lakhs was drawn up anticipating a population of 1,17,000 in Pondicherry town by the end of 2001 A.D. ensuring a per capita rate of supply of 30 gallons per day. This scheme, for which approval was accorded by the Ministry of Health and

Family Planning in 1972, will also benefit areas on the periphery of the town. Under the scheme, the town is divided into two sectors to be fed by two reservoirs of 20.02 lakh litres capacity each to be located at Muttiyalupettai and Uppalam. As the first phase of the scheme, another pipe-line of 53.24 cm. diameter was laid from the headwork at Muttirapalayam to Pattanikkadai to reach the network of the town area. This arrangement assured water supply to the town at 136.50 litres per head per day.⁷³

Karaikal town : The inhabitants of Karaikal depended on wells and ponds for their drinking water. During the rainy season i.e., from July to December the inhabitants fetched water from the river. During summer the people depended on well water which contained a high percentage of chloride that it was not used. The well-to-do obtained water from a well in '**Jardin Colonial**' at Kovilpattu at the rate of three francs per cubic metre. In the absence of a proper water supply scheme the death rate due to various epidemics like cholera, typhoid etc., was very high. The good results obtained from the artesian wells in Pondicherry impelled the Administration to sink such artesian wells in Karaikal also in 1880. The work was commenced in August 1880 and a well was sunk to a depth of 16 metres at **Place du Gouvernement** in the heart of the town. But the water had a high content of sodium chloride which made it unfit for drinking.

In 1904, the municipality decided to sink a big well in the Kovilpattu garden replacing the three wells from which water used to be sold. This project fell through as the water was found unfit for use. Following the suggestion made by the **Conseil Général** in its session during 1910-11 to include the water-supply scheme in the programme of works to be undertaken, the local administration prepared a project. This scheme envisaged harnessing the water from the Kovilpattu garden which the municipality had earlier tried in 1904, by digging six wells in six corners in the shape of a hexagon within a circumference of 200 m. diameter. In 1912, one Belime was sent to Pondicherry by the **Ministère des Colonies** to study the above project and to explore the possibility of finding any other source of water. A number of borings were undertaken and finally the Arasalar bed was chosen for investigation. Inhabitants of the villages located on either side of the river banks drew water from the wells bored in the brown sandy soil. Among such wells, could be mentioned the well of Akalanganni, Pettai, Angalamkankoil, Uzhiapattu or Oduturai. It was found that the wells of Akalanganni, Pettai and Angalamkankoil supplied water in abundance and of good quality. A sample of water taken on 20 December 1913 from the northern bank of the Arasalar confirmed the

superiority of the water of Akalanganni. Hence it was decided to utilise the water from the water-bed at Akalanganni. The project drawn up by Belime envisaged the construction of a gallery, elevatory works, reservoir, pipe-line and distribution network, the distance between the reservoir and the town being 8,800 metres. Since cost of iron was very high the canal was constructed in cement. The main pipe of 200 mm. was laid in Tirunallar street thus dividing the town into two sectors. The water was distributed by means of a 100 mm. pipe-line divided into several reaches.

Since then no major development or repair was carried out. The head work is at present situated in Arasalar where the old infiltration gallery exists. The capacity of the gallery was so designed to meet the requirements of the then population and it was not sufficient to meet the requirements of the increased population. The attempts made to get additional water by sinking more tube wells was not successful as ground water even below 30 feet was saline in Karaikal area. Hence the only alternative was to install another infiltration gallery. The Master Plan for water supply in Karaikal region was so designed as to provide water to all villages and hamlets. This scheme also provided for a new distribution network with one overhead tank to be built south of Karaikal town and the provision of two diesel alternators at Akalanganni headworks. The work on the scheme, estimated to cost Rs. 25 lakhs, was started in 1974.

Mahe town : Mahe had a municipal water supply system at Tattakulam with one ground level reservoir and additional source well. Apart from this, the public drew their water from the municipal wells. This being a rocky area, tube wells have not proved successful. In 1974 the Kerala Government was requested to include Mahe region in the Anjarakandy Water Supply Scheme prepared by them for supply of drinking water to Cannanore and Tellicherry Towns, as Mahe was only at a distance of about 7 kms. from Tellicherry. The Kerala Government had also agreed to the proposal.

Yanam town : The inhabitants of Yanam used to fetch their drinking water from the wells. But sometime in 1866, the British Government had constructed a dam in Dawlesvaram. The water stored was utilised for irrigation purposes by a net work of canals. A secondary canal emanating from this dam fed the pond of Nallasserouvou in Yanam which was used for supplying water to its inhabitants. During summer, water flow in Gautami Godavari

used to diminish so much that the water could not reach upto the end of the canal. During such time i.e., for about 50 to 70 days Yanam used to be deprived of drinking water and the people had to depend on the water reserves of Nallasserouvou. It was calculated that about 35,000 cubic metres must be stored so that it could cater to the needs of the population. But the area of the lake was such that its capacity was only 18 to 20,000 cubic metres.

The water was filtered and then supplied to the region through a small overhead tank. Even after filtration the water was not found to be totally clean for drinking purposes. Hence it was found necessary to have the water distilled with the help of a sedimentation tank besides other ancillary amenities.

To remedy the situation a new distribution system with pressure filters executed at a cost of Rs. 3.16 lakhs was commissioned in 1974. The isolated Gerempeta village in Yanam region will be benefited with the extension of the Byravapalem Water Supply Scheme in Andhra Pradesh.

Rural water supply : The Muttirapalayam water works, originally meant to meet the requirements of Pondicherry town, provided good drinking water to all the villages in Pondicherry Commune and a few villages in Ozhukarai and Mudaliyarpettai Communes. Other villages were provided with open wells, tube wells, ground level tanks or overhead tanks depending upon the source, convenience and specific requirement of the area concerned. Wells and overhead tanks are constructed either by the Public Works Department or by the municipalities themselves. The Block entered the field subsequently.

In 1965 the Evaluation Cell of the Bureau of Statistics carried out a survey to assess the availability of drinking water in the rural areas. The survey covered 40 sample villages, 30 in Pondicherry region and 10 in Karaikal region. While presenting an almost rosy picture of the availability of drinking water facility, it brought to light the prevalence of the practice of segregation in the villages. Out of 122 sources of drinking water, 76 sources were open to all, 18 exclusively for the use of scheduled castes and 28 usable by other communities only. In Karaikal out of 116 sources, 41 sources were open to all, 27 exclusively for the use of scheduled castes and 48 for other communities. This showed that the system of segregation was more rigorous in Karaikal than in Pondicherry.⁷⁴

According to a study carried out by the Directorate of Pilot Research Project in 1973 the position seems to have deteriorated considerably. According to its report, "maintenance of overhead tanks is found to be very unsatisfactory. It has been noticed in village after village that there is some defect or other which results in the basic necessity of life not made available to the people". Further, "there are public wells without water. Tube wells dug under the drought relief scheme in 1968-69 are not useful as most of them are dry or abandoned or ill-located. The position in respect of overhead tanks is also regrettable. There are water in the wells but the electric motor pumpsets are not working. There are also wells without water provided with overhead tanks. In many cases the horse power of the motor is not adequate to draw up water from the well in which both water level is very low. There are few cases in which both water is available and motor is working but the absence of proper taps and supply lines results in the flow of water directly from the pump as one finds in the field wells irrigating the lands and it causes a lot of wastage of water. There are open wells in which water supply is found to be inadequate, dirty and brackish. All these speak of an unsatisfactory position in most villages and people are not getting the supply of drinking water in their villages or the supply is so inadequate that their requirements are not satisfied. There are many villages which make use of field wells in private lands to get drinking water."

This study which covered 268 villages showed that 18 villages had no source of drinking water and the people had to depend on private wells, field wells, or the sources available in the neighbouring villages. In all 46 villages had open wells, two villages had hand pumps. Out of 110 overhead tanks, as many as 44 were not functioning; 13 villages had ground level tanks, 76 villages had street taps. Thus a total of 62 villages (44+18) mostly in Mannadipattu, Ariyankuppam, Villiyannur and Bahur Communes did not have any kind of drinking water facility. Only in 145 villages where drinking water was available from street taps and overhead tanks, protected water supply was assured. According to this study, protected drinking water was not available in 123 villages in Pondicherry region.

The same study which also covered 87 harijan settlements in the region showed that 43 villages did not have even the minimum supply of drinking water as there was no source of supply. The report pointed out that the position with regard to the maintenance of water works was not satisfactory.⁷⁵

Under the Master Plan for Rural Water Supply in Pondicherry region, it was envisaged to provide all the villages and hamlets in Pondicherry region with drinking water facilities. The work was taken up for execution in 1966. It may be pointed out that during the Second and Third Plan periods, water supply in the rural areas was the responsibility of the block and municipal agencies. The P.W.D. entered the field only during the Fourth Plan. As a first step it took up schemes for 25 villages covering a population of 27,000. The schemes were completed and subsequently handed over to the concerned municipalities.

As on 31 March 1976, in all 167 villages out of 334 (Census) villages in the Territory had adequate potable water supply while the rest resorted to open wells and ponds.

The Master Plan for Water Supply in Karaikal region seeks to provide drinking water to all villages and hamlets in five communes. The plan also envisages carrying out two major improvements viz., providing a new distribution network with one overhead tank on the south of Karaikal and providing two diesel alternatives at Akalanganni headworks. The entire scheme estimated to cost Rs. 25.00 lakhs was taken up for execution in 1974-75.

Drainage :

Pondicherry Drainage System : The flood waters and partially the sewage of Pondicherry town and its surrounding area was discharged into a wide open, slow moving *kutch*a drain called the Uppar drain running along the western and southern parts of the town a little away from the boulevards. Near about the beach where the mouth of the sea is closed for most of the year, the effluent accumulated into a stagnant creek. Even the textile mills let off their effluent into the open sewage canal leading to the lagoon by the sea-side. Apart from being used for soaking coconut husks for making coir and ropes, they served as a breeding ground for mosquitos.⁷⁶

Not much attention seems to have been paid to the drainage system during the II and III Plan periods. However since then a scheme was drawn up to improve the Uppar drain so as to improve its carrying capacity and relieve the drainage congestion in the adjoining areas. The entire stretch was divided into four reaches and the second reach was completed first in view of

its proximity to the newly developing housing colonies i e., during the IV Plan period. Work on reaches I and IV was completed in 1975 and that of III was started in July 1975. The work in the three reaches could be carried out only with the finalisation of acquisition proposals of 8.6288 acres in Saram, Puduppalayam and Olandai villages.

The link drainage system which was to include the Karuvadikuppam drain, Pakkamudiyanpet drain, Olandai drain, Nellitoppu drain and Ayyanarkoil drain was proposed for implementation under the V Plan.

Pondicherry town is even to-day served by an open drainage system which is connected to the southern flank of the Uppar drain. Only after 1936, major works were carried out to provide proper drainage, such as construction of side drains, etc. In 1937, the '**Petit canal**' which emanated from West Boulevard and the '**Grand canal**' which separated the eastern sector from the western sector were reprofiled with a view not to let the water stagnate. The same year the boulevards of the town were provided with side drains for the easy flow of stagnant water.⁷⁷ Nevertheless in some parts of the town sewage water from houses flow into the streets only to stagnate on the road.

Under the National Water Supply and Sanitation Programme an underground drainage system for Pondicherry, drawn up at an estimated cost of Rs. 58.32 lakhs, was sanctioned by the Ministry of Health in 1963. The scheme was designed for an ultimate population of 1,25,000 with a sewage contribution of 25 gallons per head per day.

For the present, only the area within the boulevards is covered under the scheme. However, the main lines on the border have been so designed as to take an additional quantity of 500 gallons per minute so that, if at a later date, any part of the outskirts of the town is to be connected to this system it can be easily done without modification of the scheme.⁷⁸

The scheme includes the construction of a Main Pumping Station, a Sub-Pumping Station (Lal Bahadur Sastri Street), an Intermediate Pumping Station between the Main Pumping Station and the Sewage Farm (200 acres) and the laying of house service connections. The progress was slow due to difficulties caused by cumbersome acquisition proceedings. The sewage farm is proposed to be established at Navalkulam behind the Tagore Arts College.

The Jipmer campus has its own sewage system and activated sludge plant.

Karaikal Drainage System : In 1969 the Madras Public Health Engineering Department prepared a scheme estimated to cost Rs. 30,000 lakhs for a drainage system for Karaikal after carrying out an investigation of the town. The scheme could not however be implemented during the IV Plan.⁷⁹

The other two towns of Mahe and Yanam do not have any underground drainage system.

Urban areas have community septic tank latrines in several wards. Private houses have either service or septic tank latrines depending on the economic status of the house owners. Dry refuse is dumped with mud for filling up low lying areas.

The rural areas are mostly without latrines and people use the open fields. While compost pits are quite popular in rural areas, soakage pits are not that popular.

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