

Tamil Arasu

JULY 1973

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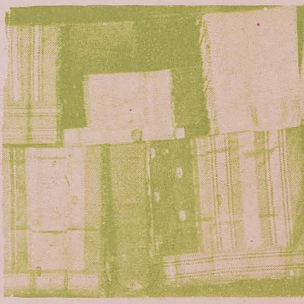
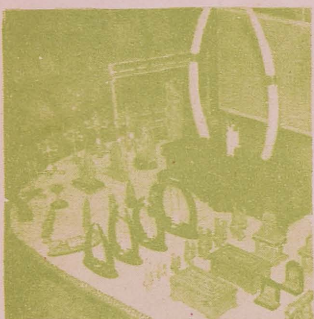
KURALAGAM

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Tamil Arasu

Vol. IV

JULY, 1973

Issue 1

CONTENTS

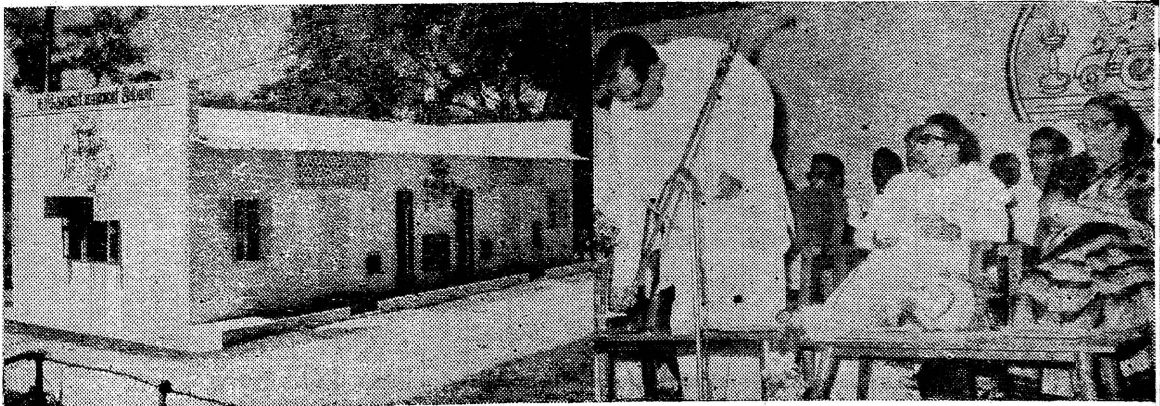
PAGES

One should wish many more birthdays for Karunanidhi.	4-6
Anna Fly-over	7-10
Anna Cancer Institute	11-14
Tamil is unique	17-18
Medical Education in Tamil Nadu	21-22
Electronic Industries near Madras	27-29
Snake Park in Madras	52-53
Functions of Employment Exchanges	55-58



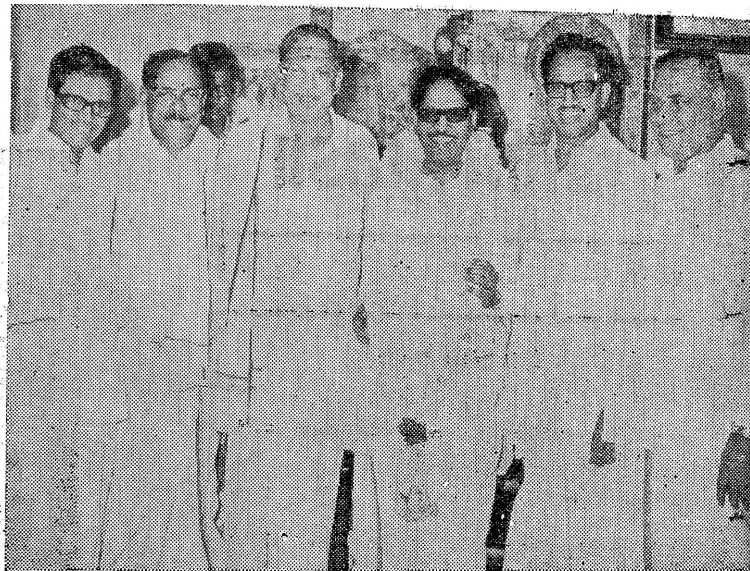
The Prosperity Brigade goes into Action.

The Seerani Volunteers constructed on their own volition the hostel building for Narikuravar students at Saidapet in Madras within a record time of 15 days. The work was inaugurated by Thirumathi Sathyavenimuthu, Minister for Marijan Welfare, (Picture top) on 20th May 1973 and was declared open by Dr. V.R. Nedunchezhiyan, Minister for Education on 3rd June, 1973 on the occasion of the 50th birth day of Dr. M. Karunanidhi, Chief Minister of Tamil Nadu (Picture below). The hostel building signifies and stands as a testimony to the mammoth nature of the selfless and sacrificing service to the society of the members of the Prosperity Brigade.



ONE SHOULD WISH MANY MORE BIRTH- DAYS FOR KARUNA- NIDHI

S. VISWANATHAN,
in Industrial Economist.

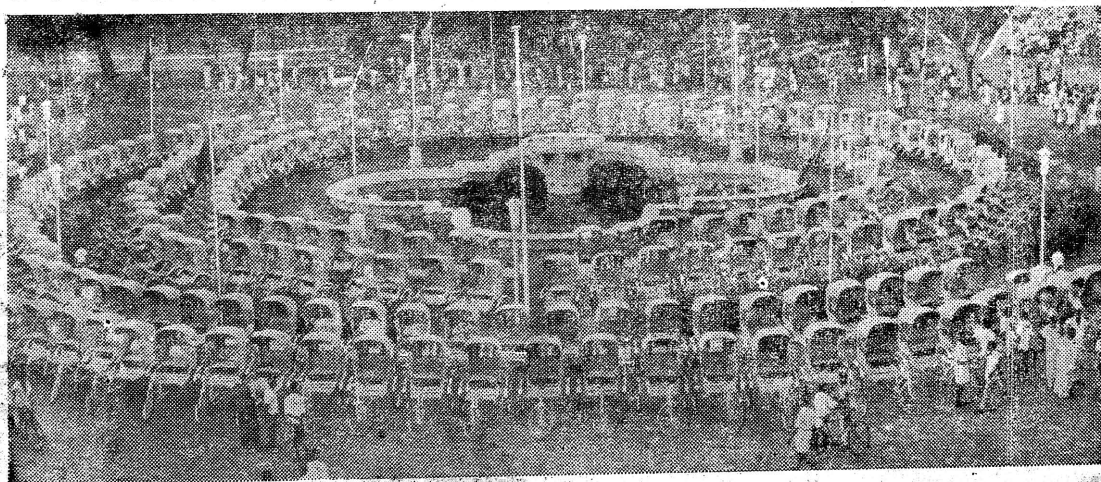


The Cabinet Ministers called on the Chief Minister Dr. M. Karunanidhi at his residence on 3rd June 1973 to greet him on his 50th birthday.

It is the endeavour of every successful political leader to devise schemes which will have impact on the widest cross section of the people. The 'garibi hatao' slogan of the Congress was the crystallisation of the objectives of the ruling party at the Centre. In an attempt to translate this, the main aim of the Fifth Five-Year Plan has been announced as the removal of poverty.

If it has taken nearly 24 years after independence to clearly define the approach of the Congress party, it is no wonder this approach has not permeated to the States' level

in many instances. Tamil Nadu is among the few interesting exceptions to this. Since the Congress Government which had a long innings continuously right up to 1967 introduced on its own many welfare measures such as free education up to high school, midday meal scheme and the like and had also worked towards rapid industrialisation of the State, its rival DMK had to devise schemes which will have a greater impact on the masses. It should go to the credit of C.N. Annadurai and to his successor M. Karunanidhi for the many schemes the DMK Government introduced within a short time of



The 300 and odd Cycle-rickshaws distributed to handerickshaw pullers on 5th June 1973.

its assuming powers—schemes that are designed to ensure the reach to the largest number of people.

Laudable Efforts

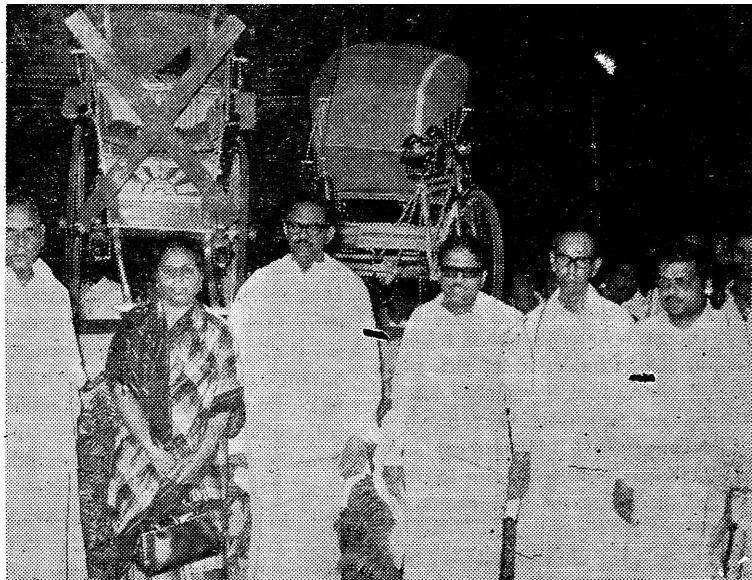
The birthday gifts of Chief Minister Karunanidhi are an extension of this approach. While the Government could introduce a number of welfare measures such as slum clearance, ensuring drinking water to all the villages, allotment of land sites to the agricultural labour and the like, there were many social welfare schemes which could not directly be charged on the exchequer. Since the excellent organisational frame work of the DMK Party lent itself to a facile collection of large funds from the public, Karunanidhi pitched upon the idea of collecting these for specific welfare measures to be initiated as part of his birthday celebrations.

Beggar 'Hatao'

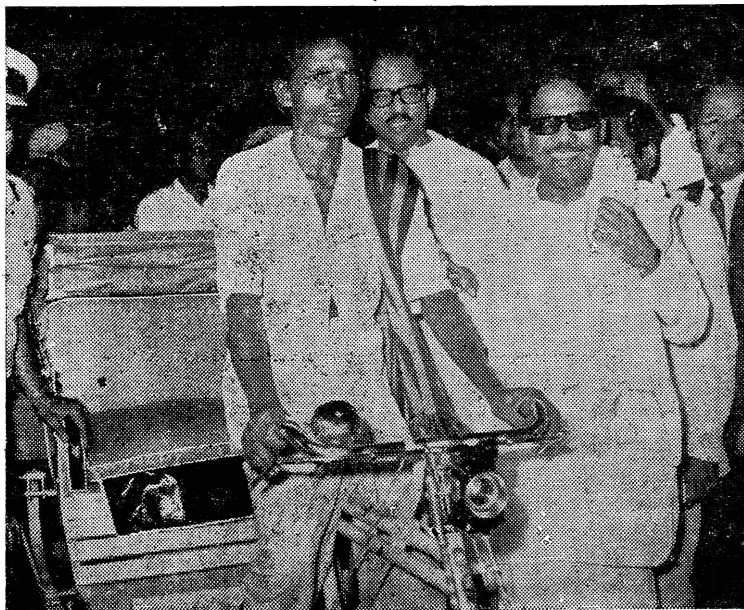
The beggar rehabilitation fund was introduced on this principle on the

48th birthday of Karunanidhi with nearly a crore of rupees collected within a short time. The scheme has the laudable object of rehabilitating the leprosy and other infirm beggars scattered all over the State in new homes built

specially for them at different parts of the State. This measure has been a reasonable success. If it is pursued, if necessary, with supplementary grants from the Government, a definite date line may be fixed for the total elimination of beggars in the State.



The photo picturing the Chief Minister and his Cabinet colleagues and a cross-marked hand-pulled rickshaw and Cycle-rickshaw symbolises the change in the line of socialistic attitude and activity of the State Government.



The first recipient of Cycle-rickshaw — a free presentation to hand-rickshaw puller— at the hands of the Chief Minister on 5th June 1973.

Ninty Free Eye Camps And 40,000 Operations

For his 49th birthday last year Karunanidhi announced the organisation of free eye camps where eye operations would be carried out by expert surgeons at the various parts of the State and free spectacles would be provided to the poor. It is gathered some 40,000 persons had been operated upon so far in the free eye camps conducted in the last one year. The nintieth of these camps was conducted at Madurantakam early this month. The incidence of eye illness is indeed large in tropical countries. Due to many factors including malnutrition and lack of adequate eye care, myopia, cataract and the whole range of eye diseases are all too common. No wonder this

scheme of the Chief Minister also proved to be quite popular.

A Tyranny of Six Decades :

For the 50th birthday celebrated on June 3, 1973, Karunanidhi pitched on yet another equally laudable scheme—the abolition of hand pulled rickshaws in the State. Though no precise data is available on the introduction of this mode of conveyance, available records indicate that these were in vogue as early as 1911. It is gathered some 2,000 hand rickshaws are in operation in the whole of Tamil Nadu. Of these 1,294 ply in the city. The cost of replacing these hand rickshaws by cycle rickshaws is estimated at Rs. 20 lakhs. This amount has been raised and handed over to Karunanidhi on June 3, 1973 and as in the earlier cases, collections are bound to be considerably larger than the target set.

In an impressive function held in the Government Estate opposite to Rajaji Hall on June 5 1973,

three hundred and one rickshaw pullers received gift cycle rickshaws from the Chief Minister.

The scheme is imaginatively conceived. A licensed puller, who does not own a vehicle, would be presented with one free of cost. The owner of hand rickshaws, who had to surrender the vehicles, will be compensated through liberal bank loans to buy cycle rickshaws. For each hand rickshaw surrendered at the traffic police office, Rs. 200 is paid as compensation. It is gathered that each hand rickshaw thus surrendered will get only around Rs. 25 as its wood value. Before the end of this month another 406 cycle rickshaws would be distributed. Before September 15, the birthday of C.N. Annadurai, the hand rickshaws in the State would completely be replaced by cycle rickshaws.

A Symbol of Social Injustice :

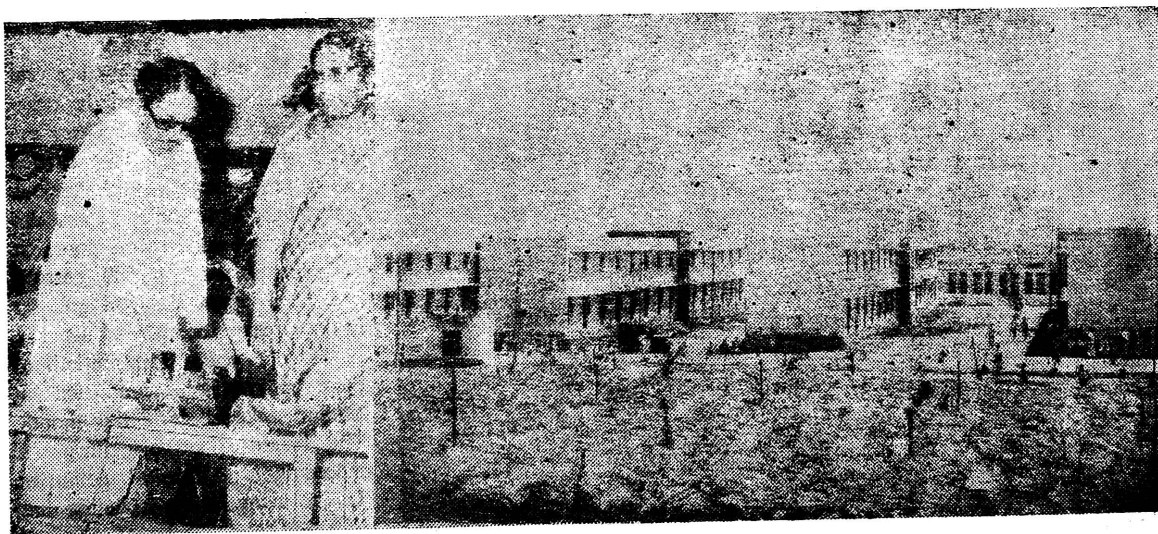
The hand drawn rickshaw was certainly a symbol of social

injustice. As Education Minister Nedunchezian pointed out at the function, none had the imagination to abolish it till now. For removing this injustice, Karunanidhi and his party deserve congratulations.

Facile Collections :

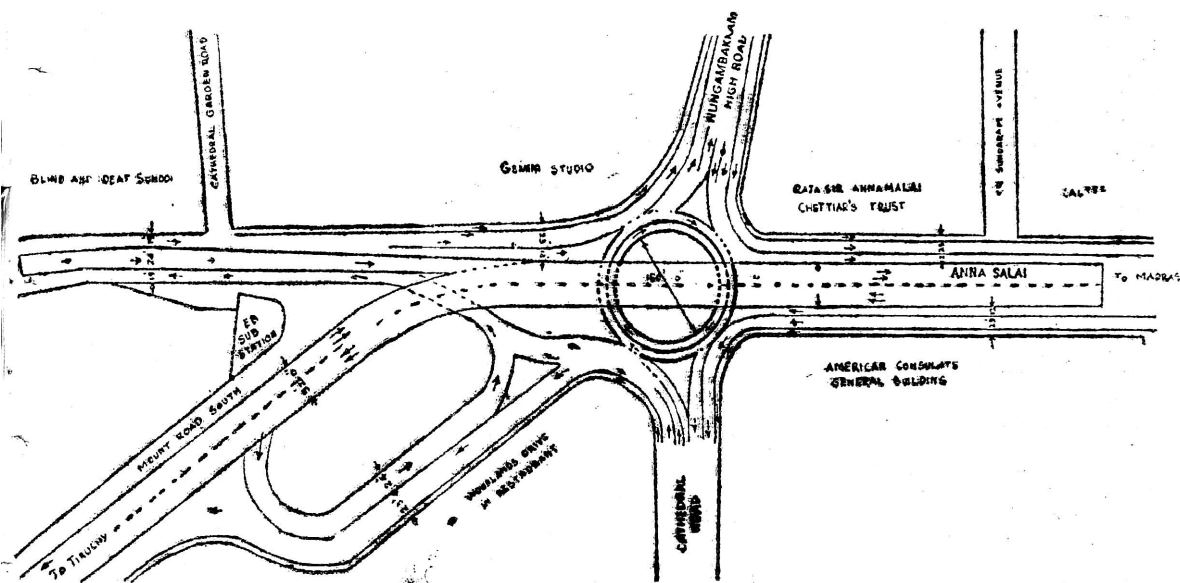
The more interesting aspect of the scheme is the facile manner in which funds are raised. There are of course complaints about the element of coercion employed at certain levels by commercial tax officers and the like. When similar or worse tactics are employed for collection of funds for far less important things such as raising party funds or for the holding of some seminars, which are of interest to a very few, one finds, even when such means were adopted, they could be excused in the light of the end envisaged. One should wish many more birthdays for Karunanidhi each intended to initiate some good scheme or other for the poor and the downtrodden.

HAPPY HOMES FOR THE HAPLESS



A Leprosy Beggar Rehabilitation Home—48th Birthday gift of the Chief Minister to the unfortunate leprosy afflicted brethren of the society

ALL ABOUT THE ANNA FLY-OVER



LAYOUT PLAN OF ANNA FLY-OVER

The round about at Gemini corner of Anna Road is an important road junction in the city of Madras where as many as 9,000 vehicles per hour pass through during the peak period of the traffic at this junction. Signal systems were in operation to regulate the traffic at this junction. But the traffic hold-up was unduly long and so a solution for providing a regulated and also an uninterrupted flow of traffic became very essential. Hence this Fly-Over-Cum interchange.

The main fly-over is of 4 lanes width, 2 lanes each for up and down traffic in the Anna Road, the main artery at the Junction. In addition,

there is an access ramp of 24' width from G. N. Chetty Road to join the main Fly-over and also a down ramp from the main fly-over running on a "clover leaf" leading to G. N. Chetty Road under the fly-over at a suitable point. All the traffic turning to left are accommodated in the 4 service roads provided at the corners of the junction. The straight traffic on Cathedral-Nungambakkam High Road and right-turning vehicles make use of the rotor of 150 feet diameter under the fly-over at the point of intersection. The pedestrians and cycle traffic make use of the extreme lanes of service roads and suitable crossings have been provided for them.

INDIA'S BIGGEST FLY-OVER COMES INTO USE

ANNA FLY-OVER AT GEMINI INTERSECTION

IN MADRAS CITY

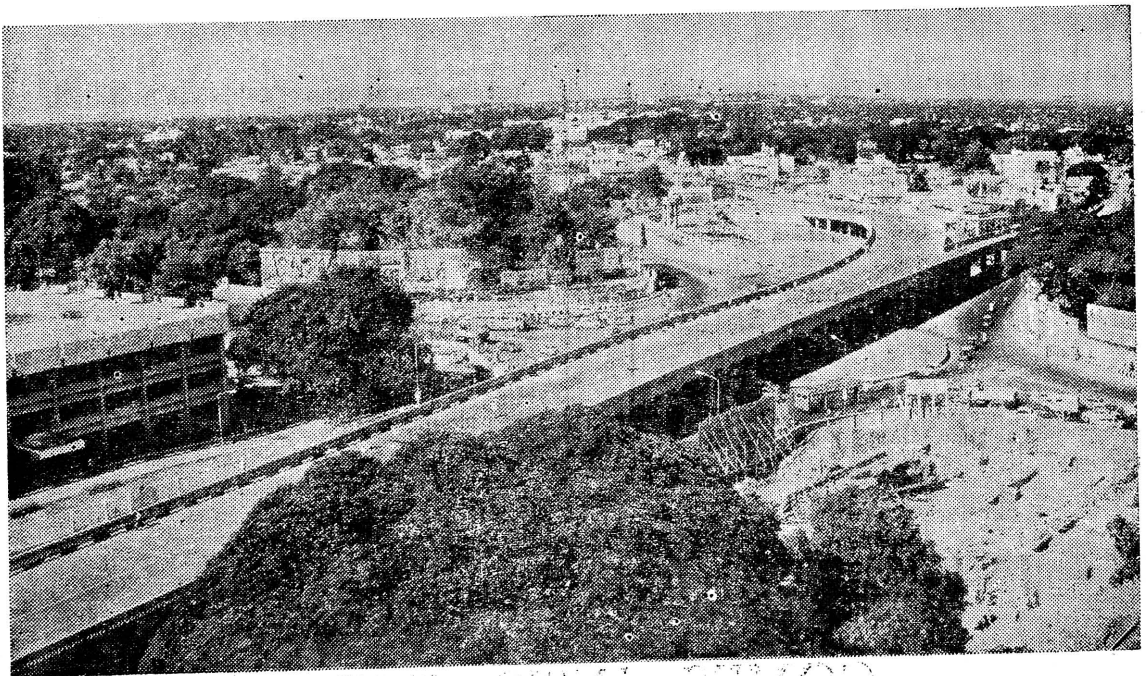
A Fly-over differs from an Over-bridge in the strict technical sense that the former provides an additional tier of road-way usually of longlengths, obviating the delay and difficulty due to cross-traffic, while the latter just bridges an intervening gap like a railway line or a water-crossing. Fly-overs are thus a rapid means of road communication system in metropolitan cities and are widely used in countries like Germany and England in the West and Japan in the East. But our country is yet to make any rapid stride in this direction. The Fly-over, just completed at Gemini Intersection, is the first of its kind in our State and the third in the country, counting two "mini-fly-overs" at Kemps corner and Marine Drive in Bombay. However it will be the longest in India as at present.

The Madras metropolitan area is the fourth longest urban concentration in the country with a population of 3.1 million in an area of 1,180 sq. k.m.

The Gemini Roundabout on Anna Salai is the most important road junction in Madras city with a continuous flow of traffic from morning till night. This intersection is very close to another intersection of Anna Salai and Lloyds Road on the north; Anna Salai and Gopathy Narayanasami Chetty Road on the south and Kodambakkam and Nungambakkam High Roads on the west of Gemini Studios. During peak traffic hours, when as many as 9,000 vehicles pass through the intersection there is locking up of traffic resulting in traffic congestion and traffic hazards. Signal

system that was in vogue, no doubt, helped to a certain extent the regulation of traffic, but the traffic hold-up was unduly long and vexatious. So it became absolutely necessary to provide continuous flow of traffic at this junction by means of a Fly-over-cum-Interchange in the interest of not only the individual motorist but also of the nation in the matter of transportation cost and economy.

The Fly-over-cum-Interchange, now completed at Gemini Intersection, consists of a main wing, running from north to south of Anna Salai of four lanes 48 feet wide, 1,599 feet long. Two lanes will cater to straight traffic on Anna Salai from north to points south of Gemini Circle and two others to north-bound traffic at the roundabout. An access ramp 24ft. width has been provided on Gopathy Narayanasami Chetty Road to link up with the main Fly-over, just south of the intersection.



Panoramic view of Anna Fly-over at Gemini intersection

Vehicles coming down from north to Gopathy Narayanasamy Chetty Road will take the left extreme lane of the Fly-Over and then branch off into an elliptical path called "Clover-leaf" linking up with Gopathy Narayanasamy Chetty Road at ground level through a longer span provided for the purpose in the main Fly-Over.

SERVICE ROADS LAID

Service roads have been laid on the four corners of the junction to cater to the needs of the left-turning vehicles. These roads vary in width from 19' to 35' depending upon requirements of traffic. In addition, a central rotor of 150' diameter, is also put up at the junction, providing a two-lane roadway around in order to accommodate the straight traffic on Nungambakkam-Cathedral roads both ways and the right-turning vehicles also go around this circular island weaving in with straight traffic in east-west direction. Foot paths and cycle-paths have been provided in the four service roads with suitable crossing zones about the intersection. This Fly-Over is solely intended for fast-moving traffic and all other vehicles are to use only ground level roads. Several traffic islands also have been constructed at the required places for the proper segregation and safety of traffic.

The proposal for constructing a Fly-Over at Gemini junction was mooted out by the Highways and Rural Works Department as early as 1960 and it has become a reality only in 1973. After long thought-out study of a number of plans in the light of reduction of cost of the Fly-Over with good traffic effect, the Government reviewed the position and accepted the proposal and the Fly-Over had taken the shape of what it is seen today.

The work was also programmed to be carried out in three stages, viz.—

(1) Western half of Main Fly-over and access ramp on Gopathy Narayanasamy Chetty Road,

(2) Portion south of junction in the eastern half and the clover-leaf and

(3) The balance of eastern half of main Fly-over.

The design and planning of the entire scheme has been done to facilitate the construction and the phasing of work in such a way as to help the movement of traffic without any undue and long diversion from the junction. This has resulted in savings to an extent of 4 to 5 lakhs, that would have been otherwise spent on improvement and maintenance of long diversion routes.

Avoidance of main sewers along Anna Salai became possible by adopting shallow but wide raft foundations and the column footings have been so staggered as to avoid 36" water main crossing the junction from west to east. Other services and man-holes have been suitably dealt with either by shifting them from the area of foundation or footings have been redesigned.

Foundation of shallow type, unlike other major bridges in the State, have been adopted in this case not only with a view to avoid the major services passing underneath, but also to facilitate easy and quick construction that has accelerated the time of completion to a very great extent. Each column of 36" diameter is supported on a raft foundation of size 20' x 10' thereby helping the total load on each column to be very near the bearing capacity of the soil, viz., 1.2 tons/sq. ft. The clayey nature of soil to a considerable depth is another factor against adopting deep foundation in this case.

The limiting factor of low bearing capacity of the soil is also responsible for adopting the short but most economical spans of 34'-9" each from centre to centre of column and also the multi-beam perforated deck, thereby considerably reducing the dead load on foundation. It is also incidentally to be pointed out that the use of hollow-beam deck for a road-bridge is the first of its kind in India. This perforated deck comprises of both precast and in-situ units. The precast portion is laid in the form of Tamil letter "L" and thirteen such beams were hoisted by means of a Gantry, locally made and placed in position side by side and propped up, before in-situ concrete was laid to for the perforated deck. The top and bottom slabs of the deck are 6" and 3½" respectively and the vertical connecting rib is 7" thick, but the end verticals have got 12" thickness. The individual box, thus made, measures 24½" wide and 27½" deep.

The concrete used for the entire construction is of special grade with a strength of 4,500 pounds per sq. inch after 28 days curing. This multi-beam deck rests on either side on the projected ends of cross-beams, over "Neoprene" pads 6" wide and 26' long. Neoprene is a material that has been recently introduced in bridge construction. These bearings do not yield under pressure but allow movement of deck, though imperceptible, at either ends. This sort of "articulation" joints of the deck considerably reduce the "shock" from the deck to the cross-beam due to impact of moving loads. The cross-beam is also connected to with columns by means of hinges and mortar pad to reduce the movement on the column. The cross-beam has been suitably placed from the inner end to the outer in the curved portion of Fly-over, so that decks in all spans may be of equal length.

The super elevation required for the curvature in the portion of Fly-Over has also been effected by suitably increasing the height of cross-beam from the inner end to the outer. There is a separate cross beam for each half of Fly-over supported on two columns, 12' apart from centre to centre with an overhang of 7' on either side.

The wearing coat for the entire roadway on Fly-over had been changed over to Asphalt concrete wearing coat from cement concrete as the latter with a number of joints filled with bituman might not provide a smooth riding surface. This Asphalt wearing surface is specially designed for the Fly-over with non-skidding and non-creeping characteristics. P.V.C. water stops also have been used for construction joints and also to prevent water from seeping through the "articulation" ends of the deck.

Drainage arrangements are made by providing opening in the kerb and water taken into the drainage gallery within the kerb and on to A.C. out-let pipes inserted into the deck and attached to the column.

The main Fly-over consists of both trestle and non-vented portions. This trestle portion, of length 1,112' has got 30 spans each 34'-9" centre to centre and one span of double its length. This longer span is intended to allow the traffic coming from

"Clover-leaf" to Gopathy Narayana-swamy Chetty Road at ground level. Of these 31 spans, central 15 spans from level portion on Fly-over with a vertical clearance of not less than 16' 6". The Fly-over is sloping at a gradient of 1 : 25 for 8 spans on either side. This main Fly-over has further got solid fill ends for a length of 260' on the north and for 227' on the south.

Appropriate provision in the construction of this Fly-over for its extension on either side in future is also provided. Accordingly, in the sloping spans, eight on either side,

the cross beam has been connected to the columns by means of a pin with a Neoprene pad in between, so that the entire deck with cross-beam can be jockeyed up to level, columns raised and Fly-over extended. This arrangement also would not have been possible in the originally accepted proposal.

This entire Fly-over complex has been planned, designed and constructed entirely by the Highways and Rural Works Department of Tamil Nadu Government through the contracting agency Messrs.

East Coast Construction and Industries. 901 metric tons of steel and 3,765 metric tons of cement have gone into the making of this Fly-over. The work has been completed in a period of 21 months which is by no means a small achievement in the face of great many odds met with. The limited space available at this crowded junction has compelled to sacrifice a little of standards but in so far as it is a maiden attempt, it can be fairly judged as a success and is a fore-runner for many more Fly-overs to come in the city and elsewhere.

PORTFOLIOS OF TAMIL NADU MINISTERS

The following are the portfolios of the Tamil Nadu Ministers as redistributed from July 2 :—

Dr. M. Karunanidhi (Chief Minister): Public, Finance, General Administration and Police.

Dr. V. R. Nedunchezian (Minister for Education): Education including Technical Education, Official Language, Legislature, Tourism and Tourist Development Corporation.

Thiru K. Anbazhagan (Minister for Health): Public Health, Medicine, Tamil Nadu Drainage and Water Board and Town Planning.

Thiru N. V. Natarajan (Minister for Backward Classes): Backward Classes, Information and Publicity, Registration, Ex-servicemen, Prosperity Brigade, Youth Service Corps, Bhoodan and Gramdan.

Thirumathi Satyavanimuthu (Minister for Harijan Welfare): Harijan Welfare, Women's and Children's Welfare, Fisheries, Beggars' Homes, Orphanages, Approved Schools and Vigilance Services, Indian Overseas and Refugees and Evacuees, Newsprint Control and Passports.

Thiru P. U. Shanmugham (Minister for Public Works): Public Works, Minor Irrigation including Special Minor Irrigation Programme Works, Highways and Ports.

Thiru S. Madhavan (Minister for Industries): Industries, Handloom, Law, Courts and Prisons.

Thiru S. J. Sadiq Pasha (Minister for Revenue): Board of Revenue, District Revenue Establishment, Deputy Collectors, Commercial Taxes, Prohibition and Excise Revenues and Waqfs.

Thiru Si. Pa. Adithanar (Minister for Agriculture): Agriculture, Food Production, Agricultural Engineering Wing and Animal Husbandry.

Thiru A. P. Dharmalingam (Minister for Local Administration), Municipal Administration, Community Development and Panchayats and Panchayat Unions.

Thiru Mannai P. Narayanaswami (Minister for Food and Co-operation): Food, Co-operation and Agricultural Refinance.

Thiru K. Rajaram (Minister for Labour): Labour, Housing and Accommodation Control, Legislation on Weights and Measures, Statistics and Slum Clearance Board.

Thiru O. P. Raman (Minister for Electricity): Electricity, Forests and Cinematograph Act.

Thiru S. Ramachandran (Minister for Transport): Transport, Nationalised Transport, Motor Vehicles Tax, Stationery and Printing and Government Press.

Thiru M. Kannappan (Minister for Religious Endowments): Religious Endowments, Khadi and Village Industries and Rural Industries Project and Milk.

THE ARIGNAR ANNA MEMORIAL CANCER INSTITUTE

Based on the WHO's concept, the Government of Tamil Nadu are evolving the Cancer Control Project at Kancheepuram for the first time in India and perhaps the first one of its kind in Far East Asia. Within the short span of its existence, the Institute has done marvellous work in the line and is soon to be elevated to the status of a Research Cancer Centre.

Cancer Control as defined by a World Health Organisation expert Committee is a series of measures based on present medical knowledge in the fields of prevention, detection, diagnosis, treatment, rehabilitation and after-care of Cancer aimed at reducing the incidence of cancer, increasing the number of cures and reducing the invalidism due to cancer.

Based on the above concept, the Government of Tamil Nadu in collaboration with the World Health Organisation are evolving a Cancer Control Project at Kancheepuram for the first time in India and perhaps the first one of its kind in Far East Asia.

The general objective was to evaluate the development of a Cancer Control Programme based on applicable systems of early detection and effective treatment fitted within the priorities of the State the existing framework of the Health Services, economic possibilities and the social and cultural characteristics of the area.

The short-term objectives were—

(a) to organise a Cancer detection and treatment programme covering Oropharyngeal and uterine Cervical cancer at first in the Kancheepuram Municipality (Kancheepuram Panchayat Union),

(b) to work out as soon as possible means and methods for making efficacious and meaningful studies by adequate coverage and follow up systems and

(c) to train the relevant personnel where necessary.

The long-term objectives were—

(a) to demonstrate cancer control,

(b) to work out prevalence and incidence rates of the Cancer sites under study,

(c) to record any suggestive and causative factors for the disease and

(d) to set up a training centre for medical and para-medical personnel in Cancer Control.

History of Kancheepuram.

Kancheepuram is a small urban town about 45 miles from Madras City, the main metropolis of Tamil Nadu State. The area of the town is about 4.5 square miles with a fairly stable population of about one lakh people. The population at risk has been estimated to about 53,600 and are about equally divided among the men and the women.

About 1/4th of them are involved in House Hold Industries—the main one being Silk weaving by handlooms. Another 1/4th of them are engaged in trade and commerce (retail and wholesale trade and commercial activities like Banking, Stock-Exchange and shares) and in Government services, medical, legal and business services, personal services and community services. Amongst the remaining, the major group are employed in manufacturing other than household industry and others are engaged either in construction work, or as cultivators, agricultural labourers, etc.

The estimated population of the Municipality was about 100,000 and the Kancheepuram Panchayat Union about 60,000. The adult population above 20 years of age was estimated to about 50,000 in the Municipality equally divided amongst the men and the women and about 40,000 in the rural area.

It was decided to invite all the residents of the area for interview



and clinical examination for evidence of cancer and pre-cancerous conditions in the Oral Cavity and in the case of the women in the Uterine Cervix.

From 23rd March 1969 till October 20th, 1972, only women belonging to the Municipality were screened for the early detection of pre-cancerous conditions and early cancerous conditions of the Uterine Cervix (neck of the womb). All married women and women 20 years and above in age were eligible for an internal examination of the birth passage and the neck of the womb from where a smear was taken for Laboratory Examination (Cytological Examination). If this showed any suspicious or malignant cells the Cervix was biopsied for confirmation of the diagnosis. If there was any obvious lesion on the cervix, then also a biopsy was advised. (Biopsy means removal of a bit of the diseased tissue for microscopical examination.)

(3) Funds and Mode of Operation

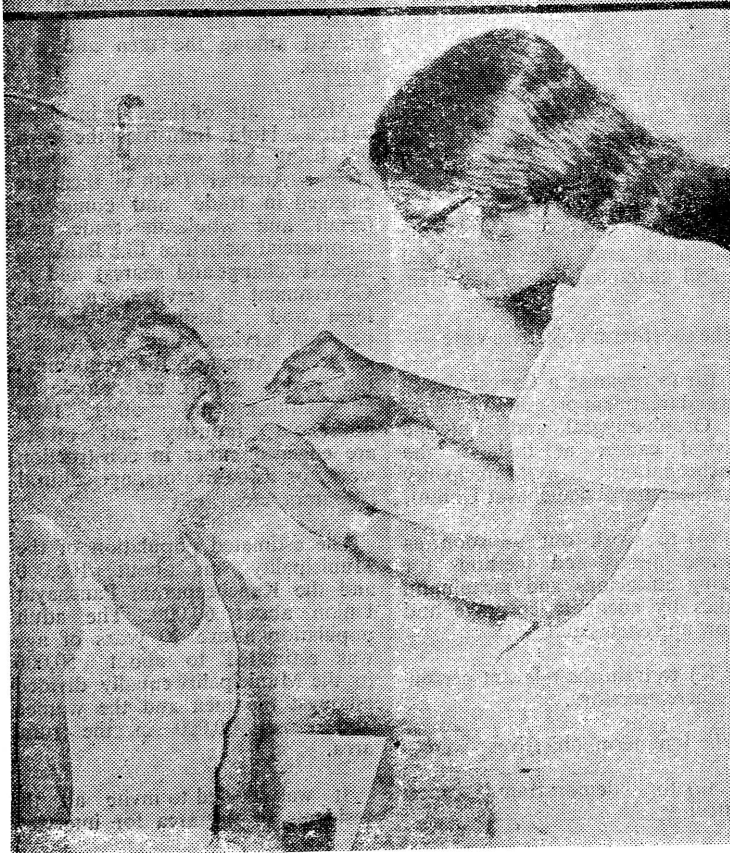
(a) World Health Organisation Aid

As per the plan of operation one million Norwegian Kroners (equivalent to 11 lakhs rupees) were to be channelled from the Norwegian Aid Agency through the World Health Organisation for capital outlay on buildings, equipments, etc., for this Institute apart from 20,000 U. S. dollars (equivalent to 1.5 lakhs rupees) to be given per year by the World Health Organisation as a grant in aid.

The Norwegian Aid Agency had also agreed to give 70,000 Norwegian Kroners (equivalent to about Rs. 70,000) to be cut by 20 per cent each year for a period of 5 years for the maintenance of equipment and supplies made by the World Health Organisation to this Institute.

The World Health Organisation has already supplied 2 Land Rover Vehicles, Laboratory Health Education Equipment and some books and journals to this Institute from the Norwegian Funds.

It has also supplied mechanical, electrical and electronic calculators and an I.C.L 1/7 hand punch and one type 103/1 verifier and 3 air-conditioners for the World Health Organisation Medical Officers Room.



Still Norwegian aid equivalent to about 88,000 U. S. \$ available for this Institute is yet to be spent on equipment and supplies.

The Government of Tamil Nadu realising the value of foreign exchange for the purchase of equipment not available in this country had written to the World Health Organisation through the Government of India to conserve all the foreign exchange meant for this Institute for the purchase of equipment for the Institute which are not available in this country on rupee payment with a high priority for the purchase of radiotherapeutic equipment.

Within a short period of operational research the treatment dimension was highlighted. Many persons detected to have cancer in the Municipality and neighbouring areas had severe psychological, socio-economic and other restraints to go to Madras to obtain treatment. Moreover, it was also realised that there is a paucity of radiotherapeutic equipment in the teaching hospitals of the State which were already over-loaded with cancer patients waiting in a long queue for treatment.

So the grant in aid of 20,000 U.S. \$ given by the W.H.O. for the staff of the project was also not taken by the Government except for the first two years—1968 and 1969—60,000 U.S.\$ of grant in aid for the years 1970, 1971 and 1972 have also been reserved by the W.H.O.

for the purchase of radiotherapeutic equipment for this Institute.

W.H.O. had also agreed to give consultants from time to time and fellowships for members of the national staff to be trained abroad, apart from equipment and supplies and a W.H.O. Medical Officer who would act as the Programme Director for at least a period of 12 months.

Government's Contribution.

Government of Tamil Nadu have already spent more than Rs. 6.5 lakhs for a building for the screening centre, as well as the statistical section, a minor operation theatre and a Cytology Pathology Laboratory apart from an administrative office, Library Conference Halls and rooms for doctors, etc. They have also since sanctioned nearly Rs. 2.5 lakhs towards the cost of airconditioning Minor Operation Theatre, Statistics Department and the Cytology Laboratory. The Statistics Department has to be airconditioned since data have to be maintained as per international standards for long periods of time (even up to 20 years) and have to be computerised from time to time. Data cards have to be stored inde-humidified temperature for computerisation.

The Government of Tamil Nadu as per the recommendations of the W.H.O. Consultants have made the appointments of a multi-

disciplinary team of 26 persons of medical doctors, Pathologist, Social Scientists, Health Educator, etc., inclusive of a Principal Medical Officer as a national counterpart of the W.H.O. Medical Officer apart from 31 other administrative and ancillary staff members.

Government have also sanctioned Rs. 61,700 for the purchase of a 4 wheel jeep and a mini-bus for the extension work.

Government have also sanctioned Rs. 3.7 lakhs for the construction of wards over both the wings on the ground floor and over the 1st floor and plans and estimates were also made for Rs. 3.7 lakhs for the construction of a building to house a Cobalt Unit, Caesium Unit, etc., on the 1/2 acre plot on the northern side of the main Institute building handed over by the Highways Department.

Later, in light of developing a Regional Centre for Cancer and Research and to build a 300-bedded Cancer Hospital in a phased manner Government have since ordered the acquisition of a 22.5 acre plot of land on the main National Highway from Madras to Bangalore on the eastern side of the Bhakthavatsalam Polytechnic. Plans and estimates for Rs. 27 lakhs for the construction of a 100-bedded Cancer Hospital during the 1st phase 1971-72 with physical facilities to house a Cobalt 60 (6000 curies source) Caesium



Doctors enquiring the villagers during a round of Villages under "the Detection and Treatment Programme".

Cheek up of a woman to find out the pre-cancerous growth in her body as a preventive measure.



A trained Para medical staff of the Institute conducting the survey of the cancer patient at risk in the locality.

A doctor of the Institute screening an eligible woman for detection of uterine cervical cancer through interview

137 units, etc., in this site have also since been sent to Government for administrative sanction.

Already nearly 80 per cent of the 28,292 women at risk have been interviewed by the social workers more than once. A continuous migration record of eligible examinees, number of eligible examinees who have expired, number who have got examined, etc., is maintained by the above para medical workers. The enumeration records thereby are being kept up-to-date.

After the collection of base line social science data, Health Education activities in terms of organisation of a Citizen's Committee, Women's Health Education Committee, etc., consisting of leading citizens of the town including the members of the family of the late Arignar Anna has been done and more than 64 Health Education meetings in organised and informal groups in community and four exhibitions on Cancer Education have been held. A full time qualified Health Educator with five years experience in extension work has since been appointed and various avenues of Cancer Education through mass media, etc., are being explored after careful pre-testing and evaluation.

Statistical Studies :

A census of the population at risk taken by the staff of the Institute has been made up-to-date. A projected census of the whole municipality is available. Figures of the provisional totals from the Director of Census Operations for the whole town with reference to the 1971 census is also available. As already indicated, a continuous migration record and death record of the eligible examinees is being maintained. Demarcation of the population in terms of localities, wards, and blocks with maps are also available.

As regards the women who have already undergone a medical check-up for the early detection of uterine cervical cancer, clinical case records have been arranged serially and relevant data obtained on pre-coded sheets have to be punched and computerised. The Statistician of this Institute has already been trained in this regard both at Guindy and Manchester. The laboratory data also have to be pre-coded and punched and the data computerised. Follow-up data also have to be punched and computerised.

Social Science numbering of the Home Visit records have been completed.

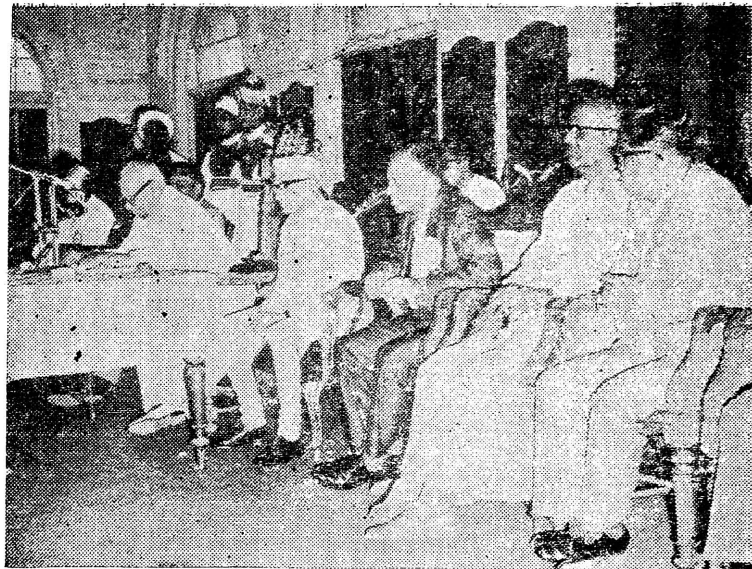
Due to considerable intra-migrations within the town and emmigrations and immigration, identification of examinees from the available records had proved to be difficult and now family cards have been filled in and the original entries in the enumeration registers have been brought up-to-date in terms of migration, persons who have become newly eligible after the enumeration and those left out at the time of enumeration, etc. Open suspension Kardex filing and other Card Cabinets have been supplied by the Government for this purpose. An up-to-date eligible examinee list is maintained comparable to international standards for the purpose of calculating morbidity, mortality prevalence, incidence rates, etc. of Cancer.

The family index cards are also very useful in a screening programme like this and when the teams go from street to street in the identification of the eligible examinees for statistical precision.

Cervical Screening Programme

As regards clinical work two lady Medical Officers screen the eligible women for evidence of early detection of uterine cervical cancer both at the Institute and at the seven municipal maternity centres and three municipal dispensaries.

This is the golden era for Tamil and we witness ourselves Tamil being given the due place in every sphere of life.



The President, and the Governor seated on the dais at the University Tamil Teachers' Conference.

Research is one of the keys to the doors of knowledge. The development of society depends upon the development of knowledge and its application. This development of knowledge is a result of pure research. Research as such is both the cause and consequence of knowledge. But generally the domains of research have always been concerned with the fields of science and Technology alone. When we venture to take up research in the fields of humanities and languages, we are unable to achieve much progress as they are lacking in certain respects. The modern developments emphasise to a certain extent the inter-disciplinary research and interest on any problem of human concern. Hence the study of literature and Tamil society as a whole should not only pave the way for understanding the glory of Tamil, but also for a systematic and analytical research for future development. The glorious past and its relevance to the present set-up have been high-lighted by various eminent scholars. It was Dr. Anna who brought home to the millions of common men in Tamil Nadu, the glory of Tamil, Tamil Culture and society and its hegemony over other languages and societies in the ancient times.

Growing Need for Social Research in Tamil

(In Sociological Terms)

L. PALANIAPPAN, M.A.

Since Dr. Anna had been devoting much of his time to bring about social regeneration, he had little time to venture into the field of research. It has to be admitted that if he had taken up research, his profound knowledge of Tamil, Tamil society and Tamil culture would have produced research documents of incomparable merit capable of reacting only the scholarly few and he would have earned the plaudits of world academies as another Ravindranath Tagore or Pearl Buck. Since he had taken up the task of rebuilding the Tamil Society, he did not find the time to take up research. His method was not within the rigid academic focus, as he was concerned in awakening the common man to appreciate the realities of past in his own way to enable him to work for the formation of a progressive social order. He suggested the need for applying the research tools in the analysis of society and literature and encouraged the Tamil scholars with academic interest to take up the research work.

The bearing of research upon the theoretical framework has been highlighted in different fields by different scholars. On the basis of research done in the field of language

and literature history has been rewritten in different parts of the world, for literature has been the bed-rock of history. But in India, especially in Tamil Nadu, literature has not been properly utilised for rewriting our history. Even some of the scholars who ventured to do research in this field were not given proper encouragement. The work begun by Dr. Anna to make the people realise the importance of our history enthused the scholars and the society in its turn began to recognise their role. As a result of this, the scholars are being held in high esteem both by the society and by the people in power. Now a favourable climate has been created for scholars, thanks to the efforts of Anna to initiate pure research in the field of Tamil language and literature. This is a potential field of social research. Instances are there that a pure research in literature and science of language go a long way in understanding the human group. Does literature reject the mass culture? or does mass culture reject the literature? This is not only relevant to the contemporary literature but also it holds good in the case of early literature. Professor Bitrim Sorokin (BITRIM SOROKIN), a leading contemporary sociologist has analysed the contents of Roman and Greek literature for understanding the process of culture and cultural change. Approaches similar to the above, justify the need for research of ancient literature in Tamil Nadu also. Now we have here, Dr. M. Sundaram, a leading Tamil scholar who has taken the initiative to fulfil the desire of the late Dr. Anna in taking up research in the field of Tamil Language and literature, has succeeded in setting up the Advanced Research Centre for Tamilology in the Presidency College, Madras with the timely help and guidance of Dr. Kalaignar Karunanidhi, a versatile scholar himself and a stout protagonist of Tamil.

Accordingly, the Government in G.O. Ms. No. 1216, dated 30th July 1971 have issued orders to open the Research Centre and the centre was declared open by His Excellency Thiru K. K. Shah, the Governor of Tamil Nadu on 18th January 1973 under the Presidentship of Dr. M. Varadarasanar, the Vice-Chancellor of Madurai University.

Aims and objectives of the Research Programme

1. To cover the unexplored regions of Sangam Literature so as to reveal the glory of Tamil Nadu. The revival of the ancient culture and civilization of the Tamils is to be a main objective. Sinister attempts to deny to Tamil its real place as a classical and modern language are to be thwarted by guiding research into right channels.

2. The renaissance movement is to be studied in all its aspects and in depth.

3. The development of modern literature in all its forms like short story, novel, drama and the essay, is to be given its due place in research.

4. To connect the hoary past with the living present, the folklore of Tamil is to be subjected to scientific methods of research.

5. A scientific study of the Tamil language by modern means of research is to be encouraged.

6. And above all, to provide a sense of direction and co-ordination at national level.

7. A Journal of Tamilology is to be started to bring out the labours and results of research.

8. For the benefit of foreigners and non-Tamils, certificate and diploma courses are to be conducted.

9. Ten research scholarships are to be awarded.

10. Rare and old books and manuscripts are to be preserved and maintained and deserving rare books and manuscripts to be published.

11. Scholars on the retiring stage to be employed under University Grants Commission scheme.

12. Periodicals, seminars and conferences are to be conducted for throwing light on specific areas of research.

13. A scheme for the exchange of scholars at the national level and international level is to be drawn up and linked with similar schemes of other research institutes.

14. Refresher courses and Orientation courses are to be conducted for providing in-service training to Tamil Scholars.

This is a boon to the sociologist. Hitherto the text-book of Sociology explained the sociological concepts to our native students in Sociology with examples and illustrations from other societies different from that of ours. I hope that this Centre will take up research on sociological aspects of Tamil

language and literature as suggested by Dr. Malcolm Adiseshiah in his Key Note address during the inaugural function. This will go a long way in fulfilling the needs of students in sociology in Tamil Nadu. May I have this as an opportunity to outline certain sociological frames of references to undertake a study in this sphere.

(1) Social Stratification and its premise during the sangam age

This is a field which should have a critical review of Tamil society based on the economic and ecological factors. A stratification of society as seen in the Sangam literature (Kurunji, Mullai, Marutham, Naithal, Palai) justifies that there have been different sections in the community and the same were based on the ecological and its related occupational components and not on the basis of birth, a criterion created by the intruders in the medieval period of Tamil History. A study in this line may re-inforce the sociological theory which has been found to be the same throughout the world.

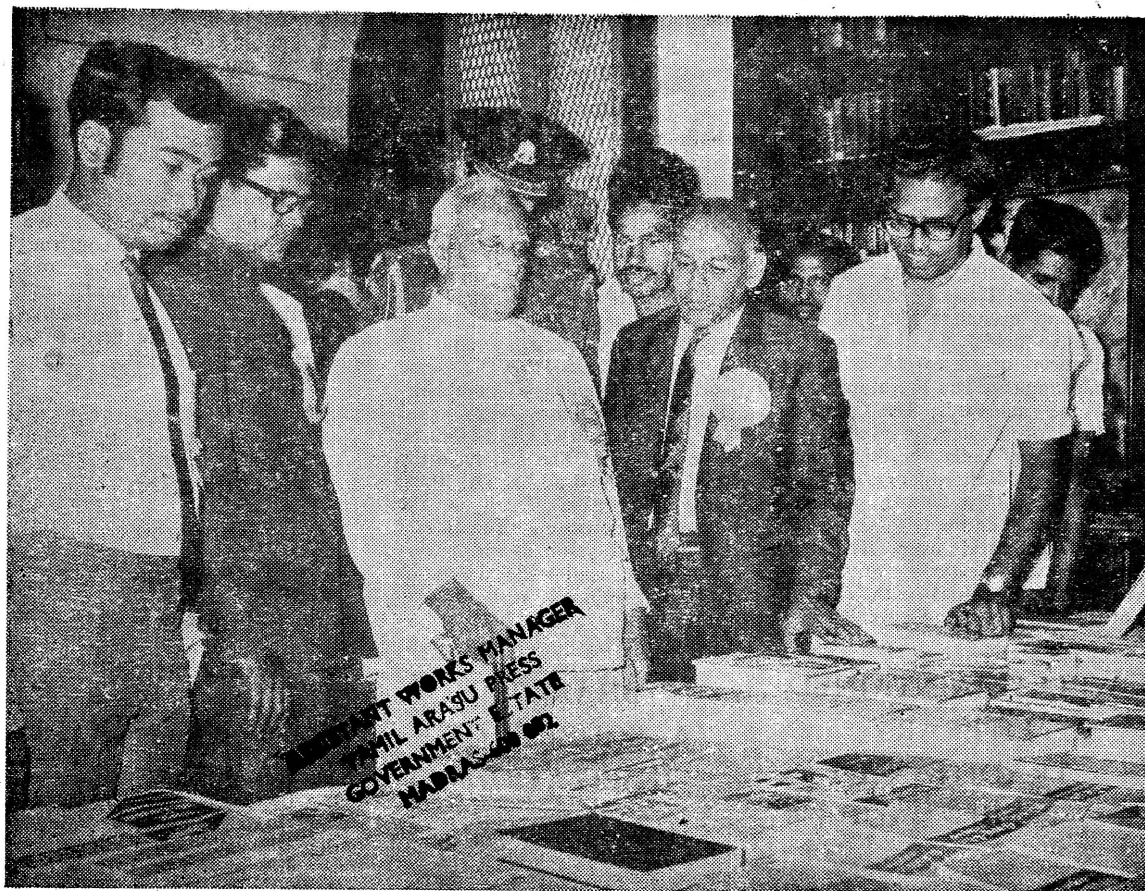
(2) Origin of Matriarchal pattern

Various theories exist as to the origin of family. This matriarchal family pattern is seen among the old Chera region also. A study of Sangam literature and its allied sources should throw light not only on the pattern of matriarchal family but also on the origin of family as such. Thus another mile-stone could be placed in our society reflecting the contribution of Western monk on the origin of family.

(3) Rise and fall of Tamil Empires during Sangam period; an appraisal for accounting a theory of Social Change

Social change as such has got different patterns. A trend of cyclical patterns of social change is highlighted that at any time there will be a distinct content of cultural component of any one of the following: Ideate, Ideational and senate. About our Tamil society also there are evidences of rise and fall in terms of glorification and deprivation. This is an additional field to test the cyclical theories of cultural change as applied to our Tamil Society.

This is the golden era, and we witness ourselves, Tamil being given the due place in every sphere of life for we have only heard about the glorious past. Let us hope and wish that the institute of Tamilology, strives hard to bring to lime light many of our valuable contributions in different fields. ☉



The President seeing the exhibited Tamil books along with the Tamil scholars of note

“Thirukkural not only contains the best of poetry and pearls of wisdom, but gives practical guidance to the people in the art of living. As such the message of Thiruvalluvar, though nearly 2,000 years old, is essential and inspiring, and shall continue to guide the people of this land for centuries to come.

“I believe it is the universalistic and unifying quality of Tamilian spirit that is responsible of the greatness of Tamil literature. The language stands absolutely unique among the world's languages for length and continuity of life”.

—V. V. GIRI,
President of India.

TAMIL IS UNIQUE

“Tamil contains the best of Poetry and Pearls of wisdom but gives practical guidance to the people in the art of living” said Thiru V. V. Giri, President of India while inaugurating the All-India University Tamil Teachers' Conference at Madras on 20th June, 1973.

“I am very happy to be here in the midst of eminent Tamil scholars and inaugurate the 5th Conference of the All-India University Tamil Teachers' Association. It is fitting that this Conference of Tamil scholars from all over India is being held in the Presidency College where renowned Tamil servants like Dr. U. V. Swaminatha Iyer and Prof. C. R. Namasivayya Mudaliar have adorned the Tamil Chair.

“The advanced Research Centre for Tamilology, under whose auspices this conference is held, was inaugurated by my esteemed friend Thiru K. K. Shah, Governor of Tamil Nadu, during the last academic year and I am glad to know of the progress it is making. I hope that this Centre in this premier educational institution will grow from strength to strength.

“It is a matter of gratification that All-India University Tamil Teachers' Association has been constituted purely for academic purposes. The primary aim of this Association is to promote Tamil Research in a scientific manner. No doubt traditional Tamil scholars are known for their learning and mastery of details but in modern times constant efforts should be made to infuse the scientific spirit in language research and development.

EXCHANGE OF IDEAS

"This Association serves an eminently useful purpose of bringing together all the Tamil scholars in India. Incidentally, I believe this is also an excellent way of promoting national integration. Scholars from places like Delhi, Trivandrum and Mysore and Tirupati, should meet often and exchange ideas in their respective fields. In this way co-ordination of research work on Tamil language and literature could best be achieved. The research findings of scholars in every nook and corner of India should be made available to all the students of Tamil so that Tamil literature may spread far and wide and reach the intellectuals the world over. This will pave the way for a comparative study of Tamil literature with that of other modern languages.

spirit that is responsible of the greatness of Tamil literature. The language stands absolutely unique among the world's languages for length and continuity of life. It is both a classical and a modern language. Great names like that of Kamban and Elango adorn the firmament of Tamil literature. The depth and range of this literary heritage is matched only by its depth, catholicity and universalism. Centuries ago, a great Tamil poet of the Sangam Age proclaimed: "The world is my village and all folk are my friends". The same message of universalism is emphasised by Thiruvalluvar who said "He alone lives who knows that he is one with all. The rest have the place among the dead". Dr. Pope had rightly called Tamil as the language of devotion. The Bakthi literature of Nayanmars and Alwars is something unparalleled in its devotion combined with musical charm.

Mother-tongue as the medium of instruction in our schools and colleges is our accepted policy. It is also gradually becoming the language of administration and law courts. Thus, Tamil and other Indian languages have a great future ahead of them. In my view, there is no room for any meaningless language controversies. We must concentrate on the constructive work of developing our languages. It is by hard and sustained work that we can make our languages serve the needs of a modern progressive society." ●

WELL - MAINTAINED LITERARY TRADITION IN TAMIL NADU

"Tamil Nadu from times immemorial has always given a pride of place to its literatures. Such a tradition has been well maintained, thanks to the successive writers through different centuries who have made a signal contribution not merely to the enrichment of Tamil but for providing an impetus to the people of this land to make their lives sublime. I would like to quote the example of Thirukkural. It not only contains the best of poetry and pearls of wisdom but gives practical guidance to the people in the art of living. Thiruvalluvar does not merely dwell on high philosophic issues, but provides the norms and values that can be fruitfully followed by every householder. The message of Thiruvalluvar, though nearly 2,000 years old, is essential and inspiring and shall continue to guide the people of this land for centuries to come.

STRENGTH OF TAMIL LANGUAGE

What has contributed to the strength of Tamil literature? I believe it is the universalistic and unifying quality of the Tamilian

BHARATI A SOURCE OF INSPIRATION

"Coming to recent times, Subramanya Bharati, another valiant fighters in the cause of India's political and economic emancipation aroused national consciousness by the eloquence of his poetry. His patriotic, and philosophic poems constitute one of the finest collections ever written anywhere. The lofty ideals which Bharati pursued and kept before the writers of his times, the vibrant thoughts of his poetic compositions and the manner in which he lived upto them continue to be a source of inspiration to the writers even today. It is for the men of letters and the intellectual leaders to recapture the dignity, the mission and destiny of our ancient land and engender an invigorating climate of ideas which will lay the foundations for a new social order."

GROWTH OF INDIAN LANGUAGES

"One of the significant happenings of recent years is the growth of our Indian languages. They are coming into their own and with care and devotion we can make them effective vehicles for conveying modern scientific and technological thought.

Collection Bonus in Pallavan Transport Corporation

A review of the system of awarding bonus out of daily collections to the crew of Transport Corporation buses has revealed a sea-change in passenger-crew relations on the one hand and has improved total collections on the other. It is said that in most routes the driver and conductor each is able to earn about Rs. 5 per shift.

The daily collections of the Pallavan Transport Corporation have increased by Rs. 36,000 to Rs. 3.48 lakhs following the extension of the "collection bonus" scheme for the bus crews to all the ten city and three mofussil depots from June 1.

Pallavan Transport Corporation managing director Thillainayagam, who disclosed this on Monday, said the scheme was a "grand success" and there had been an appreciable change in the attitude of busmen.

The scheme has also helped to bring down the number of trip bus from 2,200 to 11,08 a day. Break-downs has dropped from 160 to 82 a day.

The Pallavan Transport Corporation also proposes to rationalise the stage distance in the city to between 1.5 km. and 2.5 against the present 0.98 km. and 3.7 km. ●

Improve- ment of School Education in Tamil Nadu



The syllabi now adopted in our schools were last revised in 1965. Realising the need for a constant review of the content of the syllabi and for up-to-dating the system of instruction, the Government constituted committees in December 1970 for revision of the entire school syllabi. The draft revised syllabi finalised by these committees for Standards I to V were published in November 1971 and those for Standards VI to VIII in January 1972.

Re-training the teachers cost Rs. 40 lakhs.

The revised syllabi were introduced from the academic year 1972-73 in Standards I to V in all subjects other than Mathematics and Science. The revised syllabi for Mathematics and Science lay emphasis on problem-centred and activity-centred programmes. They will be introduced in these standards from 1973-74. The teachers who are to handle the subjects have already been given special training to equip them adequately. A massive in-service training programme was conducted in Teacher Training Institutes in the State during 1972-73 at a cost of about Rs. 40 lakhs, and 58,500 teachers will get retrained before June 1973.

In order to provide a permanent machinery for curriculum development, a Curriculum Development Wing has been set up in the State Institute of Education. It will engage itself in curriculum research, development of teaching materials, etc., and will work in close collaboration with the State Evolution Unit.

English Language Teaching Campaign :

Tamil Nadu is the only State in South India where English is being taught as a second language from III Standard onwards. A massive programme of in-service training for teachers of English in Primary Schools has been organised in collaboration with the British Council. During the past six years, about 8,000 teachers have been trained in English teaching at the Madras English Language Teaching Centres at Palayamkottai, Coimbatore, Thanjavur and Cuddalore. Besides these training courses, seminars and workshops are also being conducted periodically. Twenty-five

candidates from our State are deputed to the Regional Institute of English Studies at Bangalore.

With a view to strengthening the teaching of English from the very beginning, reading and writing in English were introduced from Standard III onwards with effect from 1972-73. The Text-Book Society brought out a new Reader for Standard III in 1972-73. A Teachers' Hand Book was also published.

Examinations :

Educational experts all over the country have underlined the need for immediate reforms in the examination system. It is Government's desire that the consensus among educational experts on this problem should be the guide in implementing the necessary reforms in the examination system. The recommendations of certain All-India Level Committees on Examination Reform have also been received and they are under examination. A State Evolution Unit was set up in 1971-72 to improve methods of educational evolution. It is now preparing a comprehensive programme of examination reform both at the external and internal level. A scheme of total assessment of pupils was introduced on an experimental basis in 12 city schools. The question of extending it to 200 schools in the neighbouring districts is under consideration.

Library Movement :

Tamil Nadu is one of the few States in India which have enacted a Library Act and are giving continuing support to the Library Movement. There are now 13 District Central Libraries, 1,437 Branch Libraries and 1,882 Delivery Stations in the State. Local Library Authorities have also introduced the mobile library service, home delivery of books, library service for children and women, for tourists, for prisoners and for police personnel and a hospital library service.

Sports and Physical Education :

Educational institutions in our State continue to attach great importance to the promotion of physical education and sports. District and State level sports meets are organised

periodically. The State Sports Council and the District Sports Councils render valuable service for the promotion of sports and games, not only among the students but also among the public. The need for popularising sports in the rural areas calls for our special attention and it is hoped that the organisations concerned with this will apply themselves to this very vital and pressing task.

The State Government are providing grants for the construction of sports stadia in the districts. So far grants have been given to the districts of Tiruchirappalli, North Arcot, Salem, Madurai, The Nilgiris, Chingleput and Kanyakumari. For 1973-74 also a sum of Rs. 2 lakhs has been provided for assistance to two

districts for the construction of Stadia. Besides this, the State Government have sanctioned a special grant of Rs. 15 lakhs to the Madras Cricket Association for the construction of a modern stadium at the Chepauk grounds and a sum of Rs. 12 lakhs has already been disbursed.

MEDICAL CHECK UP.

A pilot Project for medical check-up has been introduced in the City of Madras for about 5,000 pupils in elementary and secondary schools in the City. In the districts of North Arcot, Salem, Coimbatore, Tiruchirappalli and Madurai, Mobile medical vans with a qualified physician visit schools and do medical inspection. The scheme is financed by the special fees collected for Medical Inspection.

In order to encourage and carry out a programme of internal assessment of students to get them interested in physical education, games, etc., the Education Department has set up a State Evaluation Unit in Madras. Further the Education Department has put across to the teachers and headmasters all over Tamil Nadu a new concept to study the aptitudes and abilities of pupils through internal assessment.

Computers have been in use from last year for S.S.L.C. Examination result. This year the method is expected to help the department in a different way. From now on, computers are to be used to name the backward school in a backward area of a backward district.

Mobile Science Labs. Take Science Teaching To All Schools.



The Education Minister Thiru Dr. V. R. Nedunchezian seeing the Mobile Science Laboratory van model.

MEDICAL EDUCATION

IN

TAMIL

NADU

Health facilities are a basic human right of every citizen and the money spent on public and individual health represent an investment in the Nations' Economic Structure. The Government are, therefore, very keen in using the scarce resources to the maximum advantage in order to ensure a healthy nation. Towards achieving this end, the Government have been planning their medical and public health schemes so as to be within the easy reach of the common man and be useful to the society at large.

The more we attach importance to public health problem, the more we must create scope for the availability of qualified people to carry out the schemes. In view of this unassailable fact, the Government schemes have been so framed as to ensure that sufficient number of qualified medical and nursing personnel are made available, facilities for post-graduate medical education and research are reasonably provided and that adequate technical man power is always available for serving the people.

The Indian Systems of Medicine, particularly Siddha System, which was long neglected, is given a distinct status in the set up of Health Administration in this State. It has also given due recognition to the Homoeopathy System of Medicine which had remained unrecognised so far in this State. Homoeopathy will be given its rightful place in the health services of this State in the coming years.

PLAN OUTLAY.

The Government have invested a sum of Rs. 248 lakhs during the First Five Year Plan towards provision of Medical Services and Medical Education facilities for the benefit of the people. This has been increased to Rs. 459 lakhs during the Second Five-Year Plan and to Rs. 644 lakhs during the Third Five-Year Plan. In the Fourth Five-Year Plan the outlay has been stepped up to Rs. 17,31.59 lakhs. There is thus a marked increase in the outlay on Medical Services and Medical

logy, Micro-Biology, Mid-wifery, Dermatology, Radio-therapy, etc., are conducted in the Medical Institutions in this State.

Out of the Fourth Five-Year Plan out lay of Rs. 433 lakhs for Medical Education, Rs. 380 lakhs are for the extension-cum-completion of the new Medical Colleges at Chingleput, Tirunelveli and Coimbatore. It may be noted that the construction of buildings for the new Medical Colleges at Tirunelveli, Coimbatore and Chingleput and also the construction of buildings for men and women hostels for these institutions have been completed and a few items that are pending will be finished before the end of 1973. Certain additional facilities like provision of Cold Storage Plant, Animal House, Glass Blowing Room, etc., and also Mortuary for the Tirunelveli Medical College are nearing completion. During 1973-74, additional building works like the construction of Hostel facilities for Sanitary Inspector Trainees in Chingleput Medical College, a 100 bedded ward in the Coimbatore Medical College Hospital water-supply arrangements for Coimbatore and Chingleput Medical Colleges will be taken up.

Education in respect of Plan Schemes.

The amount allotted for Medical Education, Medical Services and Indigenous Medicine, during the years 1972-73 and 1973-74 (which include both plan and non-plan schemes) are as follows :—

	1972-73.	1973-74.
	(Rupees in lakhs)	
Medical Education.	11.17	12.33
Medical Services	10.93	12.35
Indigenous Medicine.	13	20

It will be seen from the above that there has been substantial increase in the allotment to the several wings over the provisions made in the 1972-73.

MEDICAL EDUCATION.

There are at present eight Medical Colleges established by the State with an annual intake of 1,015 students. Besides 35 students are admitted every year to the B.D.S. Course. In addition to M.B.B.S. Course, several Post-Graduate degree courses and Diploma courses are conducted in these Medical Institutions. Hospitals have been attached to these Medical Colleges and the total bed strength of these hospitals during 1972-73 is 12,047. The bed strength will be increased to 12,314 in 1973-74. All these institutions are under the control of the Director of Medical Education. Course up to M.D. level in General Medicines, General Surgery, Patho-

POST-GRADUATE INSTITUTE.

The University of Madras has proposed in the year 1965 to establish at Madras a Post-Graduate Institute in Basic Medical Sciences, with the monetary assistance from the University Grants Commission, who have promised to meet about two-thirds of the non-recurring and half of the recurring expenditure on the scheme. The balance of expenditure on the scheme has to be met by the University. The University requested the Government to meet the entire balance of the non-recurring expenditure over a period of four years. It had also requested that the annual recurring grant of Rs. 19 lakhs now being given to it, might be raised to Rs. 20 lakhs to cover the recurring expenditure on the scheme. The Government examined the proposals of the University carefully and decided to accept them subject to the modification that the annual recurring grant of Rupees one lakh might be given as a separate grant.

The Government, accordingly, sanctioned the payment to the University of Madras of a non-recurring grant not exceeding Rs. 12.50 lakhs spread over a period of four years from the year 1965-66 and to the incurring of an expenditure not exceeding Rs. 3,12,500 on this account during the year 1965-66. Sanction has also been accorded to the payment to the University of Madras of a recurring grant of Rs. 1 lakh per annum for the above purpose from the year 1965-66.

RESEARCH.

Over thirty schemes have been taken up for research work in the State Medical Colleges under the auspices of Indian Council of Medical Research and P.L. 480 funds. Research work has been completed in about ten cases and the work is in progress in respect of other schemes. Results of the Research work in certain schemes have been published in the Journal of Indian Medical Association.

About 72 Research Schemes on various subject have been taken up for Research by the Research workers attached to the Government Medical Colleges and Hospitals throughout the State of Tamil Nadu under the auspices of the Tamil Nadu State Research Committee.

EMPLOYMENT OPPORTUNITIES.

The Government have been bestowing considerable thought to the question of providing ample employment opportunities to medical graduates and others who have come out of the colleges. The number of students who come out successful every year will be roughly about 500. While the absorption of all of them in public sector would be a stupendous task, the Government are doing their best to provide employment opportunities to as many as possible by creating every year more posts of Assistant Surgeons, Nurses and other para-Medical personnel.

Two hundred and eighty posts of Assistant Surgeons have been sanctioned during the year 1972-73. During the year 1973-74 as many as 122 posts of Assistant Surgeons, 73 posts of Nurses, 27 leave reserve posts of Pharmacists and ten posts of Dental Assistant Surgeons for ten Dental Clinics for non-teaching Hospital are to be sanctioned.

INCREASE IN REMUNERATION

During the year 1972, the Government have raised the remuneration of all the Compulsory Rotatory

House Surgeons and Dental House Surgeons of this State from Rs. 175 per mensem to Rs. 200 per mensem. The remuneration given to the Resident Internees has also been raised from Rs. 175 per mensem to Rs. 200 per mensem. The Government have also sanctioned 45 posts of Resident Internees in the New Medical Colleges. Powers were delegated to the Director of Medical Education to create 18 posts of Dental House Surgeons in the Dental Wing of the Madras Medical College, Dental Institute, Madras.

With a view to increase the promotional opportunities for Pharmacists, the One Man Committee has recommended that 10 per cent of the posts of Pharmacists should be upgraded as Chief Pharmacists. This recommendation is under the consideration of the Government.

With a view to provide more employment opportunities to B Pharmacy graduates, the Government have under consideration a proposal for the opening of "Hospital Pharmacy" in the Government General Hospital, Madras and the Government Erskine Hospital, Madurai.

the living past

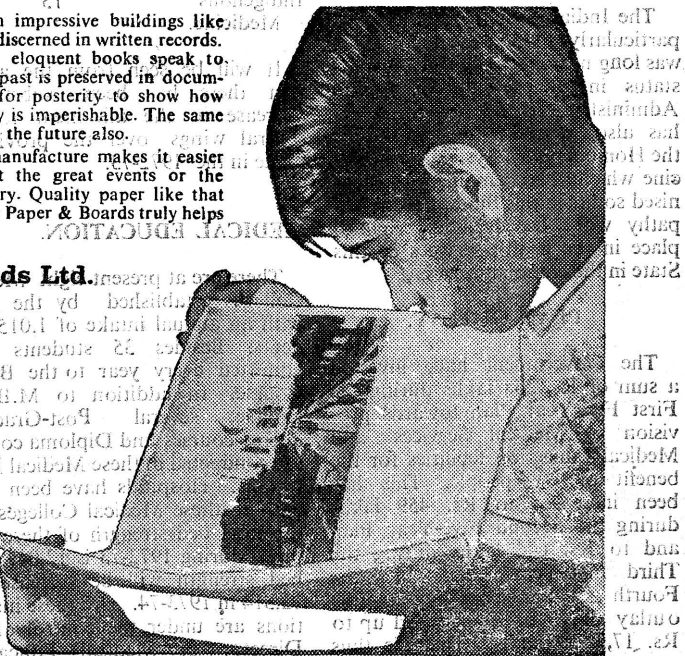
The imprint of Time left on impressive buildings like the Taj Mahal is more easily discerned in written records. In place of mute memorials, eloquent books speak to one and all. The past is preserved in documents and books for posterity to show how and where history is imperishable. The same can be a guide to the future also. Modern paper manufacture makes it easier to write or read about the great events or the mighty makers of history. Quality paper like that produced now by Seshasayee Paper & Boards truly helps the study of the living past.

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GROWTH OF SUGAR INDUSTRY IN TAMIL NADU

Prof. C. S. MAHADEVAN

The Sugar Industry has attained a new stature in the past decade and with an unprecedented growth in consumption, the need has arisen for achieving a much faster rate of growth in the next decade. At the beginning of the Planning era, all-India production was only 11.34 lakh tonnes and this rose to 18.90 lakh tonnes in 1955-56 and a decade later to a new high level of 35.32 lakh tonnes (1965-66). Four years later, in 1969-70, a fresh peak of 42.65 lakh tonnes was touched.

The developments in the Fourth Plan period, however, have unmistakably indicated that new trends in consumption have emerged and with an increase in the requirements of the rural population there would have to be a regular growth in production by atleast 10 per cent annually with consumption in 1970-71 at 40 lakh tonnes.

Tamil Nadu has been making its contribution to significant increase in production in the past decade and is now accounting for about 9.58 per cent of the output for the whole country. In 1950-51, there were 2 mills accounting for an output of 92,342 tonnes and by 1960-61 there was an increase in the number of mills to 8 and in production to 1.31 lakh tonnes. It is, however, in the subsequent decade that this vital industry has grown considerably in stature with 12 mills functioning in the co-operative and private sectors producing as much as 2.23 lakh tonnes. Thereafter, 4 more sugar mills have come on the scene and with the implementation of expansion schemes by many established units, the output in 1971-72 was 2.99 lakh tonnes in respect of 16 mills. In 1972-73, the output will be further higher at 3.20 lakh tonnes. The following table throws light on the position of the Industry in 1972.

According to Mr. A. S. Padmanabhan, I.A.S., Convener, working group on Agro Industries in the Tamil Nadu Planning Commission, the industry is a long-felt need of the

Name of the Factory.	Existing capacity in 1971-72.	Production in 1971-72 (in M.T.)
	(1)	(2)
I. Co-operative Sector.		
Madurantakam Co-operative Sugar Mills, Padalam.	1,000	12,717
Amaravathi Co-operative Sugar Mills, Limited, Krishnapuram.	1,250	13,644
North Arcot District Co-operative Sugar Mills, Ambur.	2,200	26,210
Salem Co-operative Sugar Mills, Mohanur.	1,000	11,497
National Co-operative Sugar Mills, Alanganallur.	1,000	9,698
Kallakurichi Co-operative Sugar Mills.	1,250	13,360
Dharmapuri District Co-operative Sugar Mills, Palacode.	1,250	11,767
II. Private Sector.		
Thiru Arooran Sugars, Limited, Thanjavur district.	1,200	14,676.4
Deccan Sugar and Abkari Company Limited, Pugalur, Tiruchirappalli district.	1,500	21,912.0
Cauvery Sugars and Chemicals Limited, Tiruchirappalli district.	1,000	13,939.0
Madura Sugars, Limited.	240	3,107.39
E.I.D. Parry Limited, Nellikuppam, South Arcot district.	2,200	29,619.0
Kothari Sugars and Chemicals Limited, Tiruchirappalli district.	1,500	17,163.2
Aruna Sugars Limited, South Arcot district.	1,200	25,338.17
Sakthi Sugars Limited, Erode Coimbatore district.	2,000	55,709.16
South India Steel and Sugars Limited, South Arcot district.	1,250	15,509

The industry is a long-felt need of the districts. It will even be advisable to utilise the existing acreage under

the Industry will have to plan vigorously for increasing production to 65 lakh tonnes by 1978-79 and to 90 lakh tonnes by 1983-84. It is assumed that there will be a growth rate of 8 per cent in the first 7 years of the perspective plan period and of 6 per cent in the subsequent 5 years. Even though, Tamil Nadu has a surplus now after meeting its requirements, it will have to continue to produce more for meeting the needs of other areas besides providing also fully for the requirements of the State population. Even on the basis of the All-India average, consumption in Tamil Nadu, in 1978-79, may be in the region of 5 lakh tonnes in 1978-79 and 6.25 lakh tonnes in 1983-84. There will actually be a higher level of consumption in the region apart from the need for creating large surpluses for being sold in other areas. It may, therefore, be assumed that the target of production will be 8 lakh tonnes in 1978-79 and 1.1 million tonnes in 1983-84. In the early years, an increase in the output by over one lakh tonnes can be brought about by making better use of the existing capacity with greater attention to the cultivation of better varieties of cane over larger areas adjacent to the existing units. As there will have to be a virtual doubling of capacity in 1978-79 at least 12 more factories, with a capacity of 1,500 to 2,000 tonnes daily, will have to be established in Tamil Nadu. As the economic of agriculture has to be improved in Thanjavur and large tracts are available in that district, half the new capacity can be established in this area. This will mean that six new factories will have to be brought into being in five years commencing from 1973-74. It will be advisable to select areas in the interior where there will be no problem of drainage and it will also be possible to achieve a higher recovery. The area required for this purpose will be over one lakh areas. There will be no problem on this account; what is needed is careful attention to cultivation of cane for securing a recovery of over 9 per cent.

Thiru Padmanabhan rightly holds that the remaining six factories can be located in Madurai, Tirunelveli, North Arcot and South Arcot districts. It will even be advisable to utilise the existing acreage under

cane now mainly being used for manufacturing gur for establishing sugar mills. In that case, the recovery will be fairly high at 9.5 per cent. This will enable a broadening of the base of the Industry and a wider dispersal in the coming years. In 1979-81, the objective should be to increase the capacity of the existing units whose number would have risen to 29. The additional capacity of 25,000 tonnes can be easily achieved in the Sixth Plan period by implementing merely expansion schemes. The duty of the Planner will, therefore, lie in raising immediately the output by 50 per cent in the two or three years with the existing facilities by increasing the availability of cane and improving its quality. Subsequently large areas will have to be brought under cane in entirely new regions and Thanjavur may gain the distinction of being an important producer of sugar besides rice.

The extent under cane cultivation in Tamil Nadu at present is 1,48,522 hectares as compared to the acreage of 36,422 hectares cultivated in 1953-54. Production of cane increased nearly fourfold between 1953-54 and 1971-72. About thirty per cent of the cane cultivated is now being utilised for sugar production and about sixty per cent of it is utilised for the manufacture of gur.

The Directorate of Sugar was formed in October 1969 and all matters relating to the industry are now being attended to by the Directorate. The Directorate has the special responsibility of developing and fostering the industry in the co-operative sector. For this purpose assistance is obtained from National Co-operative Development Corporation and Industrial Finance Corporation.

The Government of India have been fixing basic minimum price for sugarcane at Rs. 7.37 per quintal linked to a recovery of 9.4 per cent or below. For 1972-73 season, the Government of India have fixed the basic minimum price for sugarcane at Rs. 8 per quintal linked to a recovery of 8.5 per cent or below with a premium of 9.4 paise per quintal for every 0.1 per cent increase in recovery above 8.5 per

cent. The announcement of a higher basic minimum cane price with a reduction in the basic recovery and an increase in the premium for higher recoveries based on the principle of full proportionality is to maximise sugar production.

Besides the Government of Tamil Nadu, have decided that the premium for enhanced recovery will be disbursed in the season itself. This will be in addition to the premium to be given by the Government of India as part of the next season's price based on previous season's recovery.

In order to maximise sugar production, the Government of India gave an incentive to sugar factories by allowing a rebate in excise duty at Rs. 16 per quintal for sugar produced during 1st December 1971 to 30th September 1972 which is in excess of 80 per cent of the quantity of sugar produced during the corresponding period in 1970-71. For 1972-73 season, Government of India has announced that rebate is allowed only if production exceeds 10 per cent of what was produced in the 1971-72 season (up to December) and the factories are eligible for rebate only if production exceeds 115 per cent of what was produced in the corresponding periods of 1971-72 season for the period December to April. Government of Tamil Nadu have requested Government of India to adopt the same basis as in 1971-72 season as the present scheme will not benefit most of the factories in Tamil Nadu who have worked efficiently in 1971-72 season producing maximum sugar. The objective is to bring about a substantial increase in sugar production during 1972-73 season and also to make effective use of the existing capacities in the Mills.

There is also a proposal to establish a Sugar Research Institute in Tamil Nadu during the season 1971-72. Government have proposed to incur a revenue expenditure of Rs. 5 lakhs in the setting up of the above institute. The factories have offered to contribute Rs. 5 lakhs. The proposed institute will have teaching, research and development, advisory and extension services wings and will meet a long-felt need of the industry.

HANDLOOM INDUSTRY IN TAMIL NADU



Dr. M. Karunanidhi, Chief Minister, enjoying the fine texture of handloom clothes exhibited.

Handloom industry is the most ancient and the largest cottage industry in Tamil Nadu. There are about 5.50 lakh handlooms which represents a little over 25 per cent of the number in the country. Nearly 20 lakhs of people are depending on them for their livelihood. With an annual production potential of about 39 crores yards of handloom cloth of the value of Rs. 48 crores with export capacity of nearly Rs. 4 crores every year this industry occupies an important place in the economy of the State.

Problems of Handloom Industry.

The Handloom Industry has always been facing problems relating to raw materials, finance and competition from the organised textile mills industry. The Government of Tamil Nadu have been taking an abiding interest in the promotion of the industry and the welfare of the people engaged in it. Governmental assistance is extended to stabilise and promote the industry mostly through Co-operatives which constitute a suitable institutional agency for securing raw materials, funds and marketing facilities on favourable terms.

Experiments are also being conducted for producing cloth on handlooms using chemical fibres such as Acrylic yarn and Terelyne yarn. A suitable scheme has been drawn up for training the weavers in this direction.

Special Assistance For Disposal Of Stocks :

The Government have been rendering special assistance to the societies in disposal of their stocks. During periods of stagnation of goods with the Primary Weavers' Co-operative Societies, finance is provided to the Tamil Nadu Handloom Weavers Co-operative Society for intensive procurement so that the members of the societies may get continuous employment. During the year 1969-70, the Tamil Nadu Handloom Weavers' Co-operative Society was given a loan of Rs. 50 lakhs for this purpose in addition to a loan of Rs. 25 lakhs already provided. During the year 1970-71 the Tamil Nadu Handloom Weavers' Co-operative Society was given temporary loan of Rs. 50 lakhs.

As on 31st March, 1972, there were 726 Primary Weavers' Co-operative Societies and 23 Industrial Weavers' Co-operative Societies in the State. The Primary Weavers' Co-operative Societies alone serve as many as 1.65 lakhs handlooms which account for about 30 per cent of the total number of handlooms in this State. In addition to these, there are 20,000 silk looms of which as many as 3,352 looms are represented by 14 Silk Weavers' Co-operative Societies.

The handloom weavers enlisted as members of the societies were given loans for 75 per cent of the share value subject to a maximum of Rs. 75 per member till 1972. But

the above limit was relaxed in the year 1972 and the State Government issued orders that the entire share capital required for the admission as member of Weavers' Co-operative Society might be given as loan subject to a maximum of Rs. 100 per member. Loans are also given to the existing members for strengthening their share capital subject to a maximum of Rs. 75 per member.

Reorganisation of the Societies :

A programme for reorganisation of the Primary Weavers' Co-operative Societies has been taken up with a view to eliminate the weak and uneconomic societies. Consequently their number has been reduced from 1,069 in June 1967 to 710 in March 1972. The number of dormant societies which was 369 in 1969 was reduced to 122 as on 31st March 1972. Members of liquidated societies have been admitted in the neighbouring viable societies. New members were also enrolled in the existing societies. Steps are also being taken to start new Weavers' Co-operative Societies wherever possible. During 1972-73, 12 new societies have been started in various parts of Tamil Nadu, while five dormant societies have been revived.

Working Capital For Weavers' Co-operative Societies :

The provision of adequate working capital to Weavers Co-operative Societies at a reasonable rate of interest is the most important pre-requisite for the development of these institutions. The Reserve Bank of

India provides funds to the Weavers, Co-operative Societies through the State Co-operative Bank and the District Co-operative Central Banks for production and marketing at 1.5 per cent below the Bank rate.

The working capital loans provided to the Weavers Co-operative Societies including the State Handloom Weavers, Co-operative Society is backed by Government guarantee. During the year 1971-72 the Government have given guarantee in this regard to the extent of Rs. 625.29 lakhs to the Reserve Bank of India. For the year 1972-73 the Government have extended a guarantee to the extent of Rs. 771.25 lakhs to the Reserve Bank of India. During 1973-74 a sum of Rs. 800 lakhs is expected to be recommended for Government guarantee.

Under the scheme of guarantee of reimbursement of loss, the Government of India and the State Govern-

ment have agreed to bear the losses, if any, arising out of non-recovery of working capital loans advanced to the Weavers, Co-operative Societies from the Reserve Bank of India credit as well as from the own resources of the Banks to the extent of 50 per cent and 40 per cent respectively, the balance of 10 per cent being borne by the Co-operative Financing Banks. The liabilities of the Central and State Government have further been limited to an upper ceiling of 5 per cent of the total fund disbursed to the Handloom Industry by the Co-operative Central Banks.

In order to help the marginal societies to provide the required margin money, the Government are strengthening their own resources by subscribing towards their share capital. An amount of 10 lakhs have been invested in 119 societies during 1971-72 and an estimate of

Rs. 10 lakhs have been made for 1972-73, and a sum of Rs. 6 lakhs has been provided for 1973-74.

The Weavers, Co-operative Societies have to improve the productivity and the technique of weaving, so as to produce attractive fabrics and face the competition from the mill sector. Government therefore, subsidies 75 per cent of the cost of improved handloom and weaving appliances and provide the balance of 25 per cent as loan. The establishment of large and small dye-houses is financed by the Government.

With the object of improving the varieties and designs of production of handloom goods, a scheme for training the members of Weavers Co-operative Societies has been under implementation. Under the scheme conducted in 12 Training Centres in Tamil Nadu, Weavers drawn from neighbouring areas are being trained in several methods of improved weaving. Training is also given to the dyers employed in the Weavers Co-operative Societies in the improved methods of dyeing. There are five courses in a year for training 30 weavers in each course in each centre. The weavers are selected from among the members of the Societies running the scheme and from the other societies in the area. Training is given in the production of two or three fast moving varieties with little competition from the mill sector like bed sheets, carpets, towels, shirtings, sarees or high counts and latest designs, etc. After the training, the weavers are required to produce the new varieties on behalf of the societies and they are given the improved appliances at subsidised cost. The duration of each course is 60 days and a trainee is given stipend of Rs. 100 per mensem. Annually, 1,800 weavers are being trained. The training centre in a district moves from place to place within the district after training a reasonable number of weavers in each place. It is hoped that this training which is intensive as well as extensive, will enable the industry to stabilise itself by producing easily marketable varieties of handloom goods. The expenditure under this scheme during 1970-71 was Rs. 4.45 lakhs and a sum of Rs. 5.19 lakhs was spent during 1971-72. A sum of Rs. 5.83 lakhs is estimated for 1972-73 and a sum of Rs. 5.04 lakhs is proposed for 1973-74.

Thiru V. R. Nedunchezhian, Minister for Education, enjoying the handloom clothes exhibited.





A view of the INSTRONICS Estate, Adayar.

ELECTRONICS COMPLEX

NEAR MADRAS

With a view to develop the Electronics and Instrumentation Industry in Tamil Nadu, various promotional measures have been instituted by the State Government with the active assistance and guidance from the Government of India, National Laboratories and Higher Technological Institutions. As a first step towards this, the State Government have set up a functional Industrial Estate for Electronics and Instrumentation Industry in Madras in the heart of the Adyar technological campus adjoining the Indian Institute of Technology and other higher educational institutions to provide the basic infrastructural facilities like suitable factory units, water-supply and electric power. This area is being developed as an Electronics Complex and will cover an extent of about 30 acres in all.

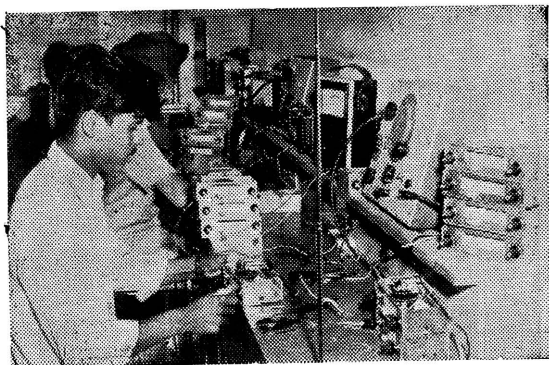
A thorough study of the types of electronic industries which have scope for development in the State

was made by a Working Group constituted by the Government during 1970 comprising of leaders in industry and technological institutions. The entrepreneurs who will be settling in this functional Industrial Estate would be made to take up to such line as have been identified by this Working Group so as to ensure a systematic development.

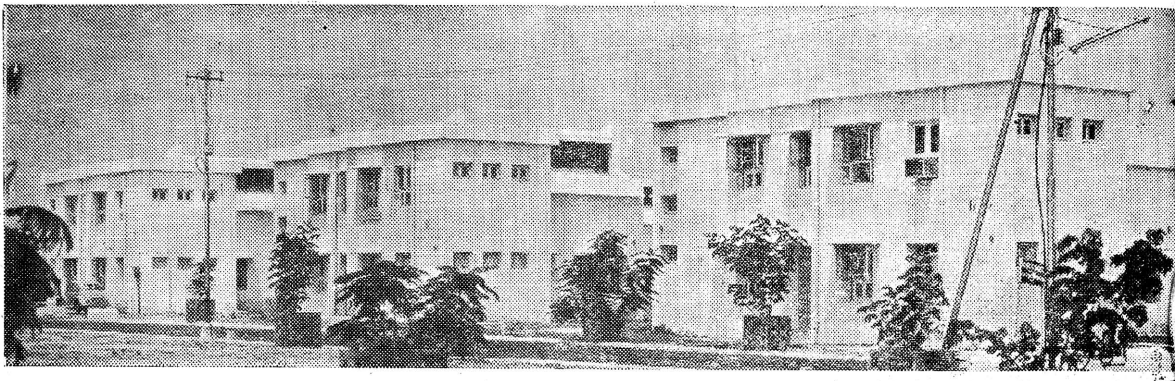
The total ultimate outlay on this Industrial Estate is about Rs. 45-00 lakhs and in all 45 factory units of various sizes engaged in the manufacture and assembly of electronic instrumentation components, sub-assemblies, systems, auxiliaries,

ancillaries and final-assemblies would be located in this estate. The estate is situated opposite the Lattice Bridge in the Technological Campus, Adyar and is accessible both by the Lattice Bridge Road and the Central Polytechnic Campus Road. The factory buildings in this estate are specially designed to be free from dust, noise, and Radio interference. The location of the estate itself is very close to the Indian Institute of Technology, College of Engineering, Polytechnic and other National Laboratories of the C.S.I.R. Complex, where from testing and consultancy facilities may be availed of by the entrepreneurs. Special protected water-supply is made available to this estate from a departmental well and a pumping unit put up at a distance of 1½ miles from the estate.

Two types of sheds, one about 1,600 sq. ft. ground floor and 950 sq. ft. first floor and 1,800 sq. ft.



ELECTRONIC ASSEMBLING PROCESS.



A long view of group of factory sites in INSTRONICS Estate, Adayar.

ground floor and 920 sq. ft. first floor have been designed. Twenty-two of these units have already been constructed and allotted. Three are under finishing stage and four more are being taken up. Even the three units nearing completion have been allotted. Fifteen units have gone into production and are making

1. Electronic Recording and Indicating Temperature Controller for Chemical Plants, Plastic Units, Sugar Plants, Refineries, etc.,

2. Industrial Thermometers and Pyrometers for Refineries and Fertilizer Plants,

3. Resistors for Electronic and auto-electric industries.

4. Glass Instruments like Hydrometers, Mercury Switches, etc,

5. Car Radios.

6. Standby Power supplies to Defence areas,

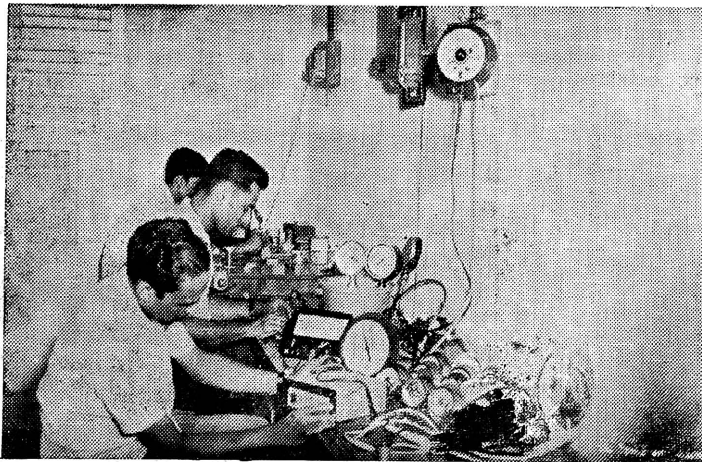
7. Instruments,

8. Electrical and Electronics measuring instruments,

9. Sub-units for larger Electronic equipments.

Other units, which are in the various stages of development are to make components for specialised instruments, battery, eliminators, ferrites for electronic equipments, television components, special batteries for Electronic controls and Systems, Television Receivers, Transducers, Electronic hardware and medical electronics. A few of the items, like Process Control instruments and Industrial Thermometers made in this estate have already found their place in equipments made by larger units for exports. The car radios produced in this estate have caught export market in developed countries.

One of the most important requisites for an organised development of Electronic and Instrumentations Industry is good certification testing and product-development laboratory with suitable facilities so as to ensure perfect quality conforming to both National and International Standards. There are no testing and certification facilities of the kind in this State at present and in order to make the goods produced not only in this Estate but also outside the Estate conform to export standards, good quality-certification and calibration laboratory is being set up by the Government in the campus of this functional industrial Estate so that it will not only act as a Reference Laboratory but also as a certification Laboratory. The exact nature of the facilities established at any place would depend upon local conditions and the emphasis on the types of products manufactured in the region. With the above view, the Department of Electronics, Government of India were approached by the State Government with a detailed Project report for assistance in setting up of a testing certification Product Development, which will ultimately cost about Rs. 40 lakhs. The Department of Electronics have accorded their approval to set up this laboratory and have sanctioned financial assistance towards the equipments. This laboratory which will be housed in the same campus is expected to function by 1974-75, and will go a very long way in providing this much-needed facility for this sophisticated industry, particularly in the small scale sector.



Electronic testing.

In addition to the above, the Central Electronics Engineering Research Institute, Pilani have also been approached by the State Government to set up a service Centre for the Repair, Service and Maintenance assistance in regard to specialised Electronics Equipments, Instruments, Controls, etc., so as to serve the small scale industry in this field in a much bigger way. This Centre will also be located close to the Industrial Estate.

Special type of small factory units with a covered area of about 1,100 sq. ft. have been put up in this Estate on nominal rental basis exclusively for allotment to technically qualified entrepreneurs. Eight of these units are being put up in the first-stage and twelve more are expected in the next one year.

The private units in Industrial Estate and also the Laboratory will provide very good openings for the qualified entrepreneurs and craftsmen in not only setting up Industries in small scale but also in getting equipped with the latest technological developments in the field of Electronics and Instrumentation. It is not worthy to mention that out of the 29 present allottees in this Estate, 26 are highly qualified Technicians.

Two of the joint sector projects of the State-owned Tamil Nadu Industrial Development corporation (TIDCO) viz., one to Manufacture of T. V. Receivers and the other to make Precision Instruments will be housed in the same scope for ancillary development and employment opportunities.

The total employment potential in this complex would be around 1,500 ultimately including highly qualified personnel, semi-skilled and skilled craftsmen and women ; with double the number as indirect employment by way of manufacture of components and feeder-industries. These units would not only be making highly sophisticated original equipments like Instruments and Controls but ancillary sub-assemblies and sub-systems to larger electronic complexes like Bharat Electronics, Indian Telephone Industries, Electronics Corporation of India, Hindustan Teleprinters and Space Research Organisations. A beginning in this regard has already been made by some of the units in the Estate.

It can be hoped without the least doubt that this Complex, aptly called INSTRONICS CAMPUS, with the private units of the Estate, Laboratory and the Service

Centre will be one of the most important nerve-centres for the development of Electronics Instrumentation in the country. ☉

EXPORTS OF INDIAN HANDICRAFTS

Exports of Indian handicrafts have increased more than four-fold during the last ten years—from a modest amount of Rs. 19.34 crores in 1961-62 to Rs. 90.52 crores in 1971-72.

It is significant to observe that exports of handicrafts accounted for 5.6 per cent of total exports of India during 1971-72 as compared to 2.9 per cent during 1961-62. Handicrafts have come to occupy a place of pride as one of the foremost export items along with jute manufactures, tea, iron ore, leather goods, engineering goods and cotton textiles.

Exports of handicrafts along with total exports from India have been as follow :—

COMPOSITION OF EXPORTS

Exports of Indian handicrafts are broadly divided into 15 groups. More than half of the total exports of handicrafts are from the sector of precious, semi-precious and synthetic stones. Wollen carpets, rugs and druggets constitute another 15 per cent. Wollen carpets from Kashmir and Mirzapur have become famous all over the world. Art metalware accounted for 8 per cent of total exports during 1971-72, and the share of handprinted textiles about five per cent. Among other important handicraft items are artistic woodware, imitation jewellery, zari, cotton carpets, embroidered goods, ivory products, etc.

Over the years, exports of art metalware, specially brassware of Moradabad, and woodware of Saharanpur have registered significant increases. The Indian hand-printed silk scarves were also very popular in western countries during 1969-70, but due to quick changes in fashion, their demand slowed down during the last two years.

DIRECTION OF EXPORTS

About 45 per cent of the total exports of handicrafts is being shipped to European countries while another one-fifth goes to American countries. Countries of Asian and African region share the remaining 35 per cent. Important countries where Indian handicrafts are being supplied in large quality are the U.S.A., West Germany, Belgium, the U.K., Japan, Hong Kong, Netherlands, etc.

EXPORT PROMOTION.

All India Handicrafts Board is the main Central Government organisation for undertaking the development and export promotion of handicrafts in India. Besides the Board, State Governments also undertake development programme for handicrafts in each State. Central Government have also set up a commercial organisation known as Handicrafts and Handloom Export Corporation to boost the export of Indian handicrafts.

During the last few years the Board has sponsored a number of study teams to visit important foreign markets like E.E.C., Japan, U.S.A., etc. The Board has also participated in foreign exhibitions and produced publicity literature and colour documentaries on different crafts such as carpets, art metalware and wood carvings. On the domestic front the Board has taken several measures to enlarge the production base including training under master craftsmen, setting up of common facility centres, etc.

The Board has planned to double the export of handicrafts to Rs. 200 crores during the next five years. With the growing awareness of the exquisite quality of Indian handicrafts in foreign markets, it will not be difficult to achieve the target of the Fifth Plan. ☉

The ancillary movement is not new to this country. It assumed greater importance during the Second Five-Year Plan in the context of growth of small-scale industries by leaps and bounds in the country. Much headway has been made in many industrial and consumer products as ancillaries to large-scale industries.

DEVELOPMENT OF INDUSTRIES THROUGH ANCILLARIES AND

SUB-

CONTRACTING

It has been the experience all over the world that while the growth of the large-scale industries stimulates the local small-scale sector as a matter of 'secondary and tertiary' growth which in turn serves as an example for artisans and entrepreneurs engaged in traditional industries, it is the very existence of these ancillary units which attract large-scale industries to a State.

Large-scale industries require a wide range of components and sub-assemblies which have to be necessarily procured from other sources at a comparatively cheaper price, instead of taking up the manufacture of these items under the roof of their own assembled units. These sources for supply of the essential components to large-scale sector could possibly be only small-scale ancillary units.

The ancillary movement is not anything new to this country. The procurement of components from outside and assembling them by large-scale units have been in vogue for quite some time although the same was not dealt with in a systematic approach. Ancillary units assumed greater importance during the Second Five-Year Plan in the context of the development of small-scale industries as a means to create greater employment opportunities. Much headway has been made in many industrial and consumer products as ancillaries to large-scale industries. The Ford Foundation Team in its report of 1963 recommended that the relationship of the ancillaries with large-scale industries

as the important potential sources to strengthen the small-scale industries which are capable of producing goods of requisite standards at competitive prices and that the ancillaries can be fostered by the constant efforts of the Government by creating an atmosphere to bring both the large and small-scale sectors together and extend the necessary technical assistance and special treatment in the supply of raw materials to them.

Initially the work relating to the development of ancillaries was entrusted with the National Small Industries Corporation by the Government of India ; but later in order to have a systematic growth, a separate ancillary division was created in the Office of the Development Commissioner (SSI), New Delhi. This division was mainly entrusted with the following works :—

(a) Preparation of the list of parts and components that can be 'farmed' out by public sector undertakings for manufacture in the small-scale units in the country ;

(b) Classification of the large-scale units in the private sector to list out the parts and components

that can be procured by them from the small-scale units ;

(c) Provision of suitable technical assistance to take up the manufacture of these listed out items by the small-scale units and

(d) Registration of small-scale units as ancillaries.

The ancillaries are under three categories, viz.—

(a) Specific components for fixed products on the basis of contracts—Captive units,

(b) Independent ancillary units supplying only selected items to one or more large-scale units and

(c) Replacement parts for open market consumption.

Goal of Self-reliance

In the present context of industrial development and the policy on self-reliance, the role of ancillaries has assumed greater importance. The Central/State Government have taken particular note for the necessity of every possible measure to strengthen this important sector of the industries by providing the infrastructure and other facilities. This has resulted in opening functional/ancillary industrial estates for ancillary products closer to large-scale units. The ancillary units have also caused certain planned dispersal of small-scale units to rural areas. The technocrats

have realised the very important role of ancillary units, as a means of improving their own resources ensuring quality and standard of production which has given new dimension to this sector. It has to be mentioned with pride that units serving as ancillaries have definitely acquired a quality consciousness among them in view of the components and parts to be supplied by them with the requisite standards comparable to that of the large-scale products. The progressive attitude adopted by the large-scale units in Tamil Nadu, the active official assistance to small-scale ancillary units through various programmes of the States/Central Governments, and the initiative and the drive, the small-scale entrepreneurs themselves had, were mainly responsible for such an impressive progress. Adding to this, the setting up of public sector undertakings like Integral Coach Factory, Bharat Heavy Electricals, etc., have acted as catalysts to the development of small-scale units, particularly ancillaries.

These are perhaps the factors that led the Centre to consider the need for higher capital investment on machines and to give a special treatment to these ancillary units by fixing the limit as Rs. 10 lakhs as

against the norm of Rs. 7.5 lakhs for small-scale units. A good number of units come under the scope of this definition, but keeping in view the limited resources for ancillary development, only about 16 selected industries products have been brought under the Intensive Assistance Programme of the SSIDO, as detailed below :—

1. Industrial machinery ;
2. Agricultural and earth machinery ;
3. Industrial, Scientific and Mathematical Instruments (Mechanical) ;
4. Locomotives, rolling stocks, ships and aircraft ;
5. Bicycles ;
6. Machine tools ;
7. Boilers and Steam generating plants ;
8. Steam engines, turbines and internal combustion engines ;
9. Automobiles ;
10. Commercial, Office and house-hold equipments ;
11. Electric machinery, equipment and appliances ;

12. Tele-communication equipment ;

13. Industrial instruments (Electronics) ;

14. Radio and electronic equipment ;

15. Mineral oil and Petroleum Products and

16. Air-conditioners and cold storage equipments including refrigerators.

PATTERN OF ASSISTANCE BY GOVERNMENT.

Ancillaries are enterprises which supply parts and components or sub-assemblies to large-scale units and will be permitted to have the limit of investment on machinery and equipment up to Rs. 10 lakhs. But they will be placed on a par with small-scale units in the matter of allotment of sheds in industrial estates, sanction of loan, export markets, supply of machinery, etc. Industrial estates exclusively for functional and ancillary units have been established at various centres (viz. at Vadalur, Virudhachalam, Adyar, Madhavaram and Kakkalur). In addition, developed plots are being allotted for location of ancillary units in places wherever there are concentration of large-scale units.

Testing laboratories both by State and Centre have been set-up. Small Industries Service Institute has laboratories at Madras and in its extension centres. The Department of Industries has set-up laboratories at Madras, Madurai, Tuticorin with a proposed one at Coimbatore. As for the training aspects, the Technical Training Centre at Guindy has been set-up exclusively to train on dye-sinking, dye-designing, tool-making, forge and heat treatment and machine operative which are primarily to benefit ancillary units. The Tools and Die Designing Centre at Dindigul gives specialised training in the design and manufacture of tools and dies required for engineering units. Three basic rural service centres are functioning in Tirunelveli for training in poweroperated machines in the trades of fitting, turning and welding.

Technical information sections are functioning at Guindy and Ambattur in Madras. In addition, the Small Industries Service Institute

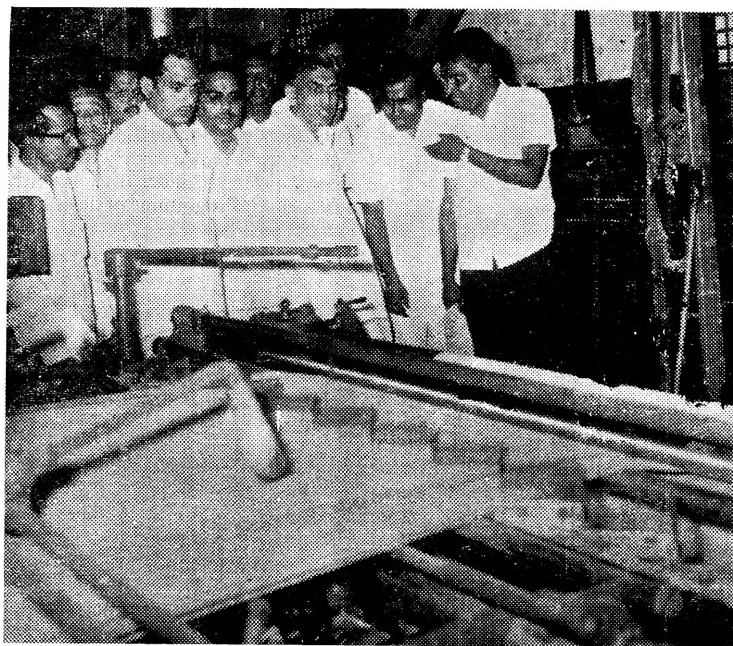


Thiru Mannai Narayanasamy, Minister for Co-operation, enjoying the going round in the Khadi Krafts Sales Emporium at Mount Road, Madras.

renders assistance in training and also conducts Seminars in collaboration with industrialists and official agencies. A sub-contract exchange has been set-up in Small Industries Service Institute creating a link between small-scale and large-scale units. The image of ancillary industries have been projected to a large extent by organising exhibitions in various places.

THE ANCILLARY DEVELOPMENT IN TAMIL NADU.

It can be claimed with pride that a vigorous and growing ancillary sector has developed in Tamil Nadu with the progressive attitude adopted by the large-scale units in both public/private sector. There are to-day over 500 ancillary units in Tamil Nadu serving large-scale units and over 300 units for small-scale units. The total investment of these units are nearly Rs. 300 crores employing over 100,000 persons. There had been rapid growth of engineering and automobile ancillary units in and around Madras from which about 50 per cent of the value of production for automobile industry is accounted for. It may be mentioned that a number of ancillary units of the automobile industries, in and around Madras have been directly benefitted in the sub-contracting of many essential items required by medium and large-scale units. The ancillary units not only expanded their production; but also diversified new skills and capacities. One healthy feature of ancillary small-scale units is that they have necessary to be modern to keep in view the rapidly changing and varying requirements of parent units. With over 60 large-scale units in the State, the ancillary development achieved substantial progress. It is seen that the total value of orders secured by small-scale units from large-scale industries in both public and private sectors including Railways and Defence since 1961 till 1971 was Rs. 34,47 lakhs. Comparing the yearly performance of the ancillaries, it was noticed that the production was around Rs. 197 lakhs in 1961-62 and Rs. 3,17 lakhs in 1965-66 which rose to Rs. 8,76 lakhs in 1970-71. The breakup of the orders from different sources for 1970-71 are furnished below in order to indicate the extent of their ancillary dependence.



Thiru S. Madhavan, Minister for Industries, going round the Somasundra Mill at Coimbatore.

Sources.	<i>Value of orders booked during 1970-71.</i>	
	(Rs. in Crores)	
Railway	1	33
Defence Establishments	0	38
Government Departments.	1	12
Large Scale Industries in Private Sector.	5	93
Total ..	8	76

The Sub-Contract System.

Adding to the natural rapid growth of the ancillaries in Tamil Nadu, a sub-contract exchange was set-up by SISI in 1970 at Madras (in addition to one unit at Bombay) with the assistance of UNIDO experts as a part of their service programmes. This exchange has been described as a system for increasing industrial efficiency by setting the forming of sub-contract work. With the increasing tempo of industrialisation and the emphasis on specialisation, need has been felt to have some device to fill up the information gap

between the requirements of large-scale industries and the capacity of small-scale industries and collect, store and disseminate information systematically by linking the two. This will be the primary role of the sub-contract exchange. This exchange serves as a Central Information Bureau registering the machine capacity for small-scale industries and enquiries from large-scale industries for the manufacture of different components, sub-assemblies and brought out components. The information is passed on to the capable registered small-scale units having spare capacity. This exchange saves the time of the large-scale units in searching for the suitable sub-contractors to carry out the work and also the small-scale units to find jobs for the machine.

The important functions undertaken by this Exchange are :—

(1) to invite small-scale units dealing in Mechanical, Electrical, Plastics, Ceramics, Leather, etc., to register their spare capacity of machinery with exchange and record, on the information cards, data machinewise, processwise and productwise;

(2) to approach the large-scale industries and request them to off load items which could be manufactured by the small-scale industries ;

(3) to render technical assistance to small-scale units in developing and manufacturing the items required by large-scale industries and

(4) to furnish information to small-scale industries regarding the requirements of large-scale industries.

The system of registration consists of collection of information regarding spare capacity, visiting the units to verify the technical competency, selection of units capable of handling enquiries, codifying the information relating to selected industries and noting the changes of addition to the machine capacity, if any, after some time.

The enquiries received either by phone or by letter are processed by inviting required drawings for the items, ascertaining the correct specifications, details of the raw materials required to be used and the delivery schedule. The selected units capable of producing these components are then linked with the main contractors. The small Industries Service Institute also follows up through correspondence, and personal visits, till the satisfactory execution of such orders when once finalised.

The exchange has at present confined itself to collecting information from engineering units in Madras City only, and is gradually attempting to build up information on non-engineering units from other districts also. The working of this exchange has already made an impact on some of the large industries in the public sector, namely, Bharat Heavy Electricals at Tiruchirappalli, Madras Refineries, Defence and Railways, private large-scale units, like Lucas-T.V.S., Leyland, Best and Company, English Electric Company and Tractors and Farm Equipment for sub-contracting several items to the ancillary units.

With the set-up of a Steel Plant at Salem and the development of Petro-Chemicals Complex around Madras, there is every scope for this exchange to create the best atmosphere for ancillary units to

cover a wide range of items and to gain further momentum in the years to come.

Attempts are afoot to eliminate complaints of these large-scale units that the ancillaries do not stick to delivery schedules and the sanctity of quality. Rejected components are sometimes included in the next consignment in the hope that a "less prejudiced" Officer of the large-scale unit might accept them. On the other hand, the ancillary units also have complaints about delayed payments and the like which by a process of stream lining, are being eliminated.

PLANT LOCATION.

Plant Location is to situate a certain industry in a suitable site. Operating and capital costs too are partially decided by Plant Location. The Industrialist takes into account not only short-run costs of the day but also long-run costs and he aims at minimizing the sum of all costs by comparison of alternate locations. It is always thought that the location problem of a plant occurs once in a while, but it is not so. The problem appears again when the organisation expands. This is solved by the following four choices :—

(a) Sub-contract the expanded capacity;

(b) expand the existing plant in its present location, if possible ;

(c) keep the existing plant in the present location and build a second one elsewhere and

(d) close the existing plant and relocate the industry in a new area.

The aim of the industrialist in location analysis is first to select a region (General Area) and then to select a community (Sub-Area). Site is finally selected for locating the plant.

There are certain factors associated with the selection of a region (or General Area) pertinent to plant location. These factors are detailed hereunder :

(a) **Location close to the market:** This saves the transportation cost and time and perishability of the product.

(b) **Location close to the raw material area :** Fruit processing Industries are necessarily located in the areas where fruits are made available.

(c) **Location close to process requirements** such as water and electricity.

(d) **Location with good transport facilities.**

(e) **Location based on climate :** e.g. Photo film Industry, Textiles, etc.

(f) **Location based on the cost of land** in the rural area and also in the urban area.

(g) **Location based on personal preferences :** An industrialist would sometimes prefer to locate the plant in a place which pertains to his nativity or to the place where he lives.

(h) **Taxes and Legal Factors :** Rate of Taxes and Legal Factors do make a difference between Governments.

(i) **Government Policy:** Government formulates some policies to balance the regional economy by encouraging the industries located in areas which are under-developed and where the rate of unemployment is very high.

(j) **Location with good labour supply:** This is a primary factor in selecting a general area for plant location. It is concerned with selectivity, levels of skills and education and productivity of labour force in that particular area. While analysing labour supply, labour management relations and patterns of absenteeism are not ignored. Fringe benefits and wage rates play an integral part for the location of a plant with good labour supply

Selection of a site which meets the minimum requirements is of vital importance when an area is chosen for plant location. This site must be zoned for industrial use and must satisfy the needs of the industrialist at reasonable development costs. An estimate of the floor space requirements must be first made—taking into account the rooms for expansion, parking space, transportation facilities, etc. A site five times the present plant

area is considered minimum to allow for future expansions. Availability of open land adjoining the plant site is preferable for future expansions. The site must provide for sewage disposals and the soil structure of the site must also withstand the weight of bearing loads of building foundations. Factory sites are fairly developed by Industrial Estates now-a-days solving many a problem of the occupants.

Multiplant Location : Analysis of a multiple of plants for an industry in different locations is considered in view of its dynamic character. Addition of such plants in various locations is pertinent to the nearness of the marketing areas. Multiplant Locations are planned to minimize overall costs. In this case, the plants situated in various locations are analysed in respect of their production and distribution costs, plant capacities and distribution demands. The promising plants are retained, while the others are shut-down or disposed when the demand falls. In a multiplant situation, a plant which is not advantageous to the organisation by way of current costs, demand for the product in the particular area and producti-

vity of labour force is shut-down or sold-out. Some of such plants are relocated in ideal locations. Appropriate decisions of this kind attribute to the well-managed organisations.

Foreign Locations : Location of plants in foreign lands are now-a-days planned taking into consideration the availability of men, materials and machinery at attractive rates. All these three factors go into ideally locating a plant abroad. There is also every likelihood that an organisation could be burned badly by giving preference to only one or two of the above factors. For instance, labour wages in India is extremely less, compared to the situation in United States but the expensive machinery at this end counter-balance the advantage of wage cost. Similarly the cost of materials, fuel and power, is dominant while locating a plant abroad. Alternatively, if either of the cost advantage of men, machinery and materials is not erased or affected by the higher costs of the other two, foreign location is a fascinating phase of development of the industries which are favoured by the structure of foreign costs.

Plant Location is of great importance in view of the physical factors of the overall plant design. A trend towards decentralisation in plant location is seen everywhere these days. This is of course a symptom of economic growth of the country as a whole. Industrial Estates are planned solely for development of factory sites. To captivate the industries to the respective regions, various concessions such as tax reductions and low-cost lands are made available where there are no industrial estates. Plant locations in rural regions provide substantive space for parking, expansion and plant design of architectural attractions. There are also instances of good locations of plants wherein the factors examined herein are not altogether observed. Yet, they cannot be followed as the model locations by the interested industrial entrepreneurs.

TANSI has secured a Defence order to the value of Rs. 8.05 lakhs for supply of Pistol 78 through open competition from the Ministry of Defence Supplies, Government of India, New Delhi. This order will be executed by the Tansi Machine shop, Guindy.

An order for supply of 40 Tonnes of Forged Steel Balls to the Ennore Thermal Station valued to Rs. 1.30 lakhs has been received from Tamil Nadu Electricity Board. This order is under execution by the Tansi Forgings, Guindy and Tansi Tool and Forge Works, Coimbatore.

Two orders, one from the Railway Board, New Delhi and the other from the Post and Telegraphs Department, New Delhi have been received by Tansi for fabrication, galvanising and erection of sixty numbers of self supporting Micro wave Towers for a total weight of 2300 tonnes. The total value of these orders is Rs. 61.40 lakhs. Both the orders will be executed by the Tansi Structural and Galvanising Works, Mettur Dam.

Thiru Sisjohn Serma, Deputy Speaker of Meghalaya, called on the Chief Minister, Dr. M. Karunanidhi on 25th May, 1973 and had a long talk with him of mutual interest.



WORK OF AGRO- ENGINEERING AND SERVICE CO-OPERATION FEDERATION

The Tamil Nadu Agro Engineering and Service Co-operation Federation Limited is concerned with the following main activities :—

To co-ordinate and facilitate the working of the affiliated societies and assist in their promotion, organisation and development ;

To manufacture, acquire, own or sell or serve as agents for the acquisition or sale of tractors, electrical equipments, pumpsets, etc ;

To service and to repair agricultural machinery and equipment ;

To offer technical services relating to agriculture, including soil testing and to undertake procurement and use of seeds, fertilisers, cattle feed and pesticides and storing and processing or sale of agricultural produce ;

To enter into contracts with Government, public bodies or other institutions or persons to supply or dispose of goods, machinery and materials of any kind, etc.

Oil engine pumpsets, which are at present installed with Government subsidy to meet the acute power shortage, are purchased and distributed through the Federation. The Federation is also serving as agent for tractors, sprinklers, electric pumpsets, diesel pumpsets and other agricultural machinery.

The Federation is likely to take up the manufacture of accessories required for agricultural machinery. The Federation is also investigating the scope for production of producer gas powered pumpsets and alternators.

The Federation has been empowered to supervise the activities of the district-level and block level Agro Service Co-operative Centres.

In view of the increasing tempo of activities of the Federation and the large financial stakes involved, Government have considered that a higher power Board of Management should be constituted to look after the activities of the Federation. They have also appointed a full time senior scale I.A.S. officer as the Managing Director of the Federation. The Board has a full time Technical Director and an Accounts Director as Members, apart from the Chief Engineer of the Directorate of Agriculture, Managing Director, Agro Industries Corporation and the Additional Registrar of Co-operative Societies (Credit) as part time Members of the Board. In order to provide proper guidance and ensure effective functioning of the Federation, the Special Secretary to Government Co-operation Department, has also been nominated as the Ex-Officio Chairman of the Tamil Nadu Agro Engineering and Service Co-operation Federation.

DO YOU KNOW INDIAN JOINT VENTURES ABROAD?

The Industrial production in India has witnessed a steady growth over the years as a result of the successful implementation of industrial development plans.

With the increased production, there came about a substantial diversification of the industrial base of the economy.

These developments have led to the emergence of a new entrepreneurial class with capacity and competence to undertake new industrial ventures not only in domestic spheres but also in overseas countries.

The Government of India have been encouraging such entrepreneurial to set up joint ventures abroad by contribution of indigenous machinery and equipment and technical know-how towards their share of equity.

Only such industries, where there is surplus production capacity of machinery and where internal demand for the product is largely covered, are allowed to participate in industrial joint ventures abroad.

Cares are taken that investments in such ventures does not in any way affect the industrialisation of our country. On the other hand, it should serve as an instrument of export promotion and for promoting economic co-operation among developing countries.

By the end of 1972-73, the Government of India have permitted setting up of 155 Indian industrial joint ventures, out of which 37 have gone into productions and sixty-seven are in various stages of completion.

Such ventures have been set up in as many as 25 countries,

Glow Of Freedom Comes Through Respect To Rule of Law.

Members of Police, whose loyalty and devotion to duty are national assets, have a thankless job to perform. But Tamil Nadu Police Force has a creditable service behind it. It had unearthed many a difficult and serious crime and its C.I.D. wing was responsible for bringing to light a series of counterfeiting offences. The City Police, for its credit, apprehended a notorious inter-State criminal gang.

The following is the text of the speech of Thiru K. K. Shah, Governor of Tamil Nadu, delivered at the Police Medal Parade held at Rajarathinam Stadium, Egmore, Madras, on Saturday, 10th February 1973 at 4-30 p.m.

It is a social obligation and administrative compulsion that meritorious services of the officers and men of the police should receive public recognition. Members of Police have a thankless task to perform. Everybody wants their help and yet is prone to criticise when he is asked to maintain law and order. Their loyalty and devotion to duty are national assets. To honour them with distinction for integrity and devotion is to encourage standards which enrich democratic way of living. Such recognition enhances their enthusiasm and goads others to follow the inspiring example of such winners.

It is this solidarity as in times of war time, that is again required when in peace we work for our economic prosperity. We cannot afford to fritter away our energies in mutual bickerings and internecine quarrels, when hard work, discipline and unity are called for to create national wealth. The highest mark of civilisation is self-restraint and the greatest virtue of democracy is tolerance. Our progress, as a developing nation, will be seriously affected if we give up self restraint and tolerance, if selfish motives put on the garb of public service, if violence is resorted to on the slightest provocation and if public property is damaged. The tendency to resort violence on the slightest provocation in the present stage of our development needs sympathetic

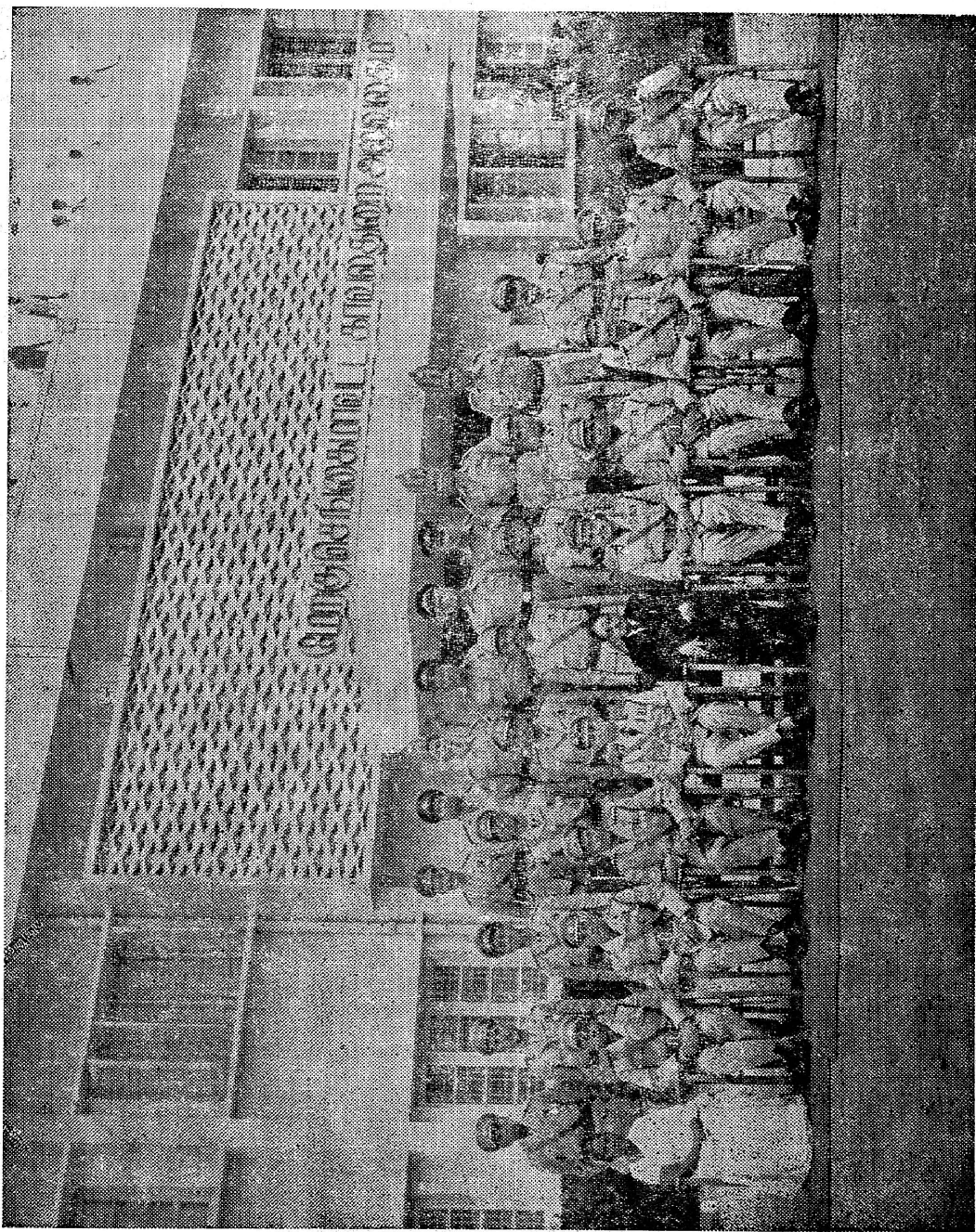
firmness. Healthy and cordial police-public relationship can succeed in evolving norms of public life so that violence as a means of airing grievances may be avoided and democratic methods for redress of grievances may be evolved. Let us all respect the Rule of Law and contribute to the growth and maintenance of internal peace which is vitally necessary for accelerating our prosperity. Your individual behaviour and your devotion to duty are bound to have a healthy impact on the people of Tamil Nadu.

A Rightful Step.

The gradual implementation of the recommendations of the Police Commission ensures improvement in the service conditions of officers and men of the force. The recent recruitment of Grade I Constables with a minimum qualification of S.S.L.C. opens out a new chapter. This is a step in the right direction, as it seeks to solve to some extent, the problem of educated unemployed.

I am glad to know that the Tamil Nadu Police Benevolent Fund continues to work for the amelioration of the conditions of all non-gazetted staff of the Police Department by providing financial relief, scholarships and recreational facilities to the employees and their families. I particularly admire the work of the Police Families' Welfare Organisation which gives gainful occupation to the families to enable them to augment their income.

I should like to pay my tribute of admiration to the Police Force, Home Guards and the Fire Service



The recipients of Police Medal Awards.

for their exemplary services. The Tamil Nadu Police had to grapple with an increased volume of property crime during the year. 22,015 cases were registered this year as against 21,270 of the corresponding period of last year, an increase of 3.5 per cent. In the context of growing urbanisation and industrialisation of various centres in Tamil Nadu together with the spiralling trend in prices of essential commodities, the reason for increase in crime is perhaps understandable. However, the Police have tackled this problem exceedingly well. The percentage of detection of property crime up to the end of October 1972 is 58.5 on the basis of convicted cases alone and 73.1 on the basis of convicted and pending trial cases. The Tamil Nadu Police have unearthed many difficult and serious crimes. The Tamil Nadu C.I.D. is responsible for bringing to light a series of counterfeiting offences.

It also brought to book a notorious cheat. The City Police, by their constant vigil and arduous efforts, apprehended a notorious inter-State criminal.

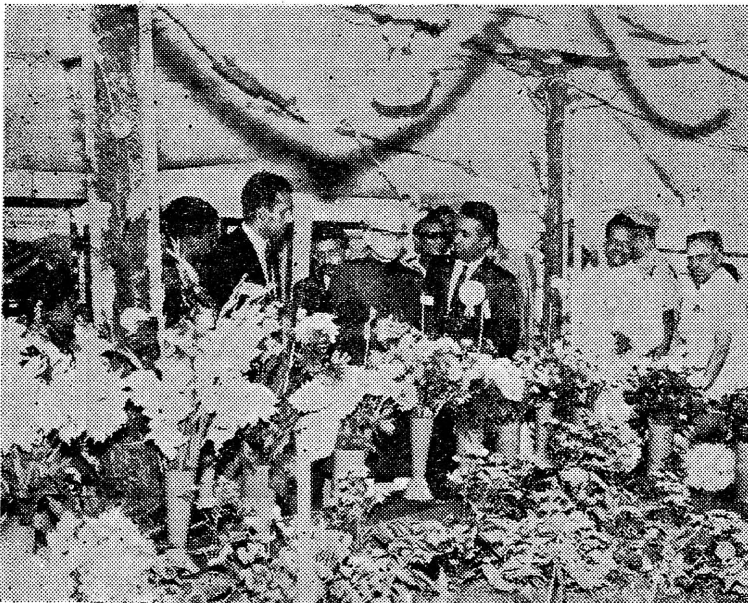
The Government are also aware of the growing traffic, particularly in cities and towns, and have already initiated a number of schemes to ensure free flow of traffic and reduce hazards to the travelling public.

A pioneering effort by the Tamil Nadu Police in its grim fight against crime is its programme of modernisation. Steps have been taken to introduce micro-wave communication and facsimile transmission of documents, photographs and finger-prints. A programme has been drawn up to provide every district with a Mobile Forensic Science Laboratory with necessary accessories and equipments to help

investigating officers. Another notable programme is the ushering in of computerization of crime records, man-power utilisation, budgetary control, pay roll, service records and traffic accidents.

I take this opportunity of appealing to all sections of the people—intellectuals, leaders, students, workers, public servants and others—to extend their co-operation in putting down violence and in respecting the Rule of Law in the land. Let us all so work in our own spheres of activity as to feel the glow of freedom. Let us remember that individual freedom is no freedom if it becomes danger to the freedom of others. Let us conduct ourselves in such a manner that the Police may have time to deal more with crime than with Law and Order problems. In doing so, we will be upholding democratic values and building up healthy democratic traditions.

FLOWER SHOW AT OOTY



Thiru K. K. Shah, Governor of Tamil Nadu, inaugurated the Flower Show at Ooty on 19th May 1973. The Governor and other dignitaries are seen engrossed in seeing and enjoying flowers of all kinds exhibited.

THIRUMANOOR—THE BEST PANCHAYAT UNION IN

Thirumanoor Panchayat Union has the unique distinction of getting the rolling shield for the best union in Tiruchirappalli district during the years 1968-69, 70-71 and 71-72. The rolling shield is given for the best Panchayat Union in each district based on its performance, which is judged by working out on composite weighted indicators and the panchayat union, which secures the highest index in each district, is selected as the best in that district. The selection is made by the Director of Rural Development.

Agriculture.

In the field of agriculture 87 per cent of the families were covered by Agricultural Production Plans to the total number of Agriculture families. In respect of green-manuring 100 per cent of the families were covered. In respect of agriculture intensive propaganda was carried on propagation of high yielding variety programme and the message of this programme was carried from door to door and the co-operation of ryots was enlisted. The technical know-how required for augmenting food production was also taken from door to door. The result was spectacular as ryots responded to the various schemes quickly when an awareness was created among them. The agricultural programmes broadcast from the All-India Radio, films, posters supplied by Government to various magazines and other publicity materials have also helped in publishing the various scientific methods of agriculture and to augment food production. For example, under paddy, out of a total area 19,325 acres, an extent of 15,750 acres was covered under improved seeds. So was the case with other crops also.

Education

Forty-two per cent of the children in the schools were provided with mid-day meals. Contribution in cash and kind were collected from

TIRUCHIRAP- PALLI DISTRICT

the public in order to provide sufficient and delicious meals to children. For the children hailing from poor families this scheme was a boon. 84 per cent of the schools were provided with their own building with the required facilities. In some cases, in which the panchayats were not in a position to contribute the required amount, the panchayat union contributed the amount from its general fund.

In order to disseminate knowledge among villagers 35 Social Education Centres were functioning. In all the centres books and magazines and dailies were supplied and the convenors were entrusted with their proper functioning. Besides 35 Rural Radio Forums functioning in the union, which arranged the assembling of ryots at the time of agricultural broadcasts from the All-India Radio, Tiruchirappalli. Pre-broadcast briefing and post broadcast discussions were held with the help of the convenors and doubts raised by the ryots were got cleared. This has helped to bring the modern scientific research and results obtained thereon to the very doors of the ryots residing in remotest corners of the villagers. The activities of the Rural Radio Forums have also helped to introduce modern agricultural practices and in augmenting food production.

Fifty-four schools had taken to kitchen gardening during the year 1971-72. The produce from these gardens were used for mid-day meals for children.

Mahalir Mandrams

In all the villages Mahalir Mandrams (Ladies club) are functioning. Apart from given training for

women in embroidery, sewing, dress making and gardening, these Mandrams were engaged in family planning, propaganda and collection of amounts for the small savings scheme. Women trained by these mandrams were sent for examinations conducted by Government in embroidery and dress making. Poor ladies have also augmented their income by engaging in dress making and sewing.

Co-operation

As regards co-operation 80 per cent of the credit needs of the ryots of the area was met by co-operatives. Apart from issuing loans, co-operatives were engaged in distribution of fertilisers, sugar and other essential requirements of ryots.

The Union also undertook distribution of chemical fertilisers for the benefit of ryots. 316 tonnes of fertilisers were distributed to ryots. This has helped the ryots to keep away from black marketeers and other exploiters, besides helping them to ascertain the required quantity for their lands at the time of purchase.

Link Roads

All the villages in this union have been provided with link roads except Ramanallur which is a small hamlet situated like an island in the midst of Coleroon river. Even in this hamlet all amenities have been provided. One higher elementary school is functioning well in this hamlet. All children of school going age have been got admitted in this school.

In short in all the fields of development and social activities this union has achieved spectacular results. During the year no meetings of the council was adjourned for want of quorum and all decisions were taken unanimously after mature discussion.

The escaped income becomes black money and is funnelled into a parallel economy. Like a contagious disease, tax evasion and black money have spread embracing almost every economic activity. This article explains in detail the causes for the growth of black money and the curative panacea to arrest it.

come becomes "black money" and is funnelled into a parallel economy.

The after-math of the last world war, the laxity in moral standards that followed in its wake and the stupendous opportunities provided by the massive industrial outlays and construction programmes, have led to the generation of more and more black money. Like a contagious disease, tax evasion and black money have spread embracing almost every economic activity. The lure of quick money, the ostentatious living that goes with it and the comforts and convenience it can buy in

BETWEEN THE TAX DODGER AND TAX COLLECTOR

Tax evasion, despite its social odour, is a world wide phenomenon. While widespread infraction of the basic laws of the country is the symptom of public decay, general tax evasion is a symbol of moral laxity as it shifts the tax burden to the honest tax payer. To expect a person to contribute voluntarily his due share of the Government's financial requirements when his neighbours evade their share, is to expect meek acceptance of a grossly discriminatory treatment by the law abiding citizen.

It is a well accepted maxim that the burden of taxation should be equally distributed among the various tax payable this equitable distribution prescribed in the law should be equally ensured in actual administration. Consideration of equity apart, there are compelling economic reasons for effectively enforcing the tax laws. An enterprise, which pays its taxes properly, is in a poor position to compete with an enterprise which does not pay its taxes properly. It must either follow the example of its competitor or be forced eventually out of business. In the latter event, the State also loses part of its revenue.

BLACK MONEY—A PARALLEL ECONOMY.

Such consequence can have a disastrous effect in a developing economy like India where there is an imperative need to mobilise all available resources for attending the plan objectives. The escaped in-

GLIMPSES OF AN UNENDING BATTLE OF WITS

an economy of shortages have tempted many a person to resort to some of the most ingenious devices to evade taxes.

DEDUCTION HAZARDS.

Let it be stressed that the detection of unreported income or undisclosed economic activity is by no means an easy task. The black money such activity generates and the parallel economy into which the money flows, have incredible ramifications. The large scale transactions that go to create the black money are planned carefully and executed with consummate fitness. The transactions generally follow a complex and circuitous route and the tax evader takes elaborate precautions to cover his track at each state. If a probing investigation is started the investigating official frequently find that witnesses are either hostile or have vanished and the records have either been destroyed or tampered with. He has patiently to pick up small clues from here and there, piece them together and embark on fresh lines of investigation if the first effort draws blank. He has to be constantly alert and he should be thoroughly familiar with the intricacies of complicated financial deals and must develop the ability to find the link between apparently disconnected transactions. There is no limit to human ingenuity and some of the best brains are pressed into service to devise new methods for suppressing the real income. In the battle of wits with the tax evader, the tax

administration has to constantly gear up its machinery and evolve new techniques to combat the more and more sophisticated methods adopted by the tax evaders.

CASH TRANSACTIONS

Cash transactions unless documented do not leave behind any tell-tale evidence. Unreported transactions figure in every shady deal like payment of secret commission, payment of on-money, property deals understating the value and the black-market transactions in controlled commodities. A group whose receipts are difficult to verify effectively, comprises the professional men who perform disconnected services for a large number of clients. They usually collect their fees in cash for services rendered from an individual who may not even bother to obtain a signed receipt. Verification and detection of such cash fees poses a very difficult question for the tax administration unless at a subsequent point of time the concealed income emerges out in the shape of a tangible asset.

The honest tax payer unfamiliar with the complexities of evasion techniques often marvels at the extent of tax evasion and is prone to attribute this to the failure of the administration. He is perturbed at the extraordinary powers of search and seizure given to the bureaucracy by the Parliament in apparent disregard of the personal liberty of citizens. A few illustrations of the intricate evasion techniques adopted would give an idea of the magnitude of the problems that have to be faced by the administration in tracking the tax evader.

PARTNERSHIP OF A STILLBORN CHILD

Many a tax dodger has resorted to the method of splitting income through spurious partnerships but this stratagem was adopted in a daring manner by a hardware merchant who masqueraded his minor son as an adult partner. The partnership deed was executed in 1956 when the boy was only 15 years old and for a few years the tax department was hoodwinked and the firm was granted registration. The tax official later got an inkling of the real truth that the registration of the firm had

been obtained on false premises. Enquiries were then started when the tax payer came with an impressive explanation that the boy was born in 1937 and not in 1941 as presumed by the tax official. The brilliance of the scheme lay in the fact that the tax payer's wife had actually been delivered of a boy in the year 1937. Extensive enquiries indicated that the boy born in 1937 was a still-born child. The tax payer, however, relied on the testimony of two doctors. To break this expert evidence, the investigating official had to dig out the old records and registers of the nursing home and subject them to a searching scrutiny. The entries in the register pertaining to the child born in 1937 showed that against 'placenta' there was a sign of interrogation and against "membrane" the entry made was "complete". The left hand corner of the page containing the entries relating to discharge was found to be torn. It was, however, noticed that no entries had been made regarding the weight of the child at the time of birth and discharge and the condition of the cord at the time of discharge, although these particulars were recorded in the register in respect of the children born later. Further corroborating evidence was obtained from insurance policies and school leaving certificates, which conclusively established that the person who signed the partnership deed in 1956 was a minor. The registration granted to the firm was accordingly withdrawn.

Silver Bricks with 'Valid' Railway Receipts

Alertness on the part of a tax official while travelling in a railway train led to the unearthing of a substantial amount of concealed income. The tax official noticed that some persons were carrying very heavy luggage containing silver bricks after obtaining valid railway receipts for the luggage and having paid the necessary freight. On return to his headquarters, he obtained from the Station Master the details of all such despatches and a datewise tabulation was made noting the names of the passengers. Enquiries with the railway staff brought out the names of certain persons connected with some ornament dealers and further enquiries showed that they were regular paid employees of these dealers. It was

found that several maunds of purified silver had been despatched and the value of these despatches in the case of one of the tax payers alone came to several lakhs of rupees in a year. These had not been disclosed in the sales. The past assessments were reopened and the concealed income was brought to tax.

More Powers And Penalties

The success in checkmating some of the cleverest schemes for tax evasion has only made the tax administration keenly conscious of the magnitude of the problem. The administrative and legislative steps necessary to combat tax evasion have been under constant study and review by the Government. Along with these administrative steps, far reaching changes have also been made in the law dealing with tax evasion. The scope for reopening the closed assessments has been progressively widened and penalties have been made more deterrent. Provisions for criminal prosecution of the tax offenders have also been placed in the statute book. The powers for securing information have been enlarged and the tax administration has been vested with the powers of search and seizure. The secrecy provision in the law has been relaxed to give greater publicity to tax offences. The Government under certain conditions has also been empowered to acquire immovable property, where the consideration declared in the transfer deed is less than the fair market value.

Need For Public Consciousness And Support

The administration has launched a mass communication programme to generate tax consciousness among the public so that they pay their taxes voluntarily as an integral part of their duties as citizens. A system of summary assessments in smaller cases has been introduced whereby a large number of returns are accepted without calling the tax payers to the income-tax offices, enabling the release of man-power to tackle the more difficult area of tax evasion.

There is increasing realisation in all quarters that tax evasion must

be effectively curbed if the goals of tax and economic policy are to be attained. In this task both the tax administration and the tax payers have important roles to play. The success of attempted tax evasion depends 'to a large extent on the assistance drawn from anti-social elements who are prepared to make recourse to such highly questionable methods as fabrication of evidence and filing of false affidavits. The burden of additional taxes that may arise due to one section of the society not paying its due share of taxes would fall exclusively on the complaint tax payers. If the society were to realise the consequences of tax evasion, the tax evader would find his game difficult as he will no longer be able to enlist any kind of support direct or indirect from anyone. Such consciousness on the part of the society will go a long way in helping the administration to track tax frauds and bring the evaders to book. The odds are heavy but the challenge has to be accepted.

THE CASE OF A FOREIGN IMPORTER OF MICA.

Fluctuations in maganese and mica trade have offered substantial potentialities for evading taxes. During the boom period under-invoicing the exports was adopted to whittle down the taxable profits and to earn illegal foreign exchange. A foreign importer of Indian mica obtained control of an Indian company with little pretensions to big business. The company had a paidup capital of Rs. 200 only and the shares were held in the names of certain nominees. The Indian company used to trade on a small scale and the result was generally a loss. After the foreigner came into the picture, the transactions assumed a large magnitude and every month mica worth several lakhs of rupees was purchased and exported. Nonetheless, the trading transactions showed a loss and the balance sheet began to show substantial accumulated losses. The large overdraft facilities extended to such a losing concern by a leading foreign bank aroused suspicion. Enquiries by the tax official with the bank did not however take him for, since the bank replied that the overdrafts had been paid against the security lodged in the

foreign country by the foreign importer. The tax official, therefore, explored other avenues of enquiry. He camped at the factory site and made detailed enquiries with various persons. He found that the company was being managed by three or four foreigners who were employees of the foreign importer and the method adopted was to purchase goods in India from the mica mine owners, process them in the factory and despatch the finished product to the foreign country at less than the total cost price. The freight, insurance and customs duty were levied on mica advalorem. This gave an edge to the importer in the foreign country over buyers who paid the market price as well as the appropriate railway freight, insurance and customs duty. The tax official ascertained the market price of mica abroad, and proved that the sale by the Indian company to the foreign company was at less than the prevalent market price. He also proved the close connection between the Indian company and the foreign importer and made additions of the order of Rs. 50 lakhs which additions were sustained in appeal. The final was even more dramatic. The foreigners realising that the game was up decided to flee from the tax jurisdiction and frustrate the tax collection. Overnight a large number of trucks were engaged and all the goods were despatched to Calcutta for being shipped abroad. The officer equally alert to the situation struck with speed. He moved through the Collector of Customs and issued distress warrants to prevent the export of goods. The export could then be made only after furnishing a bank guarantee with the result that there was no difficulty in the collection of taxes.

CIRCUITOUS BOOK ENTRIES.

The transformation of a purely personal loan into a business transaction with a view to claiming a large sum of interest as a deduction is sometimes carried out with considerable skill and pre-planning by some tax payers. A tax payer used to borrow money on interest from a limited company in which the shares were held by the members of his family. Loans were also advanced by him to a few parties on interest. A money-lending

business was thus brought into existence where interest paid to the limited company was allowed as a deduction. The company also took care to claim that the advances to the tax payer were made in the course of its business. This set-up was used to engineer an ingenious technique. In one year the tax payer borrowed over Rs. 20 lakhs from a party in a different part of the country and gifted the amount to his daughter-in-law. Over a period of years, through a chain of circuitous book entries, the tax payer transferred this personal loan into the account books of various intermediaries and eventually into the books of the limited company to whom the payment of interest was already being allowed as a deduction. The result was that interest on moneys borrowed for making the gift could be claimed as a deduction. There was a second and a more subtle angle. Since the money borrowed had been gifted away, the tax payer's estate inevitably showed a deficiency creating a background for the company to claim the amount of loan given by it as a bad debt. The manipulation nearly succeeded and for a few years the interest was allowed as a deduction. The large deficiency in the estate gave a clue to the investigating official who after extensive investigations could track the movement of the personal debt into the company's books. The attempt was, therefore, foiled in time. ●

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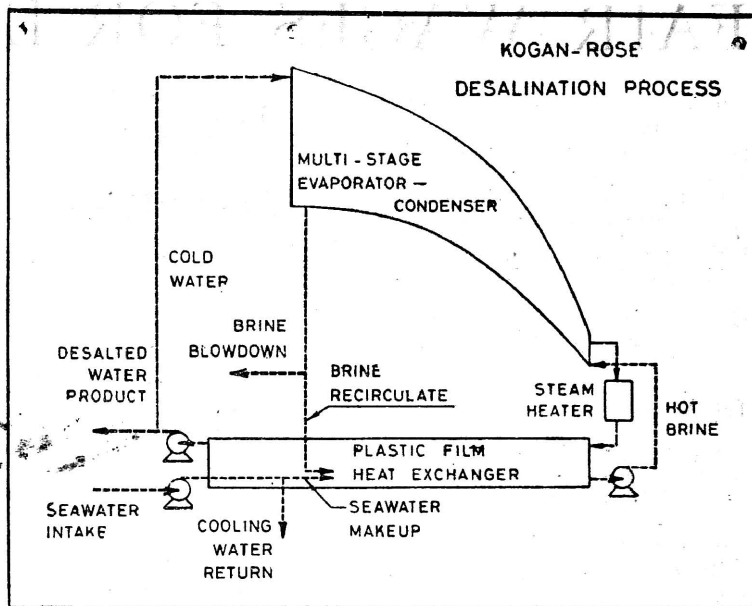
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New Desalination Process May Be The World's Cheapest



A revolutionary process for the desalination of sea water was demonstrated recently by its inventor, Professor Abraham Kogan of the Faculty of Aeronautical Engineering at the Technion, Israel.

It is expected that the new process will enable the production of fresh water at a cost 25-30 per cent less than the cheapest desalination process now in use. Both the capital investment and the operational cost of the desalination installation will be reduced.

Prof. Kogan told the press that pilot plant tests have reached a stage which enable the design of an industrial size installation. Speaking at the 18-metre-high installation in operation at the Electric Corporations' power plant, he said that several large industrial firms abroad and in Israel, have expressed great interest in his new process and wished to take part in its development, but "nothing has been settled yet".

He hoped that a plant of the size of the desalination installation in Eilat would now be planned. He said that by the early eighties, when Israel's first nuclear-powered electricity plants would go into operation, a large desalination plant with a 150 million cubic metre annual capacity, ten per cent of the country's

total water consumption, could also be in operation.

The main advantage of his system is that it eliminates entirely the need for the expensive alloy tubing, hundreds of kilometres of which are used in conventional flash-evaporation desalination plants. The alloy tubes account for 35 to 40 per cent of the cost of conventional plants and are their most expensive item.

Prof. Kogan's process, which is based on direct contact heat transfer, has replaced the alloy by super-thin plastic tubes which cost only 0.2 per cent as much. His direct-contact heat transfer system also requires a much smaller thermal driving force. The energy is provided by steam generated by the plant itself, thus eliminating pumps and reducing complexity and size and considerably reducing running costs.

Technion President Alexander Goldberg hailed the process as "one of the most important developments to come out of the Technion. I hope it will help solve one of Israel's most pressing problems and alleviate water shortages the world over by providing for the first time desalinated water at a reasonable price that will make it viable for use in agriculture and industry."

FAIR WAGES FOR LABOURERS

As per the policy statement issued by the Government in 1967 the broad features of the Government policy are the encouragement of collective bargaining, implementation of Wage Board recommendations, promotion of workers, participation in management, opposition to automation and disapproval of gharaos. The policy is enshrined in the motto "May Labour prosper and Industry flourish".

Fair Wages

Textiles :—The implementation of the Second Wage Board for Cotton Textile Industry is being secured by direct settlements and through settlements before the Conciliation Officers. The number of mills which have entered into settlement on these issues and the number of workers involved in it are as follows :—

- (1) Number of Textile Mills—102
- (2) Number of employees—83,000

Engineering

The recommendations of the Wage Board for this industry were not unanimous. The Government of India, therefore, decided to commend the recommendations of the Chairman and independent members of the Wage Board for implementation. The Government of Tamil Nadu had issued a press note regarding Wage Board recommendations for Engineering Industry on 18th December 1969 in Press Note No. 15, dated 18th December 1969 requesting the Managements and the Unions to negotiate and arrive at unitwise settlements on the basis of the above recommendations. Where no settlement is possible, the dispute are being processed under the Industrial Disputes Act and reference for adjudication ordered in appropriate cases.

Sugar

The Government of Tamil Nadu issued a press note regarding Wage Board recommendations for Suagr Industries on 18th September 1970 in Press Note No. 231, dated 18th September 1970 advising the Employers and Employees of this Industry to take action for early

Implementation of Wage Board Recommendation in Tamil Nadu in 1971

implementation of the recommendations of the Second Wage Board for Suagr Industry and also advised them to settle at the Unit Level any point that may arise in the course of such implementations. As it was not possible for the parties to come to a settlement at the Unit level, a Tripartite Committee was set up with the Deputy Commissioner of Labour, Madras, as Convenor, to discuss and finalise the implementation of the recommendations of the Wage Board for this industry. As the Committee was not able to find an agreed solution in the matter, a meeting was convened by the Honourable Minister for Labour on 22nd December 1971. At that meeting the employers were advised to implement the Wage Board recommendations and pay the arrears due to the workmen by 10th January 1972 after which other issues could be taken up for discussion. But subsequently as there was no agreement on the latter issue, the Hon'ble Minister for Labour held talks with the parties and eventually an accord was reached on 8th February 1972.

Road Transports

The final recommendations of the Wage Board for Road Transport Industry have been accepted by the Government of India. The recommendations are unanimous. So far 208 establishments implemented the recommendations of this Wage Board by which 11,945 workers were benefited.

The Departmental Officers have been instructed to persuade the remaining Managements for early implementation of the recommendations. A meeting was also convened on 19th June 1971 to discuss this question in which the Minister for Labour and Minister for Transport took part. At the meeting Minister for Labour gave time to the employers till 1st August 1971 to implement the recommendations of the Wage Board. As the response to the advice given by the Minister for Labour is not encouraging the Government are considering the

question of enacting a State Legislation to give statutory backing to the above recommendations.

Electricity

The final recommendations of the Wage Board for Electricity have been accepted by the Government of India as well as Government of Tamil Nadu. In respect of Tamil Nadu Electricity Board, a settlement was reached in 1970 at the intervention of the Chief Minister of Tamil Nadu Dr. M. Karunanidhi.

With a view to considering the question of implementation of the Wage Board recommendations in Electrical undertakings of Municipalities of Madurai, Coimbatore, Pollachi, Karur and Thanjavur, an Official Gazette was constituted by Government. The Government have since passed orders on the recommendation of this Committee that the scale of pay of the workmen employed in the above municipal undertakings be revised on a par with those in Tamil Nadu Electricity Board.

Leather Industry

So far, 231 establishments covering 10,021 workmen have implemented the recommendations of the Wage Board for this industry. The issue of revision of wages is also covered by the Arbitration Award of the Commissioner of Labour given by him on 11th March 1970 in respect of Tanneries in this State except those in North Arcot district. The progress of implementation in respect of the remaining units is being watched.

Heavy Chemicals

Out of 8 units connected with the Heavy Chemical Industry in this State, six units employing 3,255 workmen have so far implemented the recommendations of the Wage Board for Heavy Chemical and Fertilizer Industry.

Evaluation and Implementation Committee of Labour Department

The State Evaluation and Implementation Committee has been entrusted with the work of implementation of the Code of Discipline, etc. The provisions of the Code of Discipline were published through printed codes sent to the employer's and workers' organisations. The Labour Officer and Inspector of Factories have been instructed to contact various employers, employees Unions and Local bodies not affiliated to any Central Organisations and advise them to ratify the code. By the efforts of the officers of the Labour Department, 299 Trade Unions have signified their acceptance of the Code of Discipline in writing in the year 1971 and 260 managements and 24 local bodies have accepted the Code of Discipline as on 31st December 1971.

Out of a total of 76 cases (41 cases pending on 1st January 1971 and 35 cases reported during the year 1971) of alleged breach of the Code of Discipline, non-implementation of awards, non-recognition of unions, etc., 43 cases were disposed of during the year 1971 and 33 cases were pending investigation at the end of the year.

In accordance with a decision made at the State Labour Advisory Board meeting held in May 1970 the name of employers as well as Unions who were held to have committed breaches of the Code of Discipline by the State Evaluation and Implementation Committee are being published in Tamil Nadu Labour Journal.

The State Evaluation and Implementation Committee met thrice on 12th April 1971, 21st September 1971 and 27th December 1971 and discussed subjects relating to cases of breaches of Code of Discipline, recognition of unions and other subjects connected with the work of Evaluation and Implementation. The Committee was reconstituted in 1970. The Commissioner of Labour is the Chairman and the Special Deputy Commissioner of Labour, Madras, is the Secretary of the Committee.

WONDROUS WATER DIVINER

1. For sinking borewells, digging new wells or deepening the existing old wells (if economical and fruitful) a crossing point of two high yielding springs which run from South to North and the other from West to East can be located accurately by scientific methods.

2. In specified area of land, I can give details regarding the crossing point of two high yielding aquifers, the number of crossing points which can yield the water according to their yield, in a descending order based on the quantity of yield, the required horse power of pump to pump out the water available at that point, the depth at which water is available and the quantity of water that can be pumped out in an hour.

3. I give you a guarantee of the point I locate. If that point fails to supply the specified amount of water, I am prepared to pay a compensation to the extent of Rs. 3,000 to the affected party who should make an agreement with me.

With best wishes,

K. KANDASAMY,
Water Diviner,
(Member of the British Society of Dowers, London),
Ganapathy Post,
COIMBATORE-6.

PHONE: 31912.

ADV

DIGESTIVE DISEASES

CAUSES AND CURES FOR THEM

Most of the digestive diseases are chronic or recurrent and cause greater disability. These diseases are considered as number two cause of mandays lost from work even in well advanced countries like the U.S.A. But proper care of the digestive diseases will help in adding "life to years as well as years to life".

It may not be an absolute truth but certainly it will not be much of an exaggeration that every other person in India suffers from gastric disorder. No national survey data for these diseases is however, available. But those affecting esophagus, stomach, intestines, liver and pancreas do present a major health problem. Mainly responsible for this high incidence are the socio-economic and environmental factors.

Digestive diseases catch a person rather young at the prime and most reproductive period of one's life. Children fall victims at crucial stage of their growth and development. Weaker sections of the society living in rural areas and slums are their other easy preys.

Most of the digestive diseases are chronic or recurrent and cause greater disability. They are less often the cause of death but are responsible for prolonged suffering. Digestive diseases are considered as number two cause of mandays lost from work in U.S.A. and possibly it may be number one in India. Chronic disability due to digestive disorders lowers the production capacity. It is suggested that digestive disorder coupled with malnutrition is one of the most important impediments in the economic progress of our country.

Our digestive system is challenged by a number of injurious agents-infections, malnutrition, spices and alcohol, drug addiction and nervous tension. Digestive organs lose the battle and patients suffer from diarrhoea and dysentery or gastroenteritis, peptic ulcer, hepatitis, liver abscess, cirrhosis of the liver, gall stones, malabsorption, pancreatitis

and irritable bowel syndrome. Prevalence and incidence of each of these diseases is not well worked out in India.

GASTROENTERITIS

Acute infectious gastroenteritis is the most commonest ailment amongst patients attending the private practitioners, primary health centres and other hospitals in summer months. This is related to quicker rotting of food in hot weather and rapid growth of the infectious organisms.

CHOLERA

Cholera is the most severe form of gastroenteritis and it still exists in India. Parasitic infections of the intestine are widely prevalent in our country, particularly in rural areas. A survey in rural areas of hill district in North India revealed the presence of parasitic infection in 66 per cent of the population. Mixed infection was present in 31 per cent, Amoebiasis, hookworm, ascariasis and giardiasis were present in 25 per cent, 20 per cent, 33 per cent and 11 per cent respectively.

Health hazards of parasitic infections are well established. Mixed parasitic infection of the intestine is most important contributory factor to malnutrition. Anaemia due to hookworm disease is a very serious problem of chronic suffering and disability in our rural population. Giardiasis and ascariasis are important causes of chronic illness, poor absorption of food and impaired growth and development of the

children in India. Intestinal amoebiasis leads to lasting disability due to chronic bowel disturbance ending up with psychic problems. Control and eradication of intestinal parasitic infection is a challenging health problem in India.

PEPTIC ULCER

Peptic ulcer is a world-wide problem and its prevalence in India is quite high. Several field studies from different parts of our country suggest its occurrence in 4 to 10 per thousand population. Tamil Nadu, Andhra, Jammu and Kashmir are considered to be very high risk areas. The exact cause of peptic ulcer is not known, the disease results in chronic suffering, loss of working hours and occasional fatality. Smoking, alcoholism and spices aggravate symptoms of the disease and often precipitate serious complications of ulcer.

HEPATITIS AND CIRRHOSIS OF THE LIVER.

Viral hepatitis is a cosmopolitan disease and several epidemics have been reported in India, the worst being that of Delhi in 1955-56. It has serious and often fatal results during 6 to 9 months of pregnancy. It is not yet established that viral hepatitis leads to cirrhosis of the liver, but the possibility is still being actively studied. Cirrhosis of the liver is generally a irreversible disease and usually fatal after few years of chronic illness.

A peculiar type of cirrhosis known as Indian childhood cirrhosis is a serious disease, affecting young children and once established almost always leading to fatal end. Again the cause of this disease is not known and the treatment is very unsatisfactory.

CHOLECYSTITIS

Chronic Cholecystitis and cholelithiasis is very common disease of north India. It is estimated that this disease is seven times more common in north India than in south India. Dietary factors particularly 'fats' seems to play some part. Gallstones are responsible for chronic dyspepsia or dramatic illness with acute abdominal pain and jaundice. Association of chronic cholecystitis and cholelithiasis with cancer of the

gall bladder is very alarming. The prevention of fatal disease of cancer of the gall bladder can best be attempted by early detection and surgical resection of gall bladder of patients having cholelithiasis.

PANCREATITIS

Chronic pancreatitis with stones in the pancreatic duct and destruction of the pancreas is very common in certain parts of south India. A detailed study of this serious diseases producing prolonged suffering and fatal end has been carried out in Kerala. Precise cause of the disease is not known. Nutritional factors have been incriminated but not proved. The disease affects the young persons who suffers from abdominal pain, diarrhoea, skin diseases and severe form of diabetes. In few years time the end is fatal. Treatment is generally symptomatic and specific therapy to check the progress of the disease is not possible.

One of the important disorders responsible for undernutrition in India is that of Malabsorption Syndrome. It has been recorded in epidemic form in south India (Vellore) but in endemic form it is prevalent all over India. The cause of this condition is not known, patients usually young get diarrhoea and loss of weight due to poor absorption of food. It is a serious problem, as already vast proportion of our population does not get adequate diet and they cannot bear the loss of minimal food available to them. Patients continue to suffer from chronic illness as the treatment is only symptomatic.

ABDOMINAL TUBERCULOSIS

Abdominal tuberculosis affecting the intestine and other abdominal organ is quite common all over India, particularly in the North. This need not be associated with active tuberculosis of the lung. In fact though prevalence of Pulmonary Tuberculosis is declining due to several active anti-tuberculosis programme, abdominal tuberculosis seems to be still widely prevalent amongst cases admitted in the hospitals. Patients suffer from prolonged ill-health and despite good anti-tubercular treatment they end up to the surgical treatment. A sister disease, ulcerative colitis presenting

as diarrhoea with blood difficult to control and rarely cured, is now recognised more frequently in our country than was known a decade back.

Stresses and strains of life find easy vent to gastrointestinal disorders. These conditions are considerable 'bread earner' to gastroenterologists but are responsible for substantial economic loss to the country.

Incidence of cancer of the oral cavity and the esophagus is quite high in India. Thirteen out of a thousand persons are believed to be suffering from it. Certain habits like tobacco and pan-chewing are associated with high incidence of oropharyngeal and esophageal cancer in India. Cancer of the other parts of gastrointestinal tract is relatively low in our country.

Digestive system often gets afflicted with several diseases which pose public health problems. Several of digestive diseases of unknown etiology are also quite common in India. These conditions generally produce chronic ill-health and lasting disability. Unfortunately facilities for proper management of digestive disorders are very poorly developed in our country. Proper care of the digestive diseases will help in adding life to years..... as well as years to life".

**Rs. 26 lakhs issued
as loan by the
Tamil Nadu Theatre
Corporation Limited**

To encourage and help the construction of semi-permanent theatres in rural area the State Government set up the Tamil Nadu Theatre Corporation Limited, a fully state owned, institutional financial Corporation which was inaugurated in April 1972 by Dr. M. Karunanidhi, Chief Minister and it has so far sanctioned loans to the tune of Rs. 25.70 lakhs for construction of 26 semi-permanent theatres in rural areas, since it started granting loans from January 1973.

The Corporation grants loans up to Rs. one lakh for each applicant to cover the cost of construction of a semi-permanent theatre and equipment. So far 26 applicants have been granted loans.

COTTON LEAVES FOR CITRIC ACID PRODUCTION

On research it has been found that Cotton leaves can be used as an economic source for the production of citric acid saving for the country lakhs of rupees every year in foreign exchange. This is the conclusion of a team of researchers at the Indian Agricultural Research Institute (I.A.R.I.) which has studied the "utilisation of dye-products of cotton".

The research project sponsored by the Indian National Science Academy was undertaken in collaboration with the Soviet Uzbekistan Academy of Science and the Indian Council of Agricultural Research.

The Country continues imports to meet its requirements for citric acid. According to the latest figures available, India imported Rs. 80 lakhs worth of citric acid between April and December 1971. In December 1971 alone, imports amounted to Rs. 15 lakhs. The figure is on the increase.

Dr. S. K. Mukherjee of the Agricultural Division of the I.A.R.I., who headed the team, said in his report that exploitation of cotton leaves for the production of citric acid would also help create employment opportunities and improve crop sanitation. Cotton leaves, which are used as a green manure, create a major pest problem, specially for the next crop leading to increased expenditure on pesticides. If the fields were kept clean by picking out the leaves and burning the rest of the debris, the

pest problem would be lessened, Dr. Mukherjee said.

The I.A.R.I. have examined leaves of various varieties of cotton grown in different regions and have come to the conclusion that southern varieties are richer in citric acid content than other varieties.

The team also found that malic acid, another important organic acid, could also be obtained from cotton leaves as a bye-product.

India has the largest area in the world under cotton cultivation but the yield per hectare is the lowest. Therefore, the utilisation of the bye-products of cotton would help strengthen the economy of cotton growers.

The classical source of citric acid is from the citrus fruits which industrially is uneconomical.

X X X

POST BOX No. 5415

FOR COMPLAINT OF FOOD ADULTERATION

Food adulteration is a public health hazard and of late it has assumed an alarming and menacing proportion costing lives of many in the country. To secure public co-operation in preventing food adulteration, the Directorate-General of Health Services, Ministry of Health and Family Planning, have streamlined arrangements for receiving public complaints. A special Post Box has been provided in New Delhi for this purpose.

Any complaint about adulteration in foodstuffs affecting health of public directly or indirectly, at manufacturer's, whole-saler's or retailer's level may be addressed to the Director-General of Health Services, Post Box No. 5415, New Delhi-110011.

CANE CULTIVATION CATCHING UP IN CAUVERY DELTA

The area under sugarcane in the Cauvery delta has increased from less than 4,000 hectares a decade back to as much as 8,000 hectares now.

The officials of the Agriculture Department feel that if properly cultivated, sugarcane crop could give higher yields. Sugarcane cultivation is more popular around Tiruvaiyaru, Kumbakonam, Mannargudi and Tiruthuraiipoondi, in the delta. The officials feel that sugarcane cultivation is not possible on an extensive scale in the Cauvery Delta on account of the dearth of drainage facilities which the crop very much needs. "That is the reason why an official of the Agricultural Department said, the yield per acre in the delta is just 20 to 25 tonnes as against some 40 tonnes in North Arcot district. Ryots in the tail end areas like Sirkali or dry Avudayarkoil say that paddy cultivation is not worth the trouble for there is very little margin after meeting the expenditure for pumpset irrigation and labour.

While cane cultivation is becoming popular, nobody is able to answer the common man's query as to why in the midst of plenty sugar is sold at about Rs. 4 per kilo in the open market. Not only this is beyond poor man's reach, but even at this rate, sugar is not available in interior villages.

Officials of the sugar mill at Vadapathimangalam near Tiruvarur, explain that for every 100 tonnes of cane crushed, 87 quintals of sugar is normally obtained. They say that 70 per cent of the production in the factory should be sold at Rs. 153 per quintal as levy price while the cost of production works out to Rs. 180. Thus, the factory personnel say the loss has to be made good in the free market sugar. They add that on account of excise duty and cess imposed and other incidentals, the common man has to pay a higher price for sugar.

WATERSHED MANAGEMENT BOARD SETUP IN TAMIL NADU

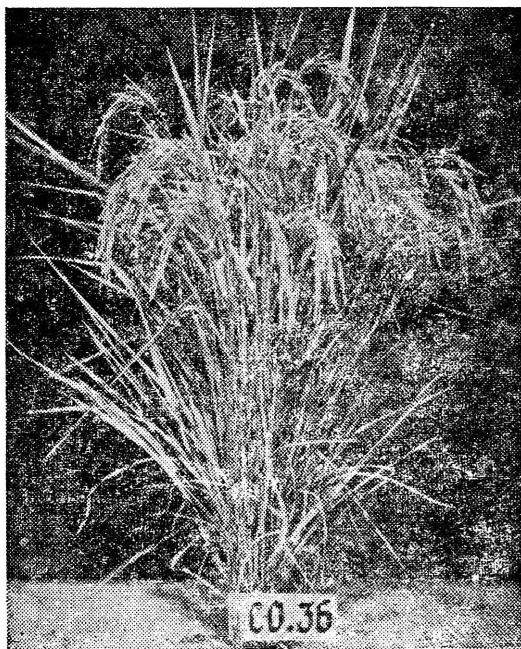
In difference to the request of the Central Board of Irrigation and Power to the State Governments, the Tamil Nadu Government has constituted a 10 member Watershed Management Board for the river valley projects. The main and the most important function of the newly formed Board is to take steps to usher in co-ordinated planning and management of watersheds of reservoirs in the State.

As far as Tamil Nadu is concerned all the available water resources have been exploited and utilised

to the maximum extent and benefit and the total water supply for irrigation and hydel power production purposes falls far short of the actual demand. In view of this acute scarcity of water availability to the alarming degree judicious management and management of water resources and economical use of them to the maximum utility have all the more assumed an all-important proportion in the State. Hence the setting up of the Watershed Management Board is bound to play a useful and utilitarian role in the State in the sphere of proper

up-keep of water resources in proper order and form in the State. The 10 member Board with the Commissioner of Food Production as Chairman is to go into the problem of sedimentation with a view to prolonging the life of the reservoirs in the State and deriving optimum benefits therefrom. Further, among many other things the Board will select reservoirs and set up separate working groups for them to combat the problem of sedimentation, examine the watershed management projects prepared by the various departments and recommend undertaking of measures for their implementation. The Board will also review the priorities for undertaking soil conservation and other measures to combat the problem of sedimentation. Thus the setting up of the new Watershed Management Board heralds a new and promising feature and future in the maintenance and management of scarce resources of water supply vis-a-vis the heavy demand for it in the State. (S)

Co. 36—A NEW PADDY INTRODUCED IN TAMIL NADU.



Thiruchencode Samba (Co. 32) is very popular in the single crop wet lands of Coimbatore and Salem districts. The Paddy Breeding Station of Tamil Nadu Agricultural University effected crosses between IR. 8 and Co. 32. Among the progenies, one culture (14,466) was promising with all desirable qualities. This culture (14,466) has been released as Co. 36 for large scale cultivation. This new variety can withstand 200 kg. of N/hectare. In the trials conducted at Agricultural Research Station, Bhavanisagar and in a number of farmers' holdings in Coimbatore district, Co. 36 recorded 7,433 kg. of grain at 120 kg. N while Co. 32 yielded 4,325 kg. of grain per hectare.

Co. 36 is found suitable only for sowing between June-August. It is of 125—140 days duration. The quality of rice is as good as Co. 32. Replacement of Co. 32 by Co. 36 paddy variety in an area of 60,000 hectares in single crop wet land areas of Coimbatore and Salem districts will result in an additional production of 50,000 tonnes of paddy valued at three crores of rupees. (S)

The Tamil Nadu Industrial Investment Corpn., Ltd.

The Tamil Nadu Industrial Investment Corporation is sponsored by the Government of Tamil Nadu to provide all types of financial assistance to industrial units in the State of Tamil Nadu and Pondicherry. The financial assistance is given to all types of units including proprietary, partnership and Joint-stock companies. Special schemes have been framed to help Technocrats and Rural Medical and Veterinary Practitioners. Concessional terms have also been offered to backward areas and backward districts.

The terms and conditions of assistance

Minimum: Rs. 1,00,000 (for small-scale industries : Rs. 25,000).

For Technocrats and Rural Medical Practitioners : Rs. 10,000

Maximum: Rs. 25,00,000 (Rs. 2 lakhs and Rs. 1 lakh in the case of Technocrats and Rural Medical Practitioners respectively).

Rate of Interest

9-75 per cent in the case of major and medium-scale industries.

7 per cent in the case of units in backward areas and for Technocrats and Rural Medical and Veterinary Practitioners.

8½ per cent in the case of other small-scale industries.

Initial repayment holiday

2 years in the case of ordinary industries.

Up to 4 years in the case of units in backward districts.

Amortisation period

Ranging from 8 to 10 years.

Special concessional terms are available to small-scale industries, technocrats, rural medical and veterinary practitioners.

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POISONOUS BUT INOFFENSIVE SNAKES OF THE SEA

"All sea snakes are deadly poisonous and their bite is considered fatal. But as a matter of fact, they are mostly inoffensive and seldom offer to bite even after rough handling and provocation. Further they are a popular delicacy in Japan".



T. S. N. MURTHY.

Few of us are aware that the sea snakes, which abound on our coasts, are but the Cobras and Kraits of the sea. They can be easily told from other snakes by their compressed bodies, and the flat tail which serves as a paddle. There are to-day about 55 kinds of these venomous reptiles of the seas, out of which half of them are confined to Indian waters. In size they vary from a 18-inch long Croker's sea snake of the Solomon Islands to the 9-foot yellow snake widely distributed in all seas of the world.

ADAPTATION.

Frequenting the close vicinity of the coasts, these snakes are perfectly adapted for a total aquatic life. The tail has been unusually flattened from side to side like a fin in which character they resemble eels. However, the dry scaly covering of the sea snakes distinguishes their identity from the smooth and slimy skin of the latter. Though they are graceful swimmers in the sea with their bodies flattened vertically, they are helpless and awkward in movement on land because they lack the broad belly plates usually seen in land snakes. In keeping with their other aquatic habits, the nostrils of these snakes are set on top of their heads so that they can breathe with their heads raised slightly out of water. Also, their nasal passages are provided with tight valves which can be closed against water.

They feed principally on fish and dive deep when disturbed. The young are born alive.

Poison.

Having been derived from the stock of Cobras and Kraits in the reptilian clan, all sea snakes are deadly poisonous and their bite is considered fatal. But the truth of this is belied when we see fishermen daily catching them in large numbers and throwing them back

into the sea with impunity. The reason for this is not far to seek, as the sea snakes are mostly inoffensive and seldom offer to bite even after all that rough handling and provocation. Further, the fangs in the sea snakes are mostly short so that the effectiveness of the bite is greatly reduced despite possession of lethal venom of neurotoxic nature. But the story is altogether different with certain kinds.

Recent experiments have shown that the venom of our commonest species—the Beaked sea snake is found to be eight times more potent than that of its deadly land ally—Cobra.

Our knowledge on the venoms of sea snakes is still meagre and it is right now known that some species are deadly to man while others can cause but a little discomfort and short lived pain.

Long Lines.

Some sea snakes love to bask on the surface of the water during days when sea is quite and hundreds of them may be seen from the bows of steamers. Long columns of sea snakes massing thousands has often fascinated the naturalists on sea-voyage. An European Naturalist, Lowe observed once a line of these creatures across the surface of the sea about 300 c.m. wide and nearly 100 kilometre long. The enthralled naturalist has estimated this congregation to include millions of individuals. This fantastic massing may be their migratory behaviour or something to do with their breeding.

EDIBLE.

These deadly serpents of the sea form a popular delicacy in Japan where they are served fried or smoked. With half of the world's sea snakes abounding our coasts it is time that we put this easily available resource for commercial gain.

Snakes are our allies and they are not to be afraid of. A visit to the Madras Snake Park at Guindy can make one to shed one's fear of snakes. Further the experts at the Snake Park aver that there are only four common poisonous snakes in Tamil Nadu and that they cause less damage than dog bites every year.



A staff of the Snake Park holds in his hands a Rat-snake to prove its harmlessness.

A visit to the Madras Snake Park, Guindy (admission 25 Paise), can make you (at the least) shed your fear of snakes though they try to portray it as a friend! Yes, according to the experts at the Madras Snake Park, snakes are our allies and not to be so generally feared. They aver that there are only four common poisonous snakes in Tamil Nadu and they cause less damage than dog bites every year! An important aspect of their work is to enable us to identify the poisonous ones, so that there won't be indiscriminate slaughter of snakes on sight. Snakes eat rats. In fact, one large cobra or rat-snake can finish off half a dozen rats in a week with the advantage of trapping it right in its hole. According to findings in different parts of the world, snakes are often the most important and effective biological control of rodents. It has been reported that India loses 20 per cent of food-grains every year due to rats. A plantation group in the Nilgiris estimates that they lose Rs. 5 lakhs annually due to rat damage! Now

THE MADRAS SNAKE PARK TEACHES US THAT SNAKES ARE OUR ALLIES IN GREEN REVOLUTION

we begin to see how snakes could truly be called our allies in the Green Revolution. The six rats eaten by a cobra could theoretically have tens of thousands of offspring by the end of one year, it is lucky for us that snakes have such good appetites with effective methods and weapons to deal with rats!

There is one very important factor that steps in the way of the snake's naturally helpful activity and that is our fear of snakes. It is not inherent, it is an acquired fear passed on from parent to child. At the Madras Snake Park emphasis is placed on getting people familiar with an animal which is usually seen just briefly, slipping away through the bushes. Visitors to the Snake Park see the FOUR common poisonous snakes and begin to learn to distinguish them from the numerous non-poisonous varieties. They can touch a snake and see that it is a very dry and clean creature with no malice towards man, only the defensive instinct natural in any animal.

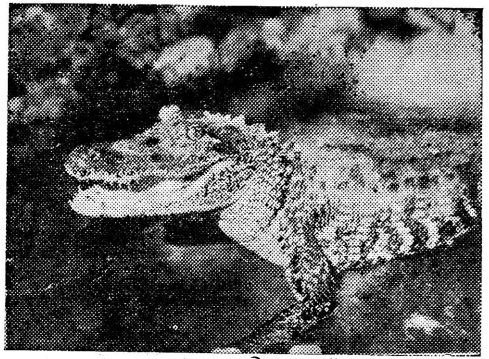
In 1971 the Tamil Nadu Forest Department allotted the Madras Snake Park one acre of land in the Beautiful Guindy Deer Sanctuary. This imaginative move on the part of the Tamil Nadu Government has provided the city of Madras with the first Snake Park on the Indian sub-continent. The famous Halfikine Institute in Bombay has been extracting venom at their lab but it is a medical products laboratory. The Madras Snake Park, on the other hand, serves the public as an educational reference centre where one can take advantage of the largest collection of snakes and literature on the subject. The other groups of reptiles are also represented at the Madras Snake Park with a collection of turtles and tortoises, giant monitor lizards, the Indian crocodile and American alligator. There are also several interesting snakes from other parts of the world.

The starting survival and growth of the Madras Snake Park has depended on five main things: (1) the land allotment by the Tamil Nadu Government, (2) a grant from World Wildlife Fund, India, (3) the snake-catching tribals, the Irulas of Tamil Nadu, (4) the support of the public and (5) the interest of a young herpetologist who has devoted his life to the study of Indian snakes.

The lead established by the Government of Tamil Nadu towards the advancement of knowledge about snakes is highly commended

by other States in India and some have expressed their eagerness to start their own Snake Parks. The well-known Professor M. V. Rajendran of Palayamkottai will soon be starting a new Snake Park in the southern part of Tamil Nadu. The World Wildlife Fund, India has granted the Madras Snake Park Trust over Rs. 20,000 in the last three years of its development without which the Snake Park could never have grown. In turn, the Snake Park now acts as the Southern Regional Office for World Wildlife Fund, India to promote wild life knowledge and conservation activity. This international organisation based in Switzerland is supporting many Wildlife Projects in India including the great Wildlife Conservation Measure of the decade—PROJECT TIGER.

The Irula tribals, who work for Snake Park, are expert snake-catchers and handlers and are constant sources of new enlightening information about wild animals and their natural history. Irulas are nearly all over Tamil Nadu and many are professional snake catchers from early childhood. Some of their observations include the fact that wherever snake-catching has been heavy the rat population automatically increases. This points to the need for a careful examination into the policy of snake-skin and lizard skin export. It appears that these reptiles are far more valuable to the economy of Tamil Nadu ALIVE.



Heyward - the American Alligator in the Snake Park.

In the first year of its existence the Snake Park had over one lakh visitors. The admission fee is 25 paise with group rates for children and free admission for orphans and the handicapped. Out of the ticket collection the Snake Park is maintained, animals fed and staff paid. New projects are always underway. One recent project is a study of the Indian crocodiles which are nearly extinct from excessive killing for skins.

The Snake Park is on the Government tourist route, and Madras residents visit again and again, a refreshing change in attitude towards snakes has already come about. They are not to be feared, despised and killed. They are to be respected, understood and protected. Once we humans realize that we are here to co-operate with Nature, not to fight against Her, the world will become the paradise we are searching for. We can learn this basic lesson of Life from the lowly snake. Go to the Madras Snake Park and see for yourself.

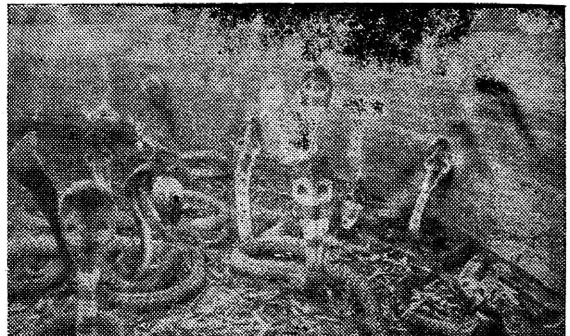
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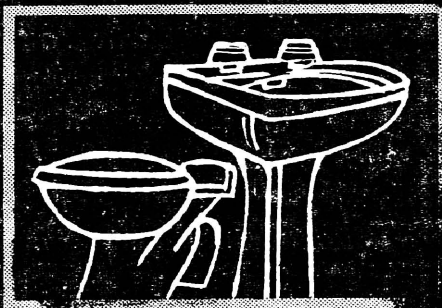
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27, II Main Road, Gandhinagar, Adyar,
Madras-20.

Two Irulas demonstrate cobras handling at the Snake Park.



A large group of cobras in their offensive attitude.



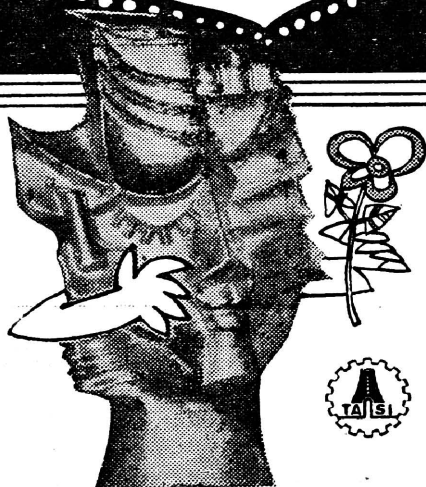


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FUNCTIONS OF NATIONAL EMPLOYMENT SERVICE IN TAMIL NADU

That the concept of Employment Service as a mere placement agency has long ceased to exist. As the conscious planning for steady development and growth has been recognised in the developing economics, the Employment Service has come to acquire extra but inter-dependent functional dimensions which are both dynamic and integral components in the process of man-power planning, its development and utilisation. Such dynamic and close-knit functions that the Employment Service has come to operate encompass the realms of Employment Market Information, Vocational Guidance and Occupational Research and Analysis. Apart from these, the Employment Service is also concerned with temporary and pressing extra imbalances in the labour market created by special developments such as the repatriation to India of persons of Indian origin from countries such as Burma and Ceylon. The service also looks after the State Apprenticeship Scheme introduced by the Government of Tamil Nadu for engineering graduates and diploma holders and craftsmen. The following are the main functional limbs constituting the service :—

1. Placement,
2. Employment Market Information Programme,
3. Vocational Guidance and Employment Counselling Programme,
4. Occupational Research and Analysis,
5. Employment Liaison for Burma and Ceylon Repatriates,
6. State Apprenticeship Scheme for Technical Personnel,
7. State Board for Physically Handicapped,
8. Staff Training Programme,
9. Employment Office for Physically handicapped,
10. Professional and Executive Employment Office,
11. University Employment Information and Guidance Bureaux and
12. Enforcement of Employment Exchanges (Compulsory Notification of Vacancies) Act,

Placenet

Placement is the culmination of regular Employment Exchange activity. The Employment Service

plays the part of matching function as between job seekers and job position available. Registration of job seekers on one hand and the receipt of vacancies on the other, set the matching process in operation. Registration at the Employment Exchanges for employment assistance is voluntary. The Employment Exchanges cater to the needs of all categories of job seekers ranging from the illiterate/unskilled to the highly skilled/qualified. According to the provisions of the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959, all establishments in public sector and those with 25 employees and over in the private sector have to notify their vacancies as and when they arise to the local Employment Exchanges serving the area. However, it is not compulsory for private sector establishments to recruit persons through Employment Exchanges to meet their man-power requirements. In every district in the State, there is not less than one Employment Exchange the district headquarters in operation. At present there are 30 Employment Offices including nine Sub-Employment Offices, one Special Employment Office for Physically Handicapped, one Professional and Executive Employment Office and three University Employment Information and Guidance Bureaux.

Employment Market Information

The programme of Employment Market Information being operated in this State from the turn of the last decade is designed to help fill the many gaps in the chain of employment intelligence. The Employment Market Information Programme is operated on an area basis, an area being defined to include a revenue administrative district, as it has the merit of practical and administrative convenience. Each Employment Office in the State, barring the specialised offices, has an Employment Market Information Cell and they maintain a Register of employers which serves as the frame of enquiry. Employers included in this frame comprise those in private and public sectors in the organised sector of the economy. In the private sector, however, only employers with at least 10 workers are included. Thus the whole of public sector and all significant employment in the private sector are covered

under the programme. The programme does not cover agricultural employment though it covers plantation industry. Self-employed, domestic and part-time employment are outside the purview of the Employment Market Information Programme. The employers covered in the frame are approached every quarter for information about their total employment, vacancies occurred, filled and outstanding and shortage occupations. The data are compared with those for the previous period, analysed and reported upon. Each area prepares and publishes its quarterly reports. At the State headquarters, the State Employment Market Information Unit compiles the quarterly State Report.

Once in two years, the employers are requested to render a statement of their employees by occupation and educational levels (the coverage in respect of Education Level information varies as regards public and private sectors). The data are analysed in the State Employment Market Information Unit and a report issued. As regards the biennial study of occupational pattern of employees, it is being separately done for public and private sectors in alternate years. So much so, there will be one such biennial study every year covering either the public sector establishments or those in private sector.

Besides, the above regular time-series 'ad-hoc' surveys, as and when required, are also carried out to investigate special problems in respect of different critical categories of man-power such as educated applicants, engineering man-power, etc. For investigating in depth such man-power pockets of special concern and significance as also other related studies on a continuing trend, a Depth Study Cell has been established recently in the State Employment Market Information Unit. This cell started functioning from December 1971.

At present fifteen field Employment Market Information Units function in the State. They are attached to the respective district employment exchanges. These field units carry out the field work for the regular quarterly and biennial employment market information enquiry and also the field work, if any, for special studies sponsored

either by the State Directorate of Employment and Training or by the Directorate-General of Employment and Training, New Delhi.

Vocational Guidance And Employment Counselling Programme

The Vocational Guidance Programme organised and developed in a phased manner in this State has almost completed a decade of its existence. The programme operated through a net work of Vocational Guidance Units attached to the Employment Offices in the State is organised, directed and co-ordinated by the State Vocational Guidance Unit at the headquarters. This State Vocational Guidance Unit also compiles and issues guidance literature for use by field Vocational Guidance Offices and the job seekers.

The modus operandi of this programme is achieving the objective set for it comprises, at present, delivery of career talks in Schools and Colleges, Individual and Group Guidance to job seekers at the Employment Exchange premises, organising Career Exhibitions in educational and other institutions, issuing career literature on employment opportunities, dissemination of occupational and training information, etc. In every District Employment Office excepting Ooty and Dharmapuri, one trained Vocational Guidance Officer is looking after these functions. Even in the above two districts the regular District Employment Officer discharges Vocational Guidance functions. Youths and aspirants in the labour force could well utilise the services of these trained Vocational Guidance Officers regarding their career choices and occupational problems.

A recurring special work assigned to the State Vocational Guidance Unit is the conduct of Aptitude Test every year at various Industrial Training Institutes for the selection of applicants for admission in the respective Industrial Training Institutes. Validation studies for evolving improved norms to be adopted in the annual Aptitude Testing Programme are also being conducted by the State Vocational Guidance Unit. This unit also arranges the administration of aptitude tests to help private industry in selecting suitable personnel against their man-

power requirements, as and when requested by private industrialists.

Occupational research and analysis

The purpose of occupational information is to provide through its job analysis an appreciation of the fundamental structure of jobs and the basic approach to occupational research and to illustrate the principal norms of occupational information pertaining to employment service operations. Job analysis is the systematic examination of a job to identify the scope, purpose and nature of the work performed and to determine the skills, knowledge and abilities which enable the worker to discharge his responsibilities for the accomplishment of the duties and tasks of which the job is composed. Since job analysis is concerned with identifying the qualifications required for the individual to perform the work to be done on a job, it provides the kind of information required to achieve a balance between labour supply and demand. Consequently job analysis represents the most minute aspect of employment market analysis. The importance of the occupational research programme is therefore immense in Vocational Guidance Programme for its success. The Programme forms the basis for all employment service operations and it is the medium used by other agencies involved in labour studies, labour management, man-power planning, etc., as well.

The Occupational Research Unit attached to the Directorate of Employment and Training engages itself in verifying old occupations with regard to their job content and identifies new occupations for updating the occupational information contained in the National Classification of occupations. The Unit also brings out occupational outlook series and other occupational literature based on intimate study of jobs which will be very useful in planning training programmes and developing occupational skills in a planned manner.

Employment Liaison For Burma/ Ceylon Repatriates

The process of repatriation of persons of Indian origin from Burma and Ceylon to India has created in its wake a chain of socio-economic problems in the country and

especially in Tamil Nadu as the bulk of the repatriates belonged to Tamil Nadu. Their resettlement in life through the provision of gainful employment necessitated the establishment of special cell in the Directorate of Employment and Training, Madras, called "Employment Liaison Office". Established in 1966, this cell is designed to organise and co-ordinate the activities of Employment Exchange in the districts, where the repatriates are registered for employment assistance, to promote their early placement in suitable jobs, to canvass job vacancies for repatriates, to maintain generally a close liaison with important employers in the State in the interest of the repatriates and to arrange for the admission of suitable and willing repatriates in various training courses available in various Industrial Training Institutes in the State and outside places such as Mana and Budni in Madhya Pradesh and Kota in Rajasthan. The Employment Liaison Office also arranges to impart pre-training to eligible repatriates for eventual absorption in appropriate job positions.

Station Apprenticeship Scheme For Technical Personnel

In order to ease the unemployment situation among technically qualified personnel and also to increase their employability, the Government of Tamil Nadu had evolved an ad-hoc apprenticeship training scheme in 1970. The total intake capacity sanctioned was 600 for graduate engineers, 1,000 for diploma holders and 1,000 for craftsmen. The duration of the training was fixed at two years and it will be in operation for two years. The apprentices under this scheme are paid stipends at the following rates :—

(1) Graduate Engineer—Rs. 250 per mensem.

(2) Diploma Holders—Rs. 150 per mensem.

(3) Craftsman—As per the Apprentices Act, 1961.

The Special Cell attached to the Directorate of Employment and Training co-ordinates the activities of Employment Exchanges and other employing agencies in this regard.

State Board For Physically Handicapped

To promote the welfare of the physically handicapped and to co-ordinate the activities of various institutions engaged in one way or other with the welfare of the physically handicapped, a State Board for the Physically Handicapped was constituted at the Directorate of Employment and Training. This Board started functioning with effect from May 1971.

Staff Training Programme :

With a view to promoting and sustaining the efficiency of the ministerial staff in the Employment Service Organisation in Tamil Nadu, a Staff Training Programme was evolved. The first staff training course was organised in August, 1969. So far several courses have been conducted and a few hundreds of members of the ministerial staff have undergone the course of training.

SERVICE TO SPECIAL CATEGORIES OF JOB SEEKERS.

(a) Physically Handicapped

The Employment Exchange caters also to Physically Handicapped coming under the categories of blind, deaf and orthopaedically handicapped in getting employment. A Special Employment Office for Physically Handicapped to co-ordinate the activities of the Employment Exchange in respect of this type of personnel and to render specialised services to these category of physically handicapped has also been functioning at Madras. It was set up as an adjunct to the services rendered by the Employment Exchanges during III Five-Year Plan. To assist in the placement of physically handicapped in public sector a Special Medical Board is also attached to the Special Employment Office to assess the physical suitability of the candidate for the job for which he is selected.

(b) Professional And Executive Employment Office

A separate employment Exchange for highly qualified applicants is functioning in Madras City. Persons

holding Bachelor's or higher degree or equivalent diploma in professional or a specialised course such as Engineering, Medicine, Agriculture, Veterinary Science, Technology, Law Education, etc., and persons holding a Masters degree or higher degree of post-graduate diplomas or equivalent in other subjects are eligible to get themselves registered in this office for employment assistance.

(c) University Employment Information And Guidance Bureaux

With a view to providing a regular agency for occupational information, guidance and placement service to the young people graduating from the Universities, the Government in consultation with the educationalist and planners set up University Employment Information and Guidance Bureaux in the Universities. The first University Employment Information and Guidance Bureau was opened in Tamil Nadu in 1964 at the Annamalai University. Next was the University Employment Information and Guidance Bureau attached to Madras University which was established in 1965. The third University Employment Information and Guidance Bureau attached to Madurai University was opened in 1969. The Bureaux in a University is an integral part of the National Employment Service, operating in the campus under the overall supervision of the Chief. The University Employment Information and Guidance Bureau is a specialised agency exclusively meant for those getting University education. The students will be guided according to their aptitude and interest and the availability of job. Although the main function of the University Employment Information and Guidance Bureaux is to give employment information and guidance to the alumni of the university they also function like any other employment exchange doing registration and placement work. The functions of the Bureau are—

(1) to give employment information and advice to the university alumni;

(2) to register for employment assistance graduates in profession and specialised courses and persons

holding a Master's degree or Post-Graduate diploma or equivalent and

(3) to answer queries from employers regarding availability of suitable applicants.

(d) Enforcement of Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959.

The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959 is being implemented through Employment Exchanges. The purpose of the Act is to assess the impact of the implementation of five-year plans in the generation of employment opportunities. The data rendered by employers in the returns prescribed in this Act helps in watching the trend in the employment market and plan vocational training, etc., on a national basis. Employment Exchanges are to receive the quarterly returns to help in the Employment Market Information Programme. The Officers in the District Employment Offices are empowered to check the records of the employers. They are also to see the effective implementation of the Act to achieve the purpose, for which the Act has come into being. The Act covers all establishments in public sector and such establishments in private sector where 25 or more persons are employed. These employers are obliged to render quarterly and biennial returns and to notify the vacancies that arise in their establishments before they are filled up. One unique feature of this enactment is that the Act compels the employers covered by the Act to notify all vacancies but it does not compel them to fill the vacancies through the Employment Exchanges.

MULTI-PURPOSE USEFULNESS OF PLYWOOD

Mosquito bombers played an important role in World War II, plywood being one of the chief materials used in the construction of these aircraft. Such aircraft were designed, constructed and flown in a few weeks which is impossible with their metal brethren of the skies.

Since the war, plywood has in peacetime helped various spheres to economise scarce resources and materials. In particular, it has conserved the use of timber—a dwindling commodity throughout the world. As compared to timber, plywood has its own advantages—it does not split when nailed and it is not so badly affected by humidity as is timber.

THREE KINDS OF PLYWOOD

There are different kinds of plywood—some for aircraft, other types for marine use, for decoration and for packing.

In India, plywood use has attained very high levels in the packaging industry. It is the usual packing material known for export of tea because if the correct species is used it does not also affect the tea's flavour as do so many container materials. India uses more than 100 million square feet of plywood a year for packing tea. The value of the tea exported in 1970 in such chests is estimated to be 1,488 million rupees.

MORE USE OF PLYWOOD

However, scientists believe that the use of plywood can be further extended if the products' properties are better understood. To achieve such understanding, a group of researchers at the Indian Institute of Science (I. I. S.), Bangalore, is today engaged in developing methods for more accurately assessing the strength of plywood of various species and grades. Heading the group is Dr. D. Narayana-murthi.

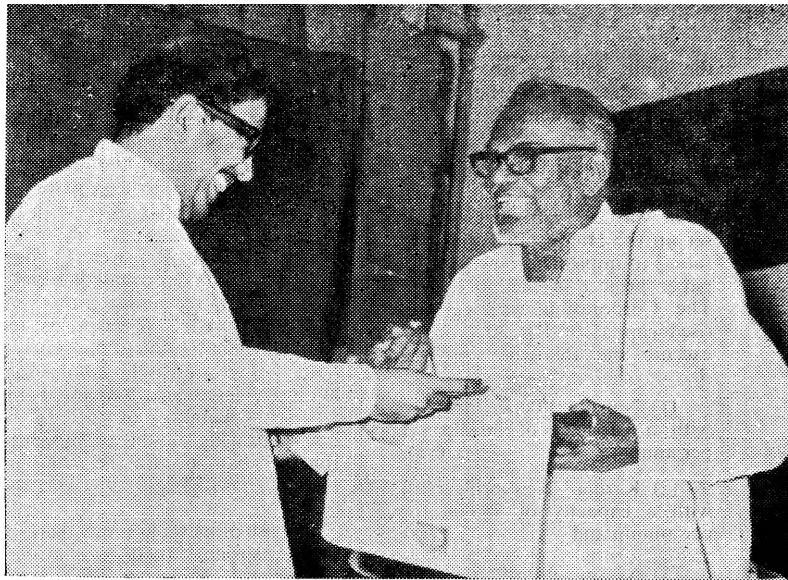
According to Dr. Narayana-murthi, the research work involves studying the effect of various defects in various sizes in the basewood veneers on the mechanical properties of commercial plywood. The project participants have so far examined 11 species of plywood. They began by grading the plywood by visual examination (and quantitative wherever possible) according to the nature of the defects in each—slight, medium and maximum defects. They then assayed the plywood strength in bending tests, panel shear tests and rigidity impact resistance tests.

"This work", says Dr. Narayana-murthi, "is very important because it will help to use the right kind of plywood for the right job". The findings may also help to evolve ways to use plywood as a structural material.

NEWS- PRINT IN INDIA



“In spite of continuing shortage in newsprint supply, there has been a substantial rise in the number and circulation of newspapers in the country, thanks to the steady rise in the level of literacy and growing political consciousness among the people”.



Thiru S. P. Adhithanar, Minister for Co-operative, receiving the first cope of 'Tamil Murasu' Tamil Daily from the Chief Minister.

Newspaper readership in India has been expanding at a rapid pace because of the steady rise in the level of literacy and growing political consciousness. There has simultaneously been a substantial rise in the number and circulation of newspapers in the country.

The number of newspapers published in 60 languages (44 Indian and 16 foreign) rose to 12,218 in 1971 as compared to 3,050 in 1956. The circulation of newspapers during the corresponding period also increased from 2.93 crores to over 2.96 crores.

But this is still far behind the level of circulation suggested by UNESCO which has recommended a minimum standard circulation of ten copies for 100 inhabitants to bridge the communication gap in the developing countries.

Judged by this yardstick, the current newspaper circulation of 1.3 copies per 100 inhabitants is rather inadequate. This implies stepping up by about eight times the present level of circulation to the UNESCO minimum.

Continuing shortage of newsprint has inhibited the growth of press in India. Even on a restricted basis, the demand for newsprint in 1970-71 was over 2 lakh tonnes as against the indigenous production of less than 40,000 tonnes. The gap

was covered by imports, entailing considerable expenditure in scarce foreign exchange which rose from Rs. 6.66 crores in 1965-66 to Rs. 18 crores in 1970-71.

The shortage can be attributed to two main factors : stringency of foreign exchange and low indigenous production on account of difficulties in procuring suitable indigenous raw materials.

The National Newsprint Paper Mills Ltd. (popularly known as Nepa Mills) situated in Nepa Nagar near Chandani in Madhya Pradesh) is India's first newsprint mill. It was floated by a private entrepreneur in 1947 with an authorised capital of Rs. 5 crores.

The mill described as a 'pioneering effort' in the manufacture of newsprint from a species of 'wood salai' hitherto not used anywhere in the world, went into production in 1955 with an installed capacity of 100 tonnes per day. During the year 1956-57, the Nepa Mills produced 13,534 tonnes of newsprint. The production had gone up to 40,000 tonnes by 1969-70.

Government raised the installed capacity of this Mill, now under public sector, from 30,000 to 75,000 tonnes by installing a second paper machine which was commissioned in March 1969. When expansion in production is fully realised, (expected to materialise by 1975)

the mill will be able to meet about a third of the country's present requirements.

NEW CORPORATION.

On May 29, 1970, the Government set up the Hindustan Paper Corporation to implement newsprint/pulp/paper project in the public sector. The Corporation with an authorised capital of Rs. 30 crores is to execute the following projects:—

(1) Nagaland Paper/Pulp Project with a capacity of 30,000 tonnes per annum,

(2) Kerala Newsprint Project with a capacity of 75,000 tonnes per annum and

(3) Assam Pulp/Paper Project with a capacity of 10,000 tonnes per annum.

A private party has also proposed to set up a newsprint project in Himachal Pradesh. With the coming up of this mill, an additional capacity of 60,000 tonnes per annum will be created.

There is also a proposal to set up a newsprint factory in the private sector in U.P. near Gola Gokkaram North, with a capacity of 80,000 tonnes per annum.

With the coming up of these units in both private and public sectors, the industry will be in a position to meet the growing demand of newsprint.

IMPORTED NEWSPRINT.

As already stated, the present restricted demand for newsprint is over 2,00,000 tonnes as against the indigenous production of 40,000 tonnes. The gap has hitherto been covered by imports, entailing foreign exchange expenditure of Rs. 18 crores in 1970-71.

India imports newsprint mainly from Canada, the Scandinavian countries, the U.S.A. and the U.S.S.R. The import of newsprint by India during 1947-48 was 43,935 tonnes. This gradually increased in 1954-55 to 78,971 tonnes. Further increase was recorded in the year 1964-65 to 1,02,461 tonnes. In the year 1971-72 import of newsprint was 1,80,000 tonnes.

RESEARCH.

Research organisations in the country are engaged in finding ways and means of making the maximum use of the available raw materials for the production of newsprint.

The Regional Research Laboratory, Jorhat (Assam) has developed a process for reclaiming pulp from newspaper waste. It has suggested commercial utilisation of this process. Some other research laboratories in India have also suggested the technical feasibility of using the quick growing mesta as a substitute for bamboo for the manufacture of newsprint.

The use of mesta as a raw material for newsprint should revolutionise newsprint industry in India and bridge the gap between the demand and supply without much difficulty. The advantages of mesta are that it ripens in 4 to 5 months and is suitable for tropical climate and the water requirements are low.

UTILISATION OF WASTE.

Another important finding of research is that different species of eucalyptus can be grown to meet the needs of the newsprint industry. Projects to grow eucalyptus have already been undertaken.

Yet another result of research is the possibility of utilising sugarcane waste, called bagasse, for the manufacture of newsprint. To exploit this process commercially, a sugar co-operative in Maharashtra has submitted a blue print to transform its waste into 45,000 tonnes of newsprint.

An appraisal of the newsprint development opportunities in Asia undertaken by the Food and Agriculture Organisation of the U.N.O. makes an optimistic forecast. It foresees the possibility of India reaching self-sufficiency in newsprint by 1980 if present plans and new schemes to create additional capacity are put into effect.

F.A.O. REPORT.

Two case mills have been suggested in this report for India, the added capacity of which amounts to

2,60,000 tonnes per year. Together with expansion schemes already taken up by the Government, a total production of about 4,70,000 tonnes by the year 1980 can be achieved.

One mill is proposed to be located in Uttar Pradesh near Dehra Dun, and Sahranpur, the principal research and training centre for forestry and paper industry in India. The second mill is to be located in the Bastar region of Madhya Pradesh either at Barsur or at Jagdalpur. At both the places water and electric power are available and the existing railway connection to the east coast is also an advantage.

The share of newsprint allocated to daily newspapers in 1970-71 amounted to 87.1 per cent of the total quantity allocated (1,78,954.97 metric tonnes). The quantity of newsprint allocated to the periodicals during the year was 12.9 per cent.

ALLOCATION.

State-wise, newspapers of Maharashtra claimed the largest share 21.4 per cent of the location, followed by Tamil Nadu 16.4 per cent, Delhi 12.5 per cent, West Bengal 11.6 per cent, Kerala 9 per cent and Gujarat 7.3 per cent.

From the point of view of language English dailies got the largest quantity of newsprint (36.5 per cent) of the total allocated to dailies, followed by those brought out in Hindi (12.8 per cent), Gujarati (9 per cent), Malayalam (8.8 per cent) and Tamil (8.8 per cent).

The total number of newspapers to which newsprint was allocated (1971) in pursuance of the 1970-71 policy included 76 big, 185 medium and 1,440 small newspapers.

The largest number of small category dailies which availed themselves of the facility of allocation of newsprint belonged to Hindi (74), followed by that in Urdu (46) and Marathi (30). Among the medium category dailies, the highest number was in English (19) followed by Hindi (17) and Tamil (15). In the big category, dailies in English were the largest in number (16), followed by five each in Gujarati, Malayalam, Marathi and Tamil.

PLANNING PROSPERITY TOGETHER

For over a billion people in South and South-East Asia, this day—July 1—holds a special significance. For, it was on this date twenty-two years ago that the Colombo Plan came into full operation to help them realise the aspirations for a better economic future for themselves and their children.

These aspirations were but natural. Political independence had led to an intense desire for a better standard of living. And, the Colombo Plan was conceived to give practical expression to this desire with the assistance initially of the developed Commonwealth countries.

A Modest Beginning.

The membership then was only seven countries—Australia, Britain, Canada, India, New Zealand, Pakistan and Sri Lanka. The Plan had thus a modest beginning. But the validity of its basic concept of economic development through international co-operation is borne out by the growth of its membership from seven to twenty-six countries. Regional members numbering twenty range now from Iran to the Philippines, from Nepal to Indonesia.

The viability of this basic concept of the Plan is now acknowledged widely as the most pragmatic approach to fostering economic well-being in the developing countries.

An Asian leader has aptly described this while referring to the Plan as :

“The earliest expression on the part of the developed countries of the recognition of their responsibility towards the less developed nation for helping in their growth effort. It proved a pioneering effort and had a catalytic effect in mobilising the flow of economic and technical assistance from the advanced countries to the newly emerging developing nations of the world.”

The extent of this assistance may be gauged from the fact that since the inception of the Plan the six major donor countries—Australia, Britain, Canada, Japan, New Zealand and the United States—had given till the end of 1971 over \$35 billion in capital aid and technical assistance to the twenty-member countries of the region, i.e. *Afghanistan, Bangladesh, Bhutan, Burma, Fiji, India, Indonesia, Iran, Khmer Republic, Republic of Korea, Laos, Malaysia, Republic of Maldives, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand and the Republic of Vietnam.*

Contributions made by each of the six major donors are :

	US \$
Australia ..	410,010,000
Britain ..	2,213,000,000
Canada ..	1,292,000,000
Japan ..	3,200,100,000

The Colombo Plan celebrates its 22nd Anniversary on 1st July 1973. The viability of the basic concept of the Plan is now acknowledged widely as the most pragmatic approach to fostering economic well-being in the developing countries.

	US \$
New Zealand ..	55,500,000
United States ..	28,658,000,000
	35,828,610,000

Till the end of 1961, the total aid extended by these six countries had amounted to \$ 12 billion. Thus in the ten years, from 1961 to 1971, the quantum of aid has registered an increase of over \$ 23 billion. A study of the nature of assistance shows that a notable portion of the aid has been in the form of grants.

Thousand Projects helped.

Capital aid and technical assistance have been extended in support of over 1,000 projects covering various facets of development in the region.

The total expenditure on technical assistance since the inception of the Plan and till the end of 1971 amounted to US \$ 1,697.8 million, spent in the proportion of 18 per cent on trainees and students, 51 per cent on experts and 31 per cent on technical equipment. Training and student awards were provided to 81,156 persons from the region to acquire specialised training in donor countries. This was supplemented with the services of 15,310 experts, consultants and advisers in key areas of activity. Total disbursements on technical assistance under the Colombo Plan rose to \$ 174.2 million in 1971 from \$ 154.6 million in 1970.

Increase in Membership

In the past twenty-two years, the Colombo Plan's membership has not only increased from seven to twenty-six but also several of the recipient have become donors, training students from neighbouring countries or helping with various projects in their fields of expertise.

Since the inception of the Plan, 6,654 training places or 8.2 per cent of the total Colombo Plan awards have been provided by member countries within the region. During July 1971 to June 1972 alone 469 trainee and student places were provided by the countries in the region.

Tremendous changes achieved

The above figures hardly convey a tangible image of the tremendous changes wrought in the lives of the people of the region through Colombo Plan co-operation. A new dam, for instance, can create a minor miracle; It can add more green to the landscape, light up the area within its ambit, and harness a massive reservoir of human resources to work for better conditions of life. And, more dams in Asia

have been built under the Colombo Plan than under any other agency.

New roads, new railways not only diminish distance and unify regions, but they also change the attitudes of the people. A clogged inertia is replaced by a will to move out and seek opportunities. A new factory in the country side draws the unemployed youth, stagnating in the village mud huts and hovels, to the modern labour colonies where an intermingling of workers from many parts of the country creates wholesome social values, and a spirit of enquiry and tolerance. They may not know that the foreigners at the site are Colombo Plan experts and advisers, but watching them at work, hand-in-hand with the local engineers and technicians, makes them appreciate the fruits of co-operation and question their narrow, tribal outlook.

Exchange of students

Over 80,000 Colombo Plan trainees and students have gone to the developed member countries to broaden their knowledge and acquire new skills. They mingle at work, in private homes, in sport, at social gatherings and in community activities of many kinds, and in so doing, change social attitudes,

acquire new friendships and a wider outlook.

Maximisation of use of manpower

One of the main targets of the Plan is to maximise use of manpower and harness native genius in creating economic well being. That the Plan has helped considerably in this respect is widely acknowledged. But socio-economic aspirations cannot be met fully unless the people help themselves by bringing down the high growth rate of population. Much of the benefit of economic development is neutralised by the rapid rise in population. At the inception of the Plan, the total population of the region was less than 725 million, but is now more than 1,000 million and a disastrous doubling of population is projected at present growth rates, by the turn of the century. On this reckoning, the population of India alone will be 1,000 million. Fortunately, an awareness of this problem is growing and the Colombo Plan too is contributing to the national and international efforts to foster this awareness.

These then are some of the steps taken, the objectives aimed at, and the pitfalls to be avoided by the Colombo Plan community of nations in the adventure of "Planning Prosperity Together".

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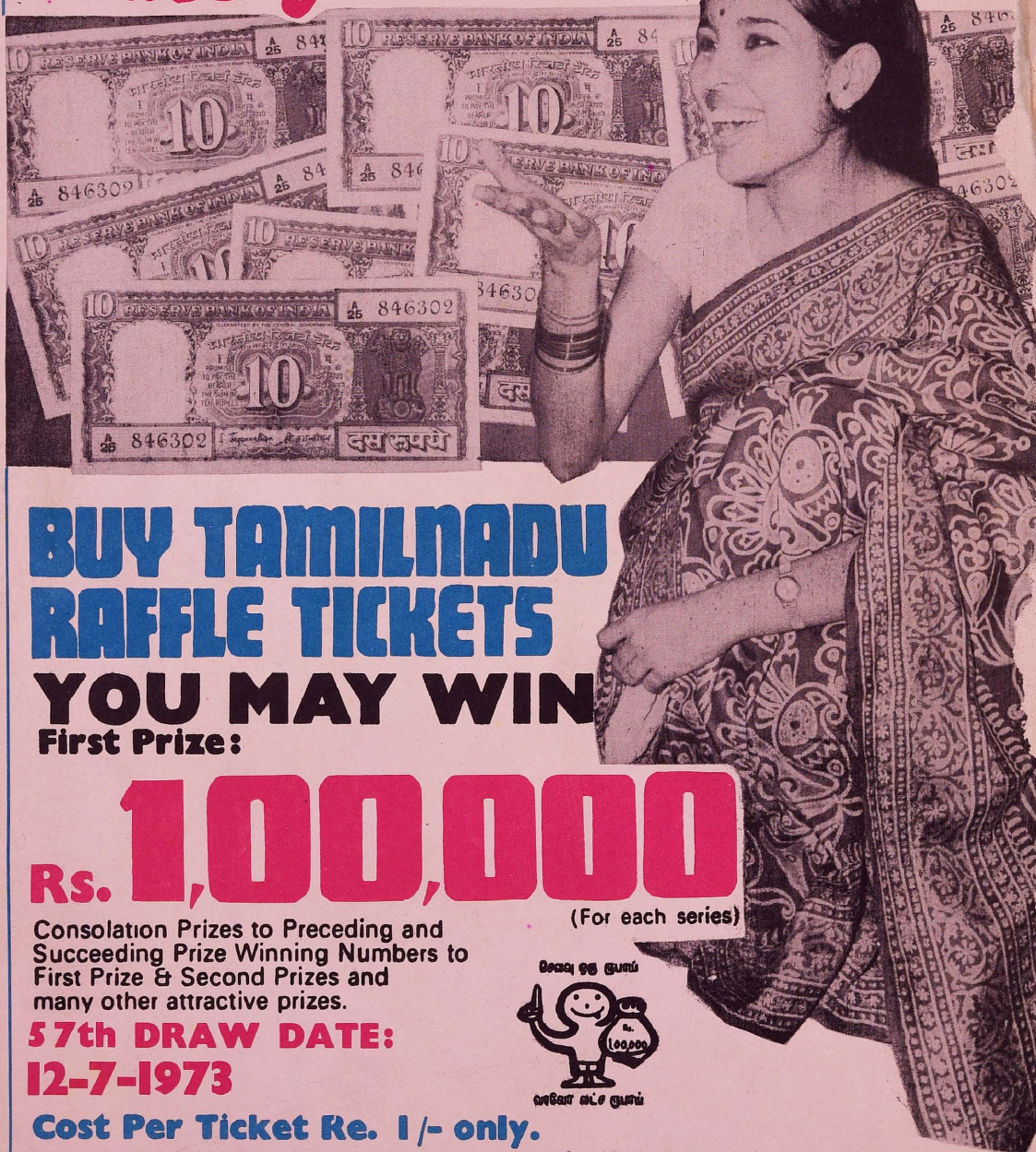
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