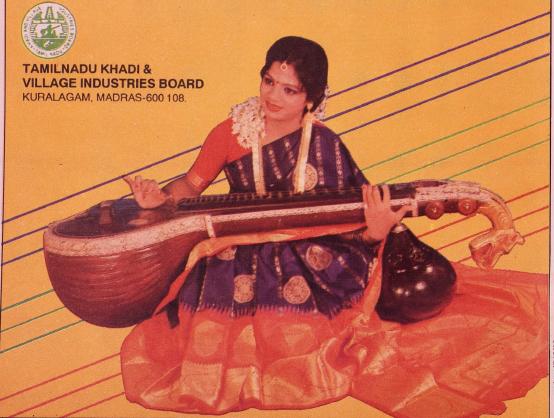


FABRICS THAT FOCUS.... ... THE SPOTLIGHT ON YOU!

- * PURE KHADI SILK SAREES
- ★ KHADI COTTONS & POLYESTER VARIETIES
- * READY MADES

PLEASE VISIT





TAMIL ARASU

A Monthly Journal of Government of Tamil Nadu Thiruvalluvar Year 2024

Vaikasi - Aani

JUNE - 1993

Rs.3

IN THIS ISSUE:

0

- * Swearing-in of the Governor.
- ★ Multi-crore water scheme for Tamil Nadu.
- * New Ministers Sworn-in.
- * Ministers and their Portfolios.
- * Marina Development Project.
- * Neyveli Lignite Corporation.
- * Development of Women and Children in rural areas in South Arcot District. - Thiru V. Irai Anbu, I.A.S.

Additional Collector, South Arcot.

* Small Savings in South Arcot District. — Thiru. V. Srikrishna

Assistant Director, Small Savings, Cuddalore.

- ★ DANIDA Health Care Project South Arcot District.
- * Mangroves of Pitchavaram.
 - Thiru S. Joseph Jogindranath, - A Jewel in the Crown. District Forest Officer, Cuddalore.
 - * Horticulture Schemes to increase production and productivity. _ Thiru. Hiriyan, Deputy Director of Horticulture, Cuddalore.
 - * Additional DA for Government employees. * Structures discovered at Kaviripoompattinam.





Dr. Channa Reddy was sworn in as the 15th Governor of Tamil Nadu at a function held at Rajaji Hall, Madras at 2.24 p.m., on 31st May, 1993. The acting Chief Justice of the Madras High Court, Thiru V. Rathnam, administered the oath of office. The impressive ceremony was attended by the Hon'ble Chief Minister Puratchi Thalaivi Dr. J. Jayalalitha, the Speaker of the State Assembly Thiru Sedapatti





R. Muthiah, Ministers, Members of the Parliament, Members of the Legislative Assembly, Judges of the High Court, the Chief Secretary Thiru T.V. Venkataraman IAS, and other senior officers.

Dr. Channa Reddy accompanied by his wife drove from Raj Bhavan to the ceremonial drive which began from the Anna Statue. Mounted Police formed the piolet and escorted him from Anna Statue, as police in colourful outfit lined the route. The police presented arms and the Indian Air Force personnel presented a Guard of Honour.

On arrival at the Rajaji Hall, Dr. Channa Reddy was received by the Chief Minister and introduced to the Chief Secretary, the three Services Chiefs in the region and the Director General of Police. He inspected the guard of honour before alighting the steps of the Rajaji Hall. At the top of the flight of steps he was introduced to the acting Chief Justice and taken in a procession to the dais.

The Chief Secretary read out the warrant of Appointment. This was followed by the Acting Chief Justice administering the oath of office to Dr. Channa Reddy. The Chief Minister introduced the Speaker and the Ministers and the acting Chief Justice introduced the judges to the Governor. After the function the Governor drove to Raj Bhavan.



The Hon'ble Chief Minister Puratchi Thalaivi Dr. J. Jayalalitha presented a Memorandum on the Rajiv Gandhi National Drinking Water Mission and the follow up action proposed to the Prime Minister Thiru P.V. Narasimha Rao at the Madras Airport. Detailed discussions were held on the progress so far achieved under the Rajiv Gandhi National Drinking Water Mission. The Chief Minister spelt out the lines of further action following the impressive implementation of the Rajiv Gandhi National Drinking Water Mission in Tamil Nadu.

The Chief Minister highlighted the need for an immediate solution to the chronic drinking water problem in Dharmapuri District which is a drought prone area and falls in the rain shadow region. She pointed out the fact that



Multi-crore Water Schemes for Tamil Nadu

the only solution to solve the drinking water problem in Dharmapuri District was to implement a piped water scheme from the Hogenakkal falls. She indicated that a detailed project report has already been prepared to supply 102 million litres per day to provide drinking water supply to 18.5 lakh people at an estimated cost of Rs.400 crore. She said that it would be most fitting that this project is taken up under the Rajiv Gandhi National Drinking Water Mission with associated funding under the Accelerated Rural Water Supply Programme (ARWSP). She requested the Prime Minister for finding support to implement this project.

The measures taken to tackle the serious water shortage in Madras City were explained in detail. The Chief Minister requested the Prime Minister that the transportation charges levied by the Railways for transporting water to water starved Madras may be

waived. The Chief Minister stressed the fact that an immediate remedy has to be found. She pointed out that the only practical immediate solution was to implement the new Veeranam Project to convey 40 million gallons per day from Veeranam lake to Madras City over a distance of 220 kms. The Prime Minister enquired about the alignment and went into the details of the head and pumping involved. Full details of the alignment were explained. The Chief Minister also stressed the fact that the proposal is to use safe and sound technology which will ensure a secure water supply to the City. She pointed out that the effort was to get additional water for Madras before the next summer. She requested special financial support for this project under the scheme for support Metropolitan cities. She also requested the Prime Minister to use his good offices to approve funding from multilateral agencies and if need be, external commercial borrowing for this project.

The Chief Minister also requested financial support for putting up a desalination plant at Madras to provide 25 million litres of water per day at a cost of Rs.75 crore.

As a follow up of the Rajiv Gandhi National Drinking Water Mission, sanction was requested for a first phase project with an outlay of Rs.57 crore to provide drinking water supply through one large size desalination and several smaller plants Ramanathapuram District. The need for funding this project under the Rajiv Gandhi National Drinking Water Mission and the Accelerated Rural Water Supply Programme was highlighted. It was pointed out that this was a most difficult area and this was the only solution which was feasible.

The Prime Minister evinced keen interest in the proposals presented by the Chief Minister to find lasting solutions for the chronic drinking water problem areas in the State. The Chief Minister also requested the Prime Minister to use his good offices to request the Andhra pradesh Government to expedite the Krishna Water Project to bring water to Madras city.

The Prime Minister indicated that he would have these poposals presented in the

Memorandum by the Chief Minister gone into in detail.

REVIEW OF THE DRINKING WATER SUPPLY POSITION IN MADRAS CITY BY THE HON'BLE CHIEF MINISTER

have reviewed the drinking water distribution in Madras City on 10th May 1993 at the Secretariat. The Minister for Public Works, the Minister for Local Administration, the Minister for Transport and the Minister for Handlooms were present at this review. The Chief Secretary to Government, the Chairman and the Managing Director of the Madras Metropolitan Water Supply and Sewerage Board, the Managing Director of the Tamil Nadu Water Supply and Drainage Board and concerned Engineers, the Secretary to Government, Municipal Administration and Water Supply Department, the Secretary to Chief Minister and other officers were present.

I have given detailed instructions to the Officers of the Madras Metropolitan Water Supply and Sewerage Board and Tamil Nadu Water Supply and Drainage Board on the



various steps to be taken to improve the distribution of water to all parts of Madras City, particularly areas which are not having adequate water supply now. Already the Madras Metropolitan Water Supply and Sewerage Board is distributing 40 Million Gallons on alternate days through the pipes and 7 million gallons a day every day by 242 lorries and 168 Tractor Trailors, I have asked the Madras Metropolitan Water Supply and Sewerage Board to step up the distribution by Lorries and Tractor Trailors to 10 Million Gallons a day by increasing the number of lorries and tractors adequately. In addition I have asked the officers to take steps to augment the city water supply by about 4 million gallons a day from the arrangements that have been put up Alandur. Mangadu, Naravarikuppam, Kadambathur, Pallavaram. Thirunindrayur. Jagannathapuram, Rettai Eri etc.

In order to tide over the difficult water supply situation in Madras City during the coming months, I have asked the officials to take steps to bring water from Neyveli through lorries, in addition to transport of water through the railways. Immediately about 200 lorries will be pressed into service for bringing water from Neyveli. Transport of water from Neyveli through lorries will begin and will be continued from the 20th of May. The number of lorries will be increased to 1000 gradually, depending upon the need.

I am fully aware of the continuing crisis which the people of Madras face in the matter of drinking water. Therefore, besides the Krishna Water Project, I have asked the officials to examine alternate sources of supply.

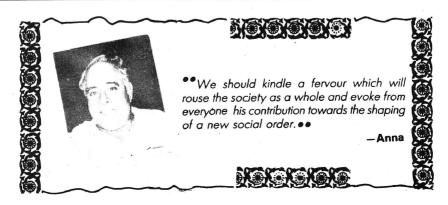
In this connection the availability of 40 million gallons of water per day at the Veeranam lake has been indicated as viable additional supply of drinking water to Madras City. Taking note of this availability, and after considering various alternatives of making available drinking water to Madras City and upon the advice of the Officers, I have agreed that the Veeranam Drinking Water Project would be a good source of supplemental supply to Madras City.

However, the old system of pre-pressed concrete pipes and their obsolete technology will not be adopted. The Government has decided to go in for the latest available technology and will execute the new Veeranam Drinking Water Project with the latest • available technology and sound materials for the pipes. The execution of this project will be completed within the shortest possible time of about 12 months. I have asked the officers to give me a project report based on the latest technology available and quickest gestation period, together with thereafter be invited for a complete package of execution of this project. I have asked the TWAD Board and Metro Water Board to prepare the Project Report and submit it to me within a week. The Project will be executed under the supervision of the TWAD Board and the internal distribution will be undertaken by the Metro Water.

The new Veeranam Drinking Water Project will be based on the latest available technology and the laying of pipes and the materials selected for the pipes will be based on technically sound and economically viable options.

Dr. J. Javalalitha

Chief Minister of Tamil Nadu





NEW MINISTERS SWORN-IN

His Excellency the Governor Thiru Bhishma Narain Singh admihistered the oath of office and secrecy to the 12 new ministers on 17th May 1993 at a function held at Raj Bhavan, Madras. All Ministers took their oath in Tamil. Earlier the Minister Puratchi Thalaivi Hon'ble Chief Dr. J. Jayalalitha introduced her new ministers to the Governor.

Hon'ble Speaker Sedapatti Thiru R. Muthiah, all the Cabinet Ministers, the Chief Secretary Thriu T.V. Venkataraman I.A.S., Senior Officials and family members of the new Ministers were present on the occasion.



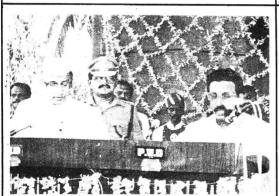
NEW MINISTERS



Thiru ERAAMA VEERAPPAN Minister for Food



Thiru DURAI RAMASAMY Minister for Rural Industries



Thiru D. JANARDHANAN Minister for Dairy Development



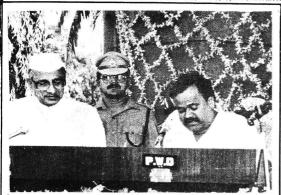
Thiru V. SATHIAMOORTHY
Minister for Commercial Taxes



Thiru M. CHINNASAMY Minister for Industries



Thiru K. LAWRENCE Minister for Forests



Thiru M. THENNAVAN
Minister for Information & Publicity



Prof. K. PONNUSAMY Minister for Education



Thiru MELUR A.M. PARAMASIVAN Minsiter for Labour



Thiru K.P. PATTABIRAMAN Minister for Co-operation



Thiru T.V. NATESAN BALRAJ
Minister for Hindu Religious &
Charitable Endowments



Thiru P. ESWARAMURTHI Minister for Khadi



MINISTERS AND THEIR PORTFOLIOS

1. Dr. J. JAYALALITHA Chief Minister

Public, General Administration, Indian Administrative Service, Indian Police Service and other All India Services, District Revenue Officers, Police, Prevention of Corruption, Prohibition and Excise, Molasses, Minorities and Electronics.

- 2. Dr. V.R. NEDUNCHEZHIYAN
 Minister for Finance
 Finance, Planning, Elections and Legislature.
- 3. Thiru K.A. KRISHNASAMY Minister for Law

Law, Courts, Prisons, Legislation on Weights and Measures, Debt Relief including Legislation on Money-lending, Chits and Registration of Companies.

4. Thiru S.D. SOMASUNDARAM Minister for Revenue

Revenue, District Revenue Establishment, Deputy Collectors, Registration, Stamp Act, Stationery and Printing, Government Press, Bhoodan and Gramdan and Passports.

5. Thiru ERAAMA VEERAPPAN Minister for Food Food and Civil Supplies.

6. Thiru S. MUTHUSAMY Minister for Health

Health, Medical Education, Family Welfare and Environmental Pollution Control.

7. Thiru K.A. SENGOTTAIYAN Minister for Transport

Transport, Nationalised Transport, Motor Vehicles Act, Ports and Cinchona.

- 8. Thiru E. MADHUSUDHANAN
 Minister for Handlooms & Textiles
 Handlooms and Textiles.
- 9. Thiru S. KANNAPPAN
 Minister for Public Works

Public Works, Irrigation including Minor Irrigation, Highways, Electricity, Non-conventional Energy Development and Iron and Steel Control.

10. Thiru S. REGUPATHY
Minister for Housing & Urban
Development

Housing, Slum Clearance, Rural Housing Development, Accommadation Control, Town Planning, Urban Development and Madras Metropolitan Development Authority.

11. Thiru DURAI RAMASAMY Minister for Rural Industries

Small Scale Industries, Rural Industries including Cottage Industries.

12. Thiru KU.PA. KRISHNAN Minister for Agriculture

Agriculture, Agricultural Engineering, Agro Service Co-operatives, Horticulture, Sugarcane Cess and Sugarcane Development.

- 13. Thiru D. JANARDHANAN
 Minister for Dairy Development
 Milk, Dairy Development and Animal
 Husbandry.
- Thiru V. SATHIAMOORTHY Minister for Commercial Taxes Commercial Taxes.
- 15. Thiru M. CHINNASAMY
 Minister for Industries
 Industries and Mines and Minerals.

16. PULAVAR TMT. INDIRA KUMARI Minister for Social Welfare

Social Welfare including Women's and Children's Welfare, Nutritious Noon Meals, Beggar Homes, Orphanages and Correctional Administration.

- 17. Thiru K. LAWRENCE Minister for Forests Forests.
- 18. Thiru M. THENNAVAN
 Minister for Information & Publicity
 Information and Publicity, Film Technology,
 Cinematograph Acts and Newsprint Control.
- 19. Prof. K. PONNUSAMY Minister for Education

Education, Technical Education, Science and Technology, Sports and Youth Welfare, Ar-

chaeology, Tamil Development and Tamil Culture.

20. Thiru MELUR A.M. PARAMASIVAN Minsiter for Labour

Labour, Employment and Training, Urban and Rural Employment Programmes and Census.

- 21. Thiru K.P. PATTABIRAMAN Minister for Co-operation Co-operation.
- 22. Thiru T.M. SELVAGANAPATHY
 Minister for Local Administration

Municipal Administration, Rural Development, Panchayats and Panchayat Unions, Poverty. Alleviation Programmes, Rural Indebtedness and Urban and Rural Water Supply.

23. Thiru M. ANANDAN
Minister for Adi-Dravidar Welfare

Adi-Dravidar Welfare, Hill Tribes, Bonded Labour and Welfare of Ex-Servicemen.

- 24. Thiru T.V. NATESAN BALRAJ
 Minister for Hindu Religious &
 Charitable Endowments
 - Hindu Religious and Charitable Endowments.
- 25. Thiru D. JAYAKUMAR
 Minister for Backward Classes &
 Fisheries

Backward Classes, Most Backward Classes and Denotified Communities, Indian Overseas, Refugees and Evacuees and Fisheries.

26. Thiru S. NAGOORMEERAN Minister for Tourism

Wakf and Tourism and Tourism Development Corporation.

27. Thiru P. ESWARAMURTHI Minister for Khadi

Khadi & Village Industries Board.







The Hon'ble Prime Minister of India, Thiru P.V. Narasimha Rao, Tmt. Sonia Gandhi, Thiru. Raghul and Selvi. Priyanka who arrived at Madras Airport on 21st May, 1993 to pay homage to the late former Prime Minister Thiru Rajiv Gandhi at Sri Perumbudur, were received by His Excellency the Governor of Tamil Nadu, Thiru. Bhishma Narain Singh and the Hon'ble Chief Minister Puratchi Thalaivi Dr. J. Jayalalitha.

The Hon'ble Chief Minister of Orrisa, Thiru. Biju Patnaik called on the Hon'ble Chief Minister Puratchi Thalaivi Dr. J. Jayalalitha at her residence on 27th May, 1993.



With Best Compliments From





TANFAC INDUSTRIES LIMITED

FACTORY:						
14, SIPCOT Indl. Complex Kudikadu Cuddalore 607 005 South Arcot District Tamil Nadu, India. Phone : (041428) 205, 286 Fax: 041428 - 221						
Telex : (0462) 204 TFCL IN Grams : TANFAC, CUDDALORE						
REGD. OFFICE :						
Raja Rajeswari Towers, 29-30 Dr. Radhakrishnan Salai, Mylapore, Madras - 600 004. India						

Phone: (044) 884962/884847, Telex: (041) 6463 TFAC IN



Marina Development Project

Under Madras vision 2000 announced by the Hon'ble Chief Minister Puratchi Thalaivi Dr. J. Jayalalitha, Marina Development Project is an important component. For this project the Chief Minister has sanctioned a sum of Rs.100 lakhs with 50% contribution from State Government and 50% from Corporation of Madras for the following works:

- 1. Improvement to parking space
- 2. Laying of new pavement in Beach Road and
- 3. Erection of 3 highmast lights.

The cost of construction of new pavement in Marina along Kamarajar Salai from Ezhilagam to Light House on the eastern side to international standards is Rs.50 lakhs. On 29.4.93 the Chief Minister inspected the samples of tiles to be laid on Marina Beach. She suggested some changes in the colour pattern and accordingly the samples were suitably rearranged and shown to the Chief Minister. She approved the revised colour pattern and instructed the Corporation of Madras to go

ahead with the work. The work will be taken up soon and is expected to be completed in about 10 months. The pavement, after the completion will be of international standards. The company have been asked to maintain the pavement for two years.

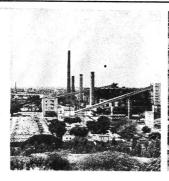
It is also proposed to erect attractive hand railing of approved designs with provision for advertisement along the footpath at a total cost of Rs.25 lakhs. Corporation of Madras and Indcon have also plans to invite sponsors for taking up the work. Thus, under Marina Development Project taken up as per the instructions of the Chief Minister, Corporation of Madras has taken up the following works, some of which have been completed and others will be started soon to give a new look.

1.	Highmast lighting - 3 Nos.	25.00 lakhs
2.	Pavement improvement	49.18 lakhs
3.	Hand railings along payement	25 00 lakhs

4. Improvement to parking space

22.45 lakhs

Corporation of Madras will be spending more than Rs.1.00 Crore on Marina Beautification.





Neyveli lies 200 kms south of Madras. A little known hamlet, that was to shoot to National prominence after independence, when geological explorations proved the lignite resources available and in 1956 Neyveli Lignite Corporation was formed for commercial exploitation of lignite. Initial mining operations were inaugurated by India's first Prime Minister, Thiru Jawaharlal Nehru in May 1957. Now, after 30 years, it has become one of the most dependable energy source of the region.

The Corporation was entrusted with the implementation of the integrated lignite project comprising Open-cast Mine, Thermal Power Station, Fertiliser Plant, Briquetting and Carbonisation Plant and Clay Washing Plant.

"In pursuit of excellence" as the goal, the corporation has been earning accolades in multifarious activities.

Nevveli Mines

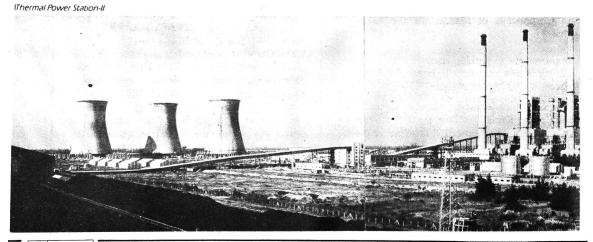
The first mine was initially set up with a capacity of 3.5 milion tonnes of lignite per annum and subsequently expanded to 6.5 mtpa in stages to meet the requirements of downstream plants.

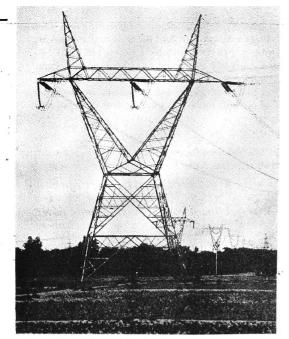
Mine II has also now been developed with 4.7 mtpa capacity in Stage I. It supplies lignite to Thermal Power station II Stage I (630 MW). Expansion of Mine II from 4.7 to 10.5 mtpa has been taken up and this will be meeting the needs of the expanded stage of the Thermal Power Station II from 630 MW to 1470 MW.

Thermal Power Stations

South Asia's first and only lignite-fired Thermal Power Stations are also the first pithead power stations in the country.

The first unit of 50 MW of the First Power Station, was commissioned in May 1962. The 9th unit was commissioned in September 1970 increasing the capacity to 600 MW. All units in first Thermal Power Station have crossed one lakh unit running hours. This station is operating around 75% LF, for the past six years. And has been continuously winning awards instituted by Government of India. The first unit of 210 MW of Stage-I (630 MW) of Thermal Power Station II was commissioned in March 1986; the Second unit in February 1987, more than a month ahead of schedule, and the last unit was commissioned in January 1988 nearly 2½





A view of 400 K.V. Transmission

months ahead of approved revise schedule. The tranmission lines between Neyveli and Pondicherry (230 KV); Neyveli-Madras and Neyveli-Salem (400 KV) were erected and commissioned to evacuate power from Thermal Power Station II.

The Mines - Some salient features

- Total reserves 3300 MT
- Proven reserves 2100 MT
- Mineable reserves 1800 MT
- Highly mechanised continuous mining system using Bucket Wheel Excavator technology.
- Means of transport.

Modern highspeed belt conveyors.

Details	Mine I	Mine II
Area (sq.km) Recoverable Lignite	16.69	27.74
(MT)	287	381
O.B. Thickness (M)	50-95	50-102
Lignite Thickness (M)	11-25	8.5-22
Capacity (MT)	6.5	Stage 1 -
		State II 4.7-10.5

The first mine is continuously operating at more than 100% capacity enabling the Thermal Power Station I also to do so.

Power Transmission - Stage 1

NLC, the pioneers in the field of lignite Thermal Power Generation has entered the field of 400 KV power transmission. Government of India has sanctioned Neyveli - Madras 400 KV line, Neyveli-Salem 400 KV line, Neyveli-Pondy 230 KV line with Switching Stations at Neyveli, Madras and Salem for the evacuation of power from Stage I of Thermal Station-II. These 400 KV tranmission lines will form part of National grid in future. Neyveli - Pondicherry line was commissioned on 12.4.87, Neyveli-Madras line was commissioned on 17.7.87 and Neyveli-Salem line was commissioned on 19.2.88.

With the commissioning of the above lines the first stage has been completed and this has increased the stability of the grid and avoided frequent trippings of Villupuram and Singarapet feeders.

NLC maintains and operates these 400 KV and 230 KV lines and the associated switching stations at Madras and Salem.

Stage-II

NLC second phase construction activities consists of construction of about 860 kms of 400 KV transmission lines and substations at Udumalpet, Trichy, Madurai, and switching station at Trichur in Kerala. Government of India has sanctioned Rs.250.71 crores for this scheme. The scheme is expected to be completed by February, 1991.

Fertiliser Plant

The fertilizer factory Neyveli was commissioned in 1966 as part of the integrated complex. The original plant was designed to utilise raw lignite as feedstock. However, due to technological and operational difficulties, the feedstock was changed over to fuel oil in July 1979.

As a plant nutrient, Urea is unsurpassed. And Neyveli Urea, with uniform and free-flowing prills, has 46.2% Nitrogen content.

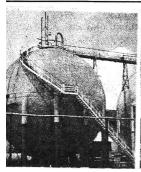
NLC also has plans for retrofitting the Urea section with modern technology for better capacity utilisation and energy conservation.

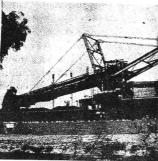
The Fertilizer Plant - Salient Features

Product - Prilled Urea
Achievable capacity - 1,29,200 tonnes of Urea
Feedstock - Furnace oil/L.S.H.S.

The Neyveli B & C Plant-conserving forest wealth

The B & C Plant commissioned in 1966, produces coke from lignite, which is sold under the trade name of 'LECO'. In the process, base chemicals vital to the chemical industry are also produced. Leco was originally contemplated for use in the domestic sector, replacing firewood. Due to its great potential and excellent properties like low





ash, low sulphur and nil phosphorous, Leco is today mainly used in industrial sector in place of furnace oil, coke and charcoal in electro-chemical and electro-metallurgical industries.

Carbo-Chemicals - The Product Range

Carbolic acid, Orthocresol, Meta para cresol, Xylenol, Multivalent phenol, Neutral oil and Tar.

Nevveli Clay Washing Plant

A boon to the ceramic industry this plant commissioned in 1961, produces washed clay marketed as 'Nekolin', Ball clay, fire clay and washout sand are other products available from the open cast mines. These are used by the ceramic industry. The aquifer sand with its high silica content is useful in the glass industry.

Managing Through Computers

Computerisation introduced at Corporate and unit levels at NLC is directed towards improving information systems, productivity and operational efficiency.

Computerisation has also helped, develop a core team of experts to co- ordinate development of user systems with micro-processor with access to the need based bigger system.

Provident fund accounting, break-down analysis, spareparts tracking, materials management, ground water management, medical record system are some of the applications developed.

Computer applied control and monitoring system, with mimic panels are planned to be introduced in the mining operation soon.

Technical Consultancy

NLC offers consultancy in lignite exploration, open cast lignite mining, bucket wheel excavation technology, material handling through continuous conveyor systems, planning, development, opearation and maintenance of mining and thermal power generation schemes, management of ground water, productivity management, human

resource development and other functional areas. A lignite planning institute is being set up. Consultancy already extended has resulted in setting up of lignite mine and lignite based thermal power station in Rajasthan, technical service in the erection of special mining equipment in Gujarat and exploration of lignite reserves in Kashmir, Pondicherry and Jayam Kondan.

Research and Development Towards a better Tomorrow

A new thrust to Research and Development have been given by constituting a Research and Development Board with eminent experts to advise on and guide the Research and Development efforts.

Major areas identified are utilisation of byproducts, pollution monitoring and control environmental care, use of non-conventional energy, diversification of usage of lignite and products, waste utilisation, etc.

Winning Laurels - NLC's way of life

No area has been left untouched by NLC's thirst for excellence. Flow of Productivity awards for its thermal power station or for the lignite mine is incessant - other areas are indigenisation, family planning, occupational health services, help to handicapped, marketing, education, sports, afforestation, exhibitions, industrial relations, horticulture, small savings, etc.

Latest tally of our awards

- IMM Marketing Man of the year award.
- Social Welfare Board's award for employment of leprosy-cured persons.
- Productivity award for Mine-I for 1986-87
- Best Productivity shield and award for Thermal Power Station-I
- Award for best displays at Horticultural and Flower show at Madras.



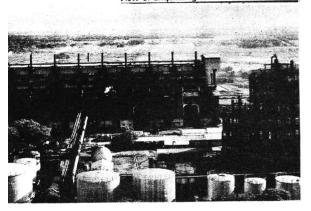
Safety award for Mine-I

 Environment preservation and pollution control award from FICCI.

Award for Environmental Preservation and Pollution Control

The Neyveli Lignite Corporation is engaged in mining which poses environmental and ecological problems. Even then, it has made significant contribution of combat environmental degradation. Reclamation of minedout areas through afforestation has helped in reducing pollution from thermal power stations and fertiliser plants. Effective steps have been taken to control both air and noise pollution. Scientific parameters are in use in assessing water and air quality. A green canopy covers residential areas. All these have helped to up keep environment and are worthy of recognition.

View of Briquetting and Corbonisation plant



Marketing

Neyveli urea is preferred by farmers for its outstanding quality and its leco and cokefines by industrialists as suitable, economical and reliable substitute for coal. - Its carbo-chemical replace Petro-chemicals enabling conservation of foreign exchange. For its innovative marketing efforts and its excellent performance in this area, NLC has been given awards consecutively in 86 and 87 by institute of Marketing Management.

A Trend setter in Mining Industry

Mined-out land after refilling is rehabilitated through massive tree- planting.

Human Resources Development

NLC has always adopted a system approach to human resources development. An approach that has found expression in a series of projectswhether it has been in improving the quality of inNLC's best OC presenting the case study



dustrial output or in imparting training to employees. In building up worthy citizens through better education or in assuring the best medical facilities and family and social welfare schemes or ensuring excellence in sports.

Quality Circles - A participative approach

87 Circles have been formed since May 1986 when it was introuced at Neyveli. This is a voluntary participative management forum to try out new ideas to increase productivity and quality.

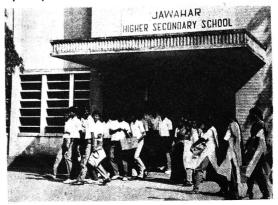
NLC conducted an All India Quality Circle Convention in March 88, 35 organisations from Public and Private Sector participated NLC's team from Briquetting and Corbonisation plant was adjudged the best.

Training

All employees are covered by a variety of training programmes. On induction all young engineers, junior executives and artisans undergo one and half to two years training. The programmes and workers education scheme has also won many laurels.

Mentor Protege Scheme

Styled on the Guru - Sishya relationship, this has perhaps, been institutionalized for the first time,





in the industry. The scheme provides the younger employees an access to the experience and expertise of the seniors.

Education - Building a stronger base

32 schools, 32,800 students. A record of excellent performance in National and State level examinations. That is the story of Neyveli's effort in this direction of providing a strong base for social and national development.

The Science College started in August 1987 has the following courses:

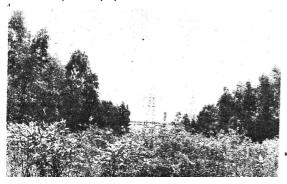
B.Sc. (Maths), B.Sc. (Computer Science) and B.Com. The courses to be added also will be career - oriented.

Family welfare - Some special features are:

- Attractive incentive schemes
- Coverage of large percentage of eligible employees
- Bringing down birth rate
- Extension of the scheme to nearby villages
- Frequent conduct of Laparascopic camps
- Recipient of FICCI award for bringing down birth rate.

Better Health Care

A 350-bed hospital being expanded to 500 beds. Five peripheral dispensaries. Specialist medical services. A team of trained doctors. Industrial health services. A well-baby clinic. Ayurvedic treatment. That's Neyveli's committment to better medical care for its employees, their families and the nearby local population.



A significant feature is computerised personal health care cards for all employees.

A 'sporting' Corporation

Sports has been given a great fillip at Neyveli. Scientific training organised by the specially constituted Sports Control Board with eminent sports persons and Corporation officials as members has greatly aided this effort. More than 500 school children are trained annually in all games and sports under the 'catch them young' programme.

NLC sportsmen and women have won a number of State and National events, be it in Chess, Kabbadi, Volley Ball, Basket Ball, Swimming, Hockey or Cricket. Its chessmen and athletes have represented the country in international events. The NLC Chess team with two international masters is the reigning National Team Champion.

In the All India Public Sector Sports Meet 1986, NLC annexed the overall championship for men.



Social Welfare

Salient features:

- Drinking water to surrounding villages.
- Irrigation water to 20,000 acres in nearby villages
- Facilities for mentally handicapped children
- laipur type artificial limb for handicapped
- Free medical camps.

Neyveli Lignite Corporation has been a long trek since inception, to success. That is reflected not only by the record lignite output and power generation, but pervades the very life of every employee. To whom have been made available good educational, medical and recreational facilities. And who have also benefitted from several welfare measures.

Improvement in quality of life has been planned.' And implemented with an enthusiasm that reflects the Corporation's care for its employees.

DEVELOPMENT OF WOMEN AND CHILDREN IN RURAL AREAS IN SOUTH ARCOT DISTRICT

V. Irai Anbu, I.A.S., Additional Collector South Arcot District Cuddalore

The scheme of Development of Women and Chilren in Rural Areas is familiar by its name DWCRA. DWCRA a Unicef sponsored sub. scheme of IRDP was introduced during 1987-88 with 100 groups in South Arcot District. As on date the total strength of women groups in this District is 513 groups.

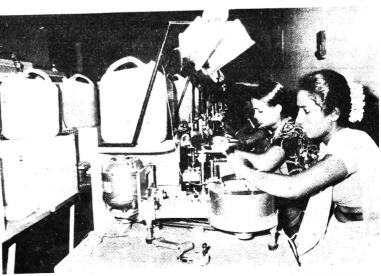
The concept of scheme is specially to feed the needs of rural poor women such as access to credit in area banks, training in skills, development of enterpreneurship and provision of rural employment through their selected trades. The scheme is also extending services like welfare, health, nutrition, education and child care to the groups.

The distinguishing feature of DWCRA is group strategy as against family as a unit of assistance under IRDP. The groups strategy is in the fields of taking up economic activities suited to their skill at will and aptitude and local conditions without any thrust on them against their wishes. The package of assistance is first of guidance to right path for the betterment of group including subsidy loan training in skill upgradation. A revolving fund of Rs.15,200 per group is being pro-

vided from Central, State and Unicef funds. So far an amount of Rs.62.776 lakh of revolving fund was received and allotted to the respective groups. Still revolving fund for 100 groups formed during 1989-90 has to be received and addressed Government have Government of India. New Delhi for sanction of revolving fund for 1989-90 and 1992-93 and orders are awaited. The Unicef fund of Rs.5,000 is being utilised to purhase equipments for child care facility. The share of Central and State funds of Rs.10,000 per group is being utilised for purchae of raw material and repayment after sales of products. Unicef is also providing special assistance for establishment of multipurposed DWCRA centres and District supply and Marketing society.

The DWCRA scheme was introduced during 1987-88 starting with 100 groups in 16 blocks. As on date the total number of groups in District is 513 groups. Of the 513 groups 9,845 women have been benefitted ranging to 40 trades. As The main source of South Arcot District is Agriuclture and Farming the trades are started with 205 milch animals, 84 sheep rearing, 37 goat rearing, 26 handloom weaving, 16 each of readymade dress making and 11 each of mat weaving and pasimani ended with 2 murukku making groups and one kadalai urundai making group. Among the 9,845 beneficiaries 2,155 belong to S.C. 150 S.T. and the rest of 7,540 belong to other communities.

Having three coastal DWCRA blocks of Merkanam, Cuddalore, Kurinjipadi, 9 groups are engaged in Nylon fishing net making, 11 in fish selling and 9 in dry fish selling. Out of them 513 groups the turnover of 307 groups lesser than





Society at Cuddalore is under process. Five Thrift and Credit Societies have been formed in the District.

We are having good rapport with the Nationalised banks, Cooperative Banks and NABARD. DWCRA is regularly being discussed in standing and District consulative Committee meetings. So far an amount of Rs.222.25 lakh was sanctioned as loan with a subsidy of Rs.111 lakh.



Rs.5,000 and 183 is higher than Rs.5000 per month. 23 groups are defunct. Hence during 1992-93, refresher trysem training is being imparted to those defunct group benefiting 423 women. Two groups of gem cutting centres in Olakkur and Mangalur block is being started during 1992-93.

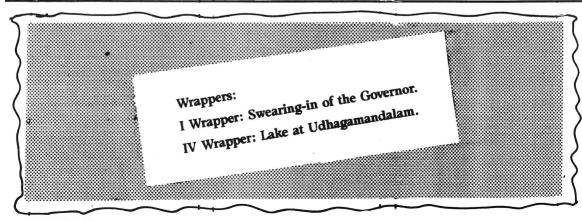
Apart from the trades we are impressing upon the women to select a viable trade such as handloom, bamboo and cane making agarbathi and sambar powder, so as to have a source of perennial supply linkage for marketing. Groups are being formed to provide sambar powder to Noon Meal Centres, tree sappling and polythene bag supplied for Social Forestry Programme and uniform for school children.

Action for establishment of District supply and Marketing

The awareness about DWCRA scheme is eminent among women folk in this District. Though as we stated earlier that 23 groups are defunct still there are nearly 30 dormant groups which requires some infusion of new blood into them to reactivate. Hence we have sent a proposal to Directorate of Rural Development for allotment of funds of Rs.12.96 lakh for 600 beneficiaries so as to address the Unicef for sanction of funds. We hope that Unicef will render required help in this regard.

A workshop on the DWCRA scheme in Sangolikuppam near Cuddalore was organized on 10th and 12th of February 1993 which was thoroughly a success since everybody participated in the workshop were outright in their

purposeful comments. augurating the workshop Thiru G. Ramakrishnan, I.A.S., Collector of South Arcot District revealed that the workshop was mainly intended to listen to the practical impediments such as in getting official guidance and assistance, marketing facility for the produce. District Collector also urge the women participants to take up innovative ventures such as coconut difibringe units to exploit the vast potential of coconut fibre in this District. Thiru K. Srinivasan. Regional Manager of the Indian Bank, the lead bank of South Arcot came forward to receive the 30 DWCRA units which are now defunct. The Indian Bank as announced by him formulate plans for women came forward with a proposal for starting DWCRA Units to exploit locally available potential in rural areas.



SMALL SAVINGS II SOUTH ARCOT DISTRICT

The Government of Tamil Nadu had fixed a net target of Rs.20 crore during last year (1991-92) but this District has exceeded the target and achieved Rs.24.75 crore which is first in the history of South Arcot District under Small Savings Schemes. The Government have now increased the target and fixed it as Rs 25 crore for the Current Financial Year Viz. 1992-93. The District administration and Small Savings Agents, under the able leadership and guidance of the District Collector, has achieved the net target of Rs.23 crore so far and is taking sincere efforts to achieve the target and to do more.

The Small Savings Collections made during the last five years are indicated below:

Year	Net Target	Net Achievement	% of Achievement			
(Rupees in crore)						
1987-88	12.00	2.92	24%			
1988-89	8.00	1.54	19%			
1989-90	14.00	8.41	60%			
1990-91	16.00	13.16	82%			
1991-92	20.00	24.7 5	124%			
1992-93	25.00	23.20	93%			
(Upto 15.3.93)						

It may be seen that only during the last year this District has achieved the target, fixed by Government and exceeded it by Rs.4.75 crore. This shows that the people in the District are cultivating the habit of depositing their savings in the Small Savings.

Small Savings Awareness Processions

In order to create awareness among the Public on Small Savings Schemes the Collector of South Arcot Distict has ordered to conduct Awareness Processions and Padayatras in the towns of Cuddalore, Villupuram, Chidambaram, Tirukoilur, Vridachalam and Tindivanam on 23.3.93. The

traders, businessmen, Public have contributed to the tune of Rs.30 lakh in Small Savings in a single day during the above said Special Campaign.

Small Savings Gift Coupon Schemes

The Government of Tamil Nadu have launched a Gift Coupon Scheme to motivate the investors in the District level from the year 1990-91 and onwards. During 1990-91 there were 262 prizes including a special bumber prize of Maruti Car, which was later increased to 352 prizes during 1991-92. Again the prizes are increased to 536 during 1992-93. In this Distirct, three series each containing one lakh gift coupon viz. A, B, C were released during 1990-91 and three series viz. AA, AB, AC were released during 1991- 92 and four series were released during the current year 1992-93 viz AD, BA, BB, BC. The beneficiaries under the Gift Coupon Scheme are increasing day by day. This shows awareness among the public and motivated them to invest their savings under Small Savings Scrips.

District Incentive

The Government of Tamil Nadu also sanctions incentive to Districts based on performance done in Small Savings for implementing welfare activities like, construction of School Buildings, improvements of roads, providing water supply to needing villages etc. The Government have sanctioned a sum of Rs.8.00 lakh for the year 1989-90, a sum of Rs.20 lakh for the year 1990-91 and a sum of Rs.33 lakh for the year 1991-92.

> V. SRIKRISHNA Asst. Director **Small Savings** Cuddalore

Since the incentive is placed of the disposal of the Collector, he sanctions the amount to meet the immediate need for the construction of school building, laying of roads, providing water supply to villages, etc. The above figures shows that whenever the Small Savings Collection increases the incentive sanctioned by Government also increased. This augment the implementation of Welfare Schemes in the needy places in the District.

Grant of local body incentive

The Collector also sanctions local body incentive at Rs.50,000 for each of two best Panchayat Unions, and Municipalities, Rs.10,000 each for the best 5 Village Panchayats for implementing welfare activities in their area. During the last year, the Collector has sanctioned the above incentives to Cuddalore and Kammapuram Panchayat Unions and Chidambaram Municipality.

Incentive to schools

To cultivate the habit of Savings among school going Children the Government have introduced and implementing the Scheme of 'Sanchayika'. Under this scheme the Children can deposit any amount in their account. A Pass Book is also being given to them to show their day to day cash balances.

To encourage Small Savings among children the Collector has also sanctioned the purchase of ceiling fan for mobilisation of every Rs.10,000 in Sanchayika Savings Scheme for the benefit of the students.

Incentive to Investors

In order to motivate the investors, the Government also sanctions incentive to investors for the investment of Rs.1000 and above. During the year



(1992- 93), more than 10,000 investors have benefitted amounting to Rs.30 lakh.

Incentive to the Small Savings Agents

In order to motivate the Agents to mobilise more funds under Small Savings, the Government of Tamil Nadu also sanctions incentive to the Small Savings Agents. There are about 50 PPF Agents, 250 NSC (SAS) Agents and 300 RD (மகளிர்) Agents are mobilising funds under Small Savings in the South Arcot District. Rs.15 lakh were sanctioned to these Agents as state incentive during 1992- 93.

In order to encourage and motivate the investors to invest more funds in Small Savings Scrips the Government of Tamil Nadu is implementing a number of schemes like gift coupon schemes to the investors as well as Agents, Incentive Schemes to the investors as well as Agents, Incentive to local bodies, incentives to Districts, schools etc.







There are different Small Savings Schemes to suit the different categories of people. Those who desire to avail Income Tax rebate can invest their savings in NSC/NSS/PPF and can avail 20% of tax rebate upto a maximum of Rs.60.000 (u/s 88 of Income Tax Act) Those who desires high return on their investments can avail 20% interest by investing in IVP, and KVP and get their investments doubled in just 5 years. Retired persons, business men and small traders who desire regular monthly income can invest their Savings in Post Office Monthly Income Scheme and can avail 14% interest and 10% bonus at the time of maturity after six years. Those who desire to contribute a Small amount from their earnings every month can open "Post Office Recurring Deposit" account and get a huge return after five years.

A student who is studying is School can also contribute to Small Savings by joining in Sanchayika Scheme which is being operated in all the schools and can also cultivate the habit of thrift and savings in his mind. The student who saved money can utilise it for the purchase of books, payment of fees, to meet the initial expenses for seeking admission in higher studies on latter days.

Thus Small Savings helps the People in all walks of life. Small Savings not only help the People, but also Local Bodies, Districts, States and Nations a whole.

"Save Today for a Safe Tomorrow!"



DANIDA HEALTH

CARE PROJECT -

SOUTH ARCOT

DISTRICT

Tamil Nadu DANIDA (Danish International Development Assistance) Health Care Project strives to improve the Health status of the rural population in South Arcot and Salem Districts by increasing the coverage and improving the quality of Health Care service establishment of inthrough frastructural facilities at Health Sub Centres. Primary Health Centres and Block Level Primary Health Centres, placement of manpower training of available health manpower, provision of equipments, furniture, stationery, articles and drugs, gearing up the IEC activities, monitoring through Revised Health Information System, streamlining the Drug Supply System, by constructing Drug Ware House and by launching a Sepcial Health Care Scheme of Tribal people at Kalrayan Hills.

The Project is in operation in the District from 1981 in different phases, the Phase-I from 81-87, interim phase 1987 to 1989 and Phase-II from 1989 to 1992. The Project period of Phase-II has been extended to two more years from the planned end in March 1992, based on the recommendations of the mid term review team in 1991, considering the good work done, and for completing the requiring modification.

Around 8 crore had been contributed by the DANIDA in its Phase-I. For Phase-II nearly 14 crore are being earmarked for South Arcot District out of 22.96 crore for both the Districts. 85% of the amount is grant in aid from DANIDA and the remaining 15% is contributed by the Government of

Tamil Nadu and the remaining 5% Government of India.

The Project Directorate in Madras is responsible for implementing the Project through the two District Project Organisations. The State Project Co- ordination Committee and the empowered Committee with the Chief Secretary as Chairman are the apex bodies. A technical Advisory Unit consisting of representatives of the DONAR AGENCY is also placed at the Project Directorate.

In the district, the District Collector is the Chairman of the District Project Monitoring Committee responsible for periodically monitoring and reviewing the Project implementation.

The DANIDA Project only strengthens, supplements and supports the existing Health care system but does not substitute the efforts of the regular Department. It provides facilities as per the norms of the Government of India. but earlier than the time the Government would achieve the same in due course of time. The working principles of the Project are participative management, decentralisation and community involvement. The Tamil Nadu DANIDA Health Care Project has achieved good results and has been appreciated for its good performance

The Project directs its efforts towards strengthening of HSC, the basic unit of Health services at the villages. Other levels are also strengthened to support the HSCs, for better referral system, 285 HSC buildings, 163 Health Supervisor (F) Quarters, 20 Medical Officers Quarters, 7 General side Dispensary buildings, compound walls for 20 PHCs, 34 Meeting cum Training Halls, Remodelling of Operation Theatres for 14 PHCs and Paediatric and maternity wards and conditioned Operation Theatres for Taluk Hospitals have been constructed in Phase-I

Water Supply

The DANIDA Project rightly understood the importance of providing water supply facilities at the Health Sub Centres. Almost all Health Sub Centres and Primary Health Centres have been provided with water supply facilities which benefit the villagers also apart from the use of Health Sub Centres. All the 34 block PHCs have been provided with water supply facilities.

To maintain the infrastructural facilities already established, the preventive maintenance concept is operationalised. Financial provision is being made for carrying out minor repairs in the building, furniture and equipments. Timely rectification are carried out and major breakdowns are averted. The funds are made available at the level where the repairs have to be carried out. The need assessment is done by the Medical Officer, technical feasibility obtained from PWD, screened and approved by the District Project Officer.

It is expected that the component of Preventive maintenance will be integrated into regular Health system after studying the usefullness of this particular activity.

Laboratory in the block Primary Health Centres

Laboratories have been established in 34 Block PHCs. Necessary equipments and machineries have been supplied. Chemicals and reagents are supplied annually. The laboratory assistant have been given training at Project cost. Clinico-Pathológical tests are conducted at the PHCs. The Laboratory facilitiy is not available in the PHCs of the Non-Project Districts.

DDK (Disposable Delivery Kit)

One of the significant supplies is DDK, for conducting aseptic delivery irrespective of the place and person, conducting the delivery. It is a Polythene bag, con-

taining soap for hand washing, a sterile blade for cutting the umbilical cord, thread for tying the cord, antiseptic lotion, cotton and gauze for dressing the umbilical cord and supplied to pregnant mothers in the seventh or eighth month. Though the cost of DDK is only Rs.5 the benefits is invaluable in terms of human life.

Manpower

The DANIDA Project placed the Manpower required at the HSC level. The cost towards their salary have been initially borne by the Project, later on the staff salary expenditure was taken up by the regular Department.

Training

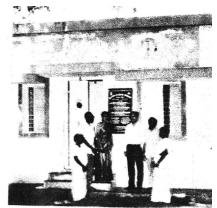
Health Manpower Development Institute has been formed by integrating the three District Training Teams which were covering the District from three HUDs and upgrading with a static and mobile units. The HMDI is located at Villupuram and the building complex with the teaching block, hostel block, administrative block, and quarters is being built at Vazhudareddi at a cost of Rs.1.55 crore.

This institute imparts in-service training to the entire health staff ranging from DAIS to DOCTOR.

The Professional and Managerial skills of all health functionaries of Primary Health Care System are developed. The field based training by the Mobile Team and Managerial training by the static wing of the HMDI distinguish the HMDI from other conventional training Institutes.

Revised Health Information Systam

The DANIDA Project is experimenting a revised HIS with the objective of establishing a comprehensive and decentralised HIS and computerising the health data for getting effective feed back. In the revised HIS, the number of



records and registers are reduced, streamlined and simplified. Mother and Child care cards replaced the enormous volumes of registers. The performance data in the Monthly Progress reports are computerised and feed back reports are sent to PHCs.

The outcome of the experiment will contribute to the State as a whole for making appropriate modification and improvement in the HIS of the State.

IEC (Information Education Communication)

The IEC component is one of the trust areas of the Project. The community has to be educated by the Health staff for better health practices.

At the HSC level the field staff required IEC materials like flip



charts, flash cards, tin sheets, flannel graphs and hand outs for conducting health education. These were supplied by the Project.

At the block level, Block Communication Cell were created with necessary eqipments like megaphone. Overhead Projector and Slide Projector in addition to the Departmental supply of 8 mm Projector etc. Skill Training in handling equipments was imparted. Moreover Rs.500 per Block Communication cell per annum is provided for developing local communication materials and meeting out any petty repairs.

In 200 villages, influential local leaders formed village Health Councils for making effective linkage between the village and formal health system. The VHCs have to meet once in a month to discuss health problems and plan suitable action. This VHC has been found useful in drawing the attention of the community towards Health. Financial provision of Rs.25 per

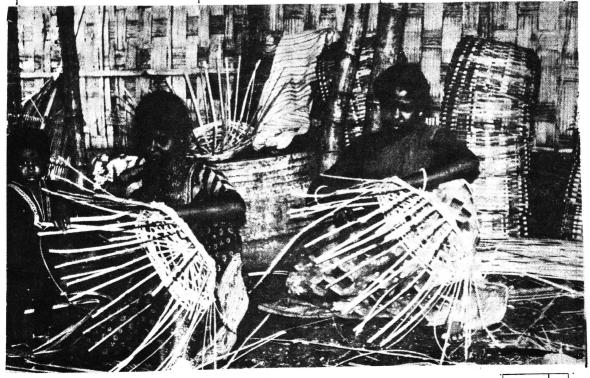


meeting per month is given by the Project. The VHN concerned is the Member Secretary of the VHC.

These steps complemented the efforts of the field staff in the Health education aspect.

Drug Ware House

The Drug Supply system is streamlined and a Drug Ware House is constructed in Cuddalore at a cost of Rs.17 lakh in the Phase-II.



The Drug Ware House will function as a nodal point for receiving the Drugs from various supply sources, proper storage and distributing of the medicinces to the PHCs of the District Drug Ware House is an innovative idea to regulate the drug supply system.

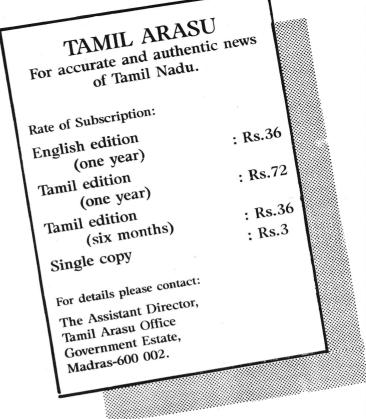
Special Tribal Health Care Scheme, Kalrayan Hills

The tribal people of Kalrayan Hills have not been given Health Care service facilities and other developmental activities have not reached them so far. The tribal population is 40,000 living in widely scattered 151 settlements in an area of 600 sq. k.m.

A Special Health Care Scheme, comprising of reorganisation of Health Care Delivery system, construction of Health Sub Centres, Primary Health Centre and Community Health Centre, Training activities, Special Action Plan for IEC, suitable to the Tribal people and logistic support is launched in Phase- II. The cost of the programme is nearly 3 crore inclusive of 22 lakh for IEC activities alone.

The Intersectoral co-ordination is essential to commence delivery of Health Care services in the virgin and isolated hilly terrain of Kalravan Hills. So the existing other like Noon Meal Centres, ICDS Government Tribal Centres. Residential Schools and Voluntary Organisations are co-ordinating for effective delivery of Health services. The HSC village is made as Co- Terminus for the field staff of Revenue, Development and Education etc. and Social Welfare. Even Non-Governmental agencies coordinate with the regular departments. The Programme Officer is for the implementation of the Scheme. As planned in the IEC component, IEC activities are conducted in Shandy places for creating awareness.

It is worth mentioning that Awareness campaign for health, was inaugurated by the



Minister Thiru T.M. Selva Ganapathi, M.A., B.L., during the summer Festival.

To conclude the construction of DANIDA Project to the Health Department of Tamil Nadu speaks for the value and usefulness of the Project. Disposable Delivery kits are supplied to all the other Districts by the Family Welfare Department, and IPPF. The District Training Teams are replicated in the other States.

The crown of the contribution is the construction of HSC buildings by the community members. The HSCs functioning in rented buildings cannot do full justice especially for the conduct of institutional deliveries. So an innovative scheme of construction of HSC building with the involvement of the community is launched. DANIDA Project provides Rs.90,000 as contribution of the

Government and the balance amount required is mobilised by the community through the Chairman of Village Health Council. The Medical Officer, PHC, representative of the Government and President of the Village Health Council, the representative of the community are partners in the noble effort of providing this Health care asset to the Village.

232 HSC buildings are being covered by the Special Scheme, 52 HSC buildings have been inaugurated and the remaining buildings which are in various stages have to be completed by October 1993.

The Project Organisation is trying to get sanction for remaining 30 HSCs functioning in rented buildings. Then the Project District will have buildings for all the HSCs in the District. The success will be of historical importance.

MANGROVES OF PITCHAVARAM MINI

In Tamil Nadu, Mangroves inhabit the eastern coast line in great concentration. Mangrove is a combination of the Portuguese term for an individual tree "Mangre" and "grove" the English word for a group or stand of trees. These are coastal tropical formation found along the border of the sea and lagoons, reaching upto the edges of the rivers to the point where the water is saline.

Location: Pitchavaram Mangroves of South Arcot District lies inbetween the Vellar and Coleroon estuarine systems. At the habitat of Pitchavaram Mangroves, mixing of water from Bay of Bengal, brakish water from the Vellar and Coleroon estuaries and fresh water from an irrigation channel called Khan Sahib Canal takes place. It covers an area of 1589 km. with depth varying between 0.3m to 3m. and about 51 assorted sizes of islets separated by a network of intricate waterways and lagoons. About 40% of the total area of this mangrove is covered by waterways, 50% by forests and the rest by mudflats, sand flats and salty soils.

Aquatic fauna and flora

Mangroves are salt tolerent forests ecosystem of tropical and subtropical regions playing an important role in socio economic stability. The mangroves constitute a reservoir and refuge for many unusual, rare and entageous species of plants and animals. They also are both protective in nature in addition to being of recreational value and flourishing in fish culture.

The acquatic fauna constituted fin fishes, shrimps, mulluscs, crabs and seaweeds. Prawns are in plenty. Among tree species Rhizophora apiculata, Rhizophora mucronata, Bruguiera cylindrica are the species found in abundance. Avicennia marina, Pseudo maretima, and Salvadora species also occur.

In Tamil Nadu, Mangroves in- A Jewel in the Crown been

The special and peculiar adaptation of these species to the environment i.e., salt water, ebb tide, low tide, water innundation and mud flats being the pneumatophore, (the breathing root) the Viviparous germination process, and the stilt root development. The plants have developed C Mechanism of depositing the excess salt in the waxy cuticle part of leave surface.

Present Status

This in itself a unique ecosystem serving the purpose of nutrient cycling and provides a regular flow of organic matters to the adjoining coastal waters in addition to replenishing the coastal fishery resources.

Also it serves as a potential nursery ground for commercially important prawns, crabs and fin fishes since it provides abundant food and shelter for their young ones.

It is an ideal place to undertake coastal acqua cultural practices. The quality of water is very good and its productivity is also very high, as such at present, this environment can be used as a standard for comparison with other polluted environments.

This area can also be used in a restricted way for the development of tourism, recreation, education and research. This Bio diverse unit also supports a variety of bird species some of them are local and seasonal migrants.

There is an intricate network of channels and creeks and lagoons. These channels are shallow rarely more than a meter in depth.

To agument and balance the illeffects due to the biotic factors that cause gradual slowing down of the progress of stability of the mangrove vegetation, a scientific approach of management had

been attempted to in the mangrowes. The main objectives of such prescription and practice being to aid the natural regeneration by artificial means and to pave a conducive way and creating the original situations which had lost its identity on account of adverse biotic factors. These adverse as well as positive indicators identified and the following operations executed in the past.

- 1. Desilting the existing mangrove channels.
- Raising artificial regeneration over 5 hectares.
- 3. Dredging of criss-cross channels and planting potted mangrove seedlings.
- 4. Desilting and clearing debries in the existing channels dug.

Since this is a very sensitive and delicate ecosystem responding to both adverse and conducive factors one will have to be extremely cautious and rational in dealing managing fragile and this This mangrove ecosystem. Mangrove ecosystem is easily destroyed by various human aclike alluvial mining. tivities damage, canals, building of harbour and marinas and heavy inflow of tourists. A rapid increase in and activities human brouser populations in mangrove also put lot of pressure on it, which ultimately would result in total extermination of forests.

The mangroves are to be protected not for the present but for the future so as for the generation to come, will be able to realise experience and enjoy the aesthetic value, protective value, productive and ultimately the socio economic value in perpetuity.

S. Joseph Jogindranath District Forest Officer Cuddalore

HORTICULTURE SCHEMES TO INCREASE PRODUCTION AND

PRODUCTIVITY

M.A. HIRIYAN Deputy Director of Horticulture Cuddalore

t is known that the South Arcot District is one of the biggest Districts in Tamil Nadu. Many of us may not know that South Arcot is also one of the biggest District under area in various Horticultural Crops. The dollar earning Crop "Cashew" is grown in larger area in this District. The area under Cashew is equally comparable with Trichy District. The Red lateritic soil, warm tropical climate and facility to export through sea, are the various favourable factors for the larger area available in the District. An extent of 25,000 ha under Cashew, 5,000 ha under fruits, 9000 ha. under spices, 70,000 ha. under Vegetable and tuber crops, 5000 ha. under flower crops are grown in the District.

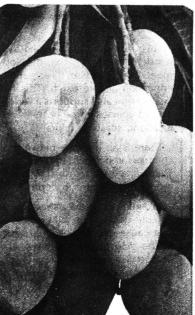
The various Central sector and State Sector schemes are implemented with the object to increase the production and productivity of Horticultural Crops. An allocation of Rs.29.50 lakh has been spent for various plan schemes and farms during the current year (1993-94).

Centrally Sponsored Cahew **Deveopment Scheme**

Rs.13.71 lakh was been allocated for the working expenses. An achievement of 215 ha. under Cashew area expansion programme is done by distributing Cashew planting materials at 75% subsidised rate and with Rs.300 worth protection plant chemicals and fertilizers. The fertilizers and P.P. Chemicals are



distributed through primary cooperative banks, 240 ha, has been achieved under II year follow up programme. 75% subsidised rate of Cashew Planting materials for gap filling and Rs.550 worth of tertilizers and P.P. Chemicals per ha.



have been distributed. 175 ha. have been covered under III year Area Expansion programme by distributing Rs.900 worth of fertilizers and P.P. Chemicals per ha. 210 ha. have been achieved under IV year area expansion programme by distributing Rs.1000 worth of fertilizers and P.P. Chemicals per ha. Besides the above schemes, there is one Scheme called "Integrated Plant Protection Scheme", plemented in 1315 ha. Rs.300 worth of P.P. Chemicals per ha. have been distributed to the Cashew growers, for the yielding Crops.

Integrated Horticulture **Development Scheme**

The high yielding planting materials, Mango, Guava, Sapota, Lime, lack are distributed at 50% cost to small and marginal farmers. 750 ha. is exptected to be covered under this scheme. The high vielding Vegetable seeds like Tomato, Brinjal, Gourds, etc., are distributed at full cost, 757 hectares have been achieved under Vegetable area Coverage in this District. Rs.6 lakh has been spent for the working expenses under this scheme.

Nutrition Garden Plants Distribution Scheme

2.200 numbers of families have been benefitted under this scheme, Rs.1.10 lakh has been spent. The planting materials Mango, Guava, Jack, Lime etc., have been distributed to the ryots to plant in their house compounds and lands.

Rejuvenation of Old Orchards **Development Scheme**

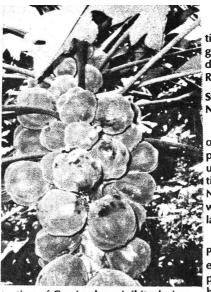
40 hectares have been achieved under this scheme. Rs.5.8 lakh has been spent. The inputs like fertilizers and P.P. Chemicals at the rate of 50% cost have been distributed to the beneficiaries.

Distribution of Vegetable Minikits

This is a National Horticulture Board Scheme, 600 numbers of hybrid Tomato seed kits have been distributed. Rs.0.45 lakh has been spent. The cost of each Vegetable kit is Rs.75. A token amount of Rs.5 per kit. has been collected.

Spices Crop Development Scheme

Under the Scheme the distribu-



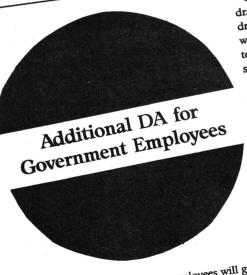
tion of Corriander minikits, laving demonstration on Chillies. distribution of Sprayers, distribu-

tion of P.P. Chemicals for chilli growers and laying Turmeric demonstration are carried out. Rs.0.65 lakh has been spent.

State Horticulture Farm Nevveli and Vridhachalam

The production and distribution of quality fruit plants and other plants required for schemes are undertaken in the State Horticultural Farms. situated Nevveli and Vridhachalam. The working cost of 2 farms is Rs.7 lakh

There is scope to increase the Plan Scheme outlay to manifold in ensuring years and there by the productivity and production of Horticulture Crops will be increased for the benefit of more number of ryots in South Arcot District.



 $\mathbf{T}_{\mathbf{he}}$ Tamil Nadu Government employees will get an increase in dearness allowance (DA) ranging from Rs.67 to Rs.315 per month, effective from January 1, 1993. The additional instalment announced by the Government brings the DA on par with the rates sanctioned to Central Government employees.

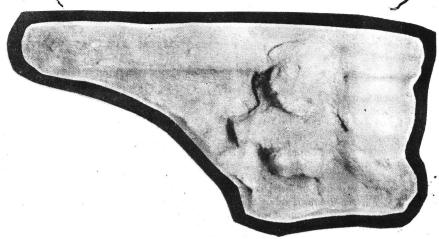
The revised rates will be 92 percent for employees \ drawing pay upto Rs.3,500 and 69 percent for those drawing pay exceeding Rs.3,500. The revised DA will apply to all Government employees, including teachers in local bodies and aided educational institutions.

Nearly 10 lakh employees will benefit from the DA increase and the additional commitment to the Government will be Rs.128.16 crore per annum and Rs.149.52 crore in the current financial year.

The Government has also announced the sanction of one additional instalment of DA to pensioners and family pensioners with effect from January 1, 1993 at the same rates as announced by the Government of India.

The revised rate will be 92 percent for those drawing pension/tamily pension upto Rs.1,750, 69 percent for those drawing above Rs.1,750 and upto Rs.3,000 and 59 percent for those drawing above Rs.3,000 per month. This will give a minimum increase of Rs.34 per month and a maximum of Rs.195 per month. About 2.13 lakh pensioners and family pensioners will benefit from the DA increase which will cost the Government an additional Rs.19.77 crore per annum and Rs.23.06 crore during the current year.

STRUCTURES DISCOVERED AT KAVIRIPOOMPATTINAM



The Under Sea Exploration carried out by the Tamil Nadu State Department of Archaeology in association with the National Institute of Oceanography has brought to light a few authentic remnants of the Ancient city of Poompuhar, In the Second Phase exploration off the shore of Poompuhar conducted in the months of January - February 1993 it was able to discover a row of structural remains about 300 to 400 meter seaward at a depth of 7 to 8 metre near the confluence of river Kaveri with the Bay of Bengal and a series of remnants of brick structures with some intervals near the present light house in the shallow

This time they deployed airlift to remove the sediments that are embedded on these structures. During the airlifting upon those structures considerable number of potsherds respresenting the Black and Red Ware, Redware, and amphorae and a few brick bats have been collected. These findings clearly attest the fact that these structures could be dated from 300 B.C. to 4th Century A.D.

The structure that was located during the first phase exploration was intensively explored this time by sending divers in consecutive times. The divers cleared a portion of the structure and made visible the laterrite stones that are found used for constructing the walls.

This building appears to be in apsidal shape being in North South orientation having high walls on both sides. The gap in between the two walls is about 25 metre. Considering the plan of this structure, it is believed that it could probably be a temple of the famous city Poompuhar.

Further, during the intensive exploration of the shipwreck an iron cannon measuring about 1.25 metre length, a few iron and copper nails and a few wooden planks were exposed. More number of ingots have also been cleared and photographed and videographed. The outer surface of the shape of this ship was made seen. This ship wreck could have occurred during 18th Century.

Besides this, on shore exploration was carried out near Melapperunpallam, four K.M. landward south west of Kaviripoompattinam. It was able to pick out a few pieces of urns datable Megalithic period bearing a female and male figurines on the outer surface. In an earlier instance also a few such figurines had been collected from nearby area of this village by this department. In Kunnur area some terracotta figures are found on the lid of megalithic pots. Hence it is quite probable that Poompuhar had the habitation even from Megalithic period.

These explorations were conducted by the Archaeologists Messrs. Abdul Majeed, Sampath, Rajendran, Srikumar and the Scientists Messrs. Gudikar, Sundaresh, Gaur and Bandhukar of National Institute of Oceanography, and Dr. Rajan of Tamil University, Tanjore under the guidance of Dr. S.R. Rao and Dr. Vora of National Institute of Oceanography and Thiru Natana Kasinathan, Director of Archaeology.

Exotic Designs for the New Year Chiffon, F

A new range added in Chiffon, Polyester, Silk and Cotton sarees for you. Visit Co-optex showroom.



Co-opto

DIPR/Efficient

