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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State :

Inter-State Statistics : The Commerce Research Bureau's Economic Monitoring Service October 1975 publication refers to some essential data on the status of the States. With 7.5 per cent of the country's population, Tamil Nadu has the third highest percentage of the irrigated area of the country at 8.4 per cent (after UP and Punjab), with 51 per cent of its area with reasonably assured water supply and is the third highest State (after Punjab and Haryana) at 42 per cent of the net sown area. It has the largest number of pumpsets in the country (4,68,215), while 24 per cent of its area and 17 per cent of its district population live in drought prone taluks. In regard to power, the State with the highest per cent of installed capacity (13.8) of all States and the second highest generation (10.9 per cent) after Maharashtra, has a low efficiency rating as measured by power generation per year per KW capacity at the 16th rank. Its distribution as between hydel and thermal generation is good (54.46), with Karnataka and Kerala being 100 per cent hydel based, while Delhi, West Bengal, Bihar and Gujarat are 92-100 thermal based. While the State's infrastructure is ranked second among the States, it shares with West Bengal a decline in the index of infrastructure development between 1966-67 and 1971-72 from 171 to 164, being 5th in road length, 6th in railway route length and 14th in goods vehicle per lakh of population. Its population is

estimated at 4.76 crores in 1976 and forecast at 5.32 crores in 1979 and 5.56 crores in 1981. Its labour force is divided into 64.5 per cent in agriculture (All India 72 per cent), 7.8 per cent in industry (all India 5.6 per cent) and 20.3 per cent in services (all India 16.8 per cent). 21 per cent of total workers are women, being the 6th highest among States (all India 17 per cent). It has 15,735 villages with an average population of 1,289 and 44 major and 395 other urban centres in which 30.3 per cent of its people live. This is the second most urbanised State after Maharashtra at 31.2 per cent. The pattern of land utilization shows an increase in forest land between 1960-61 and 1970-71 from 14.4 per cent to 15.5 per cent as in the net sown area from 46.1 per cent to 47.4 per cent. The net sown area per cultivator at 1.3 hectare is the 15th among the States, with the second highest consumption of fertiliser per hectare of cropped area (24.6 kg. in 1968-69 and 46.2 kg. in 1973-74). Its growth rate of food grains production between 1961-62 and 1973-74 was the 11th among the States at a low 2.3 per cent. With a live stock population of 24,569, it ranks 7th among States. Its minerals being extracted are only limestone, lignite, bauxite and gypsum at a small 2.3 per cent of the all India total value of mineral production. In terms of employment, its major industries are spinning and weaving, electric light and power, machinery, manufacture of motor vehicles and rail road equipment

and is the third State in terms of number of mandays lost at 2.4 million in 1974. It is the second best banked State (after Maharashtra), contributing 7.1 per cent of the all India deposits and drawing 10.7 per cent of all India credit. Its Fourth Plan outlay was Rs. 467 crores (5th largest), and a per capita of Rs. 113 which dropped to Rs. 32 in the 1975-76 Annual Plan. Its development expenditure is Rs. 87 per capita and non-development Rs. 32, which places the State in the middle All India position. It is among the 6 bottom States in per capita resources transfers from the Union to the State at Rs. 39 per capita, and has the highest water rates. Using 16 indices of development, the State is placed 6th (after Punjab, Haryana, Gujarat, Maharashtra and Himachal Pradesh). In a related analysis of the tax effort of the States, the *Economic and Political Weekly* (Vol X No. 50 issue) shows that the usual indices of tax ratio, the income elasticity of tax revenues and marginal tax rates show that this State makes the greatest tax effort standing 1st 2nd or 3rd, but that when the per capita income share of the non-agricultural sector in the State Domestic product, percentage of people above subsistence level percentage of urban population to total population, per capita level of services and level of illiteracy are taken into account, Tamil Nadu's level of tax effort places it in the 9th place after Bihar, MP, Haryana, Maharashtra, Andhra Pradesh, Rajasthan, Kerala and Punjab. This is a somewhat distorted analysis, which uses indices which are not relevant to the discussion of the inter-State tax effort, giving a rather important place to such factors as urbanisation and the level of tertiary sector.

Third Annual Plan Finances and Prices : The Third Annual Plan for the

State is being finalised at a level of between Rs. 160 and Rs. 170 crores. First discussions between the State officials and the Union Planning Commission in December indicates that subject to the State being able to mobilise further resources, the Third Annual Plan will be stabilised at a higher level than the Second Plan (Rs. 142 crores). RBI analysis confirms the trend for the States, to rely increasingly on their own resources, particularly for development. For the current year, the States' own resources will finance 65.9 per cent of their expenditures against 64.6 per cent in 1974-75 and 59.8 per cent in 1973-74. Per contra, the States' share of Union taxes has declined from 33.5 per cent in 1973-74 to 30.9 per cent in 1974-75 and will be about 30.3 per cent in 1975-76. Even Union loans as a share of the States' capital expenditure declined from 62 per cent in 1973-74 to 50.4 per cent this year. The State's resources have developed to provide for their development expenditure and financed 51.1 per cent of their development expenditure in 1974-75 compared to 44.1 per cent in 1973-74. The combined budgetary position of the States will be one of balance as between income and expenditure this year. Their tax receipts rose by 19.6 in 1973-74, 19 per cent in 1974-75 (mainly a reflection of inflation) and with the non-inflationary condition will be 6.6 per cent this year. The State government owe Rs. 13,746 crores to the Union government, which would be increased by Rs. 1,028 crores in March 1976. A disturbing element is the rising trend of ways and means advances from RBI and commercial bank loans to the State governments, which in the former case is a rise to Rs. 30 crores and in the latter case to Rs. 502 crores, according to the RBI study. Interest charges on the total State governments' debts are now Rs. 652 crores, about 2/3 being

payable to the Union government. Prices in the State have been declining. Rice of the fine variety is selling at Rs. 3.20-3.30 per kg., medium varieties at Rs. 2.20 per kg. and boiled rice at Rs. 2 per kg. Kar was selling at Rs. 1.70 per kg. With the improved rice stock the size of the ration for the low income group has been doubled to 3 kg. per fortnight. Model schemes for distribution of essential commodities are being set up in the State similar to those functioning in Delhi. The scheme removes the distinction between rural and urban areas and mobilises people in the effective operation of the scheme. Further the National Textile Corporation is opening 50 show rooms a month to reach a target of 500 shops quickly and ensure that textiles reach the rural poor effectively.

Power: In December, the thermal stations in the State, except Neyveli closed down because the hydel stations were working at full capacity and this interregnum was used to carry out the needed repair and maintenance servicing of the plants. The Fifth 110 MW unit at Ennore was set up in December and had its trial run successfully completed. This gives Ennore a total installed capacity of 450 MW. The Fifth unit cost Rs. 24 crores, its boiler supplied by BHEL, Ranchi, its turbo-alternator by the Hyderabad unit of BHEL, and its instruments by IL Kota. Commercial production will begin in early January when the remaining instruments are installed by IL. REC has sanctioned a further project covering 20 villages in the Venur block of South Arcot district to energise 300 pumpsets. To date its loans amount to Rs. 17.22 crores for 51 projects to cover 2,323 villages supplying energy to 49,500 pumsets. The emphasis in next year's Plan (Third Year Plan) will be

essentially on the States' power projects.

In the country as a whole, power continued to be normal except in Maharashtra and Karnataka. In mid December, the Maharashtra government introduced further restrictions on the consumption of power during peak hours—on general industries from 30 to 54 per cent, on continuous process industries from 26 to 46 per cent, and textile mills from 15 to 75 per cent. With Bombay High going on stream in 1976, there is need for the installation of multiful units. The power cut is likely to result in a 15 per cent reduction in engineering production in that State. A World Bank team visited India at the end of December to discuss the government's request for aid to the 4 Super Thermal stations. The Union secretary of Energy announced that one of the stations will be located at Neyveli. If this is official, it is good news. But at the same time, he pointed out, that as the power scarcity was more acute in the North and West, the first 2 stations will be set up there and followed later by stations in the South and the East. Also in the first stage, 200 MW sets will be used for which BHEL has all the technical knowhow, to be followed later by 500 MW sets. The Ministry also points to the fact that at present only 24 per cent of the hydro-electric potential of the country is being used—of the country's potential of 42 million KW at 60 per cent load factor, only about 10 million KW are being used by the schemes. BHEL would have an important role in ensuring the more effective harvesting of this energy source. For this year 1975-76, the Union government estimates that an additional 2,300 MW generation capacity will be attained as against the 1,700 MW in 1974-75 and 450 MW in 1973-74. Within this plan, hydel generation will be

increased by 16 per cent and thermal by 8 to 10 per cent and the total energy generated increased by 12 to 15 per cent. The power strategy being used involves maximum use of hydel power, efficient use of thermal stations—which now have a coal stock of 30 to 35 days use, and use of regional grids to transfer power from surplus to deficit areas. In this strategy, rationing will be resorted to ensure power to priority uses and selective tariff increases in order to conserve power. On the REC programme, even at the end of the annual Plan under 2.5 lakh villages will be electrified, 840 lakh pumsets energised, only 45 per cent of villages will be covered. There is need for a special effort in rural electrification, particularly for Harijan villages.

Water: December witnessed heavy rains in Thanjavur, Tirunelveli and Nagapattinam. A week's incessant rain with a daily average of over 100 MM in these areas has filled all tanks and reservoirs, suspending water supply from Mettur and submerging paddy fields in tail end areas and holding up transplanting operations or affecting Thaladi and Samba crops. The major development in December was the Godavari River Agreement reached between the 5 States, which provides for the irrigation of 13 million acres of land of the 3,000 TMC feet of water in the Godavari; 500 TMC feet above Pochampad is not in dispute: of the 2,500 TMC feet below Pochampad, existing projects in the States use 700 TMC feet. In the December Agreement 1,100 TMC feet was shared out, with Andhra Pradesh, Maharashtra and MP having 300 TMC each, Orissa 200 TMC feet and the balance of 700 TMC feet to be worked out. This historic Agreement has raised hopes of a similar agreement between the Cauvery riparian States—Tamil Nadu, Karnataka and Kerala. When

the official survey now under way is completed, it is hoped that Karnataka and Tamil Nadu will reach an agreement, which will provide Karnataka with the waters she requires, while simultaneously safeguarding the rights of the delta farmers in Tamil Nadu.

Transport: The first parts of the first stage of the tenth major port, namely the new Tuticorin port, was completed and commissioned in early December. Of the 4 berths planned for salt, cement, fertiliser and general cargo for 30 feet draft ships, two were commissioned. In mid 1974, one mooring berth for tankers was completed (see Vol IV pp 411 and 530) and within one year has received 20 tankers carrying 75,000 tonnes of naphtha and more than one lakh tonnes of fuel oil for the SPIC complex. Now the incoming and outgoing cargoes will be more varied. In air transport, the International Airports Authority of India (IAAI) has successfully replaced the costly and complex imported airport lighting equipment by those produced by the country's defence production units. They are being used in Meenam-bakkam and in Delhi, Bombay and Calcutta airports for installing new lighting systems and replacing the old equipment. The equipment includes fixtures, bells, visual aids for landing and take off, the special inset lighting fixtures capable of standing jet air craft pressures, sealed beam lamps and inset taxi lighting. This will ensure no interruption in airport lighting arising from lack of spare parts. On the transport side, the syndicate bank has introduced an innovative scheme to finance poor villagers who wish to own their own bullock cart. The full cost of the bullocks and cart are advanced to the rural people as loans. Also the bank is advancing credit to industries engaged in the manufacture of bullock carts. Following the Prime Minister's suggestion (see

last issue p. 5), the bank is sponsoring a national competition for an award to the best model of an improved type of bullock cart to be used on rural roads. On the tourist front the government reports an increase in the number of tourists visiting the State during 1975. Plans are being made to facilitate their stay by building hotels of the 2 or 3 star type in Madras and Tiruchi, concessional fares between Colombo and Madras and more frequent IA flights, better food on the trains going South from Madras, and popularised Indian cuisine in the hotels. The Madras Kal club is a workshop dealing with problems of the tourist industry, and with the help of professional and trade associations in the State develops solutions by using the cumulative expertise of all concerned with the industry. 1976 is expected to record a greater influx of tourists as information about and infrastructure in the South are continuously improved.

Welfare : At Mahabalipuram and Courtallam, two holiday homes for workers at a cost of Rs. 10 lakhs each are being built by the Tamil Nadu Labour Welfare Board. Each has dormitories to accommodate 50 persons and rooms to house 25 families. This is the first attempt to provide workers with good residences for their holidays, as well as such facilities as reading room, library and indoor and outdoor games. In addition workers in the industrial units in Madras, Gummidipundi and Chingleput districts are permitted to withdraw Rs. 200 each from their Provident Fund for repairing their houses that were damaged in the November/December rains. This facility is being extended by other industries also to their workers.

National

Fifth Plan : The review of the Draft

Fifth Plan targets referred to in Vol V p 579 in light of the price inflation in 1972-74 is likely to result in establishing spillover of a number of projects into the Sixth Plan. Such spillover particularly in the core sector—coal, irrigation, power, steel and fertiliser—must now be identified and made known as the other constraint on the Fifth Plan is the level of foreign aid during the last 3 years of the Fifth Plan. It is hoped that it will be around \$ 1.2 billion rather than \$ 900 of this year in order to meet both foreign trade gap and the increasing burden of debt servicing. On these assumptions the outlay for the Third Plan which is now being fixed and related to the business in the plan projects both within the Union ministries and the State governments is likely to be around Rs. 7,000 crores compared to this year's Rs. 6,078 crores, including the Rs. 100 crores recently provided for irrigation and power (see Vol V p 576). This would represent a rather sharp increase of around 16 per cent over this year's outlay. The grounds for such an increase are rather continuing. As noted earlier, the States have a good resources position, having raised in the first 2 years the target for the 5 years—Rs. 25.50 crores. Inflation had increased the cost of development activities and called for payment of additional DAs, to which the cost of droughts and floods in some States should be added. And so the States raised Rs. 164 crores in budgetary, Rs. 84 crores in post budgetary measures and Rs. 110 crores through the Electricity Boards and Transport Corporations, amounting to a total of Rs. 358 crores in 1974-75, which in a full financial year will amount to Rs. 540 crores. To this improved financial position of the States should be added the increased tax receipts of the Union government between April and November of this year, (though the budget deficit

will be much higher than the budgeted Rs. 247 crores), the fact of price stability, the relative success of the various economy measures, the improved returns from public sector undertakings, the campaign against black marketers, the impact of the good kharif and rabi harvests and the higher industrial growth performance. The Third Year Plan as well as next year's budget should be based on a comprehensive package of rationalised taxation measures—income, corporate, excise and sales taxes—as well as innovations that will promote savings and investments. On the basis of the report from the Bureau of Costs and Prices now presented to the Finance ministry recommending a development rebate to the capital intensive industries and a 2 tier price system, an enlarged tax holiday and preferential excises for industries requiring heavy capital, it will be possible to identify the capital intensive industries for which fiscal concessions and revised pricing policies are needed to promote fresh investments such as that done for sugar and needed for cement, tyres, steel as well as the diversification programme for consumer durables. Also the lowering of interest rates for priority industries and co-ordinated financing by all All India and State term financing institutions will be needed. For all this a continuing stability of prices and promotional measures are needed.

Prices and anti-inflation : The wholesale price index for November recorded a fall of 1.8 per cent compared to the rise of 1.8 points noted in October (see last issue p 6). The November decline was due to the continued decline in food prices by 16 points (5 per cent, and liquor and tobacco by 2 points). A survey by the Department of Civil Supplies and Co-operations shows that on a point to point comparison, the minus rate of

inflation in the wholesale prices index reached 5.4 against 1.9 per cent in July 1975 and -52 in October 1975, indicating a negative rate of inflation of 1.3 per cent compared to April - November 1974. The minus rate in the consumer price indices which had started in September 1975 had further improved in October 1975 being -5.7 for industrial workers and -10.6 for agricultural labourers compared to 2.7 per cent in September. The Economic Times retail prices index for greater Bombay to which reference was made in Vol V p 654, showed, however, an increase of one per cent in November over October 1975 and an increase of 1.6 per cent over November 1974. In November 1975 cereal prices declined by 6.8 per cent, pulses by 7.9 per cent, edible oils by 10.2 per cent. The prices of vegetable and fruits rose by 20 per cent, condiments and spices by 12.9 per cent, so that the food basket cost 13 per cent more in November. Similarly among non-food items, all items fell except rent which rose by 5.6 per cent. Among the anti-inflationary measures, the system of credit planning and rationing continued and though money supply in the hands of the public increased by Rs. 602 crores (5.22 per cent) between April and November compared to Rs. 231 crores or 2.1 per cent in the previous year, part of the increase being due to increase in foreign exchange holidays by the Bank (Rs. 99 crores), the increased food grains position absorbed the increase. The 6½ per cent 1976 Union government Rs. 200 crores loan announced on November 24 was opened and closed on December 1, as the loan was over subscribed and all subscribers were assured by RBI that they would receive their full allotment. December was the key closing month for the voluntary disclosure scheme (See Vol V p 654). In an effort to promote its success, a November 29 ordinance amended the earlier one in

providing immunity from confiscation penalty and prosecution under the Customs Act of 1962 and the Gold Control Act of 1968, in the case of persons who declared their concealed income or wealth before the end of the year. This was in addition to the October 8 ordinance exempting prospective declarants from penalty and prosecution under the direct tax laws. The additional assistance by the Union government on account of DAs, advance plan assistance to the States, for irrigation and power, and fertilisers subsidy is expected to amount to Rs. 250 crores—more than the budgeted deficit and the Union government expects the disclosure scheme to meet this additional expenditure. Also the increased valuing of the rupee by 0.98 per cent on December 5 in wake of the weakness of the dollar, to be referred to later, and the directive to RBI from the government to help meet more readily the demands of institutions providing short term credit to the poor majority—such as the Fisheries Corporations, Scheduled Castes Finances Corporations, Backward Classes Finances Corporation, Leather Corporations, the Slum Clearance Boards etc. increases the pressure on resources. Towards the end of December, there was a rush for disclosures to the income tax departments all over the country. The government announced that these sections of the department will work every day till December 31 till 7 and 9 a.m. and will be open on all holidays and Sundays including the December 31 till mid night. In Bombay, in the last 10 days of December 15,000 chalans were being issued per day, with people in the film and building industry, and the professions in the lead. In this context the department stepped up its raids on doctors and others in order to increase the disclosures desire. On the basis of declarations made till mid night

on December 31, the voluntary disclosure scheme has resulted in declaring Rs. 1,313 crores in concealed income and wealth. Bombay's total as at January 2 amounted to Rs. 318 crores, Calcutta Rs. 217 crores, Madras Rs. 154 crores, Delhi Rs. 150 crores and Ahmedabad Rs. 77 crores. This is a success for this instrumentality and the department must be congratulated on the manner in which the ordinance was executed.

Economic and Industrial growth : The Economic Times makes a quick estimate of the country's national income for 1974-75 as being 1.6 per cent higher than that for 1973-74, while the per capita income fell by -0.7 per cent. Using CSO's quick estimates for the 1973-74 national income (CSO has not published its estimates for 1974-75, see Vol V pp 337-338 and last issue pp. 7-8), it is computed that this 1.6 per cent increase in National income at 1960-61 prices means a national income of Rs. 20,040 crores and a per capita income of Rs. 337.7 (compared to the 1973-74 per capita income of Rs. 340.1). In 1974-75 according to this estimate, the agricultural net product declined by 1.4 per cent due to the set back in food grains, oil seeds and jute production, while the industrial sector inched forward at 2.1 per cent. On the industrial front, it is estimated that for this year 1975-76, there will be an increase of 4 per cent, despite substantial increases in some industrial sectors. The pull back in industrial growth this year is due to lower production in the textiles, automobiles and sugar sectors. Despite the good cotton crop, cotton yarn production declined by 5.6 per cent and cloth by 12.3 per cent, and given the greater weight of textiles in the index, this was a serious drag factor. In the automobile sector, car production fell by 40 per cent, jeeps by 16 per cent, and auto rickshaws

by 10 per cent, while the production of buses rose by 12 per cent, tractors by 30 per cent, motor cycles by 18 per cent and mopeds by 12 per cent, indicating the nature of the demand shift. On the other hand vanaspathi, fertilizers, aluminium, copper, coal, steel, have done well increasing by 10-20 per cent in the first six months. The hope, however, that industrial growth will reach 6 per cent, if not the planned 8 per cent this year will not materialise because the first 6 months partial index prepared by the Department shows that the increase has been 3.8 per cent over the corresponding period of the last financial year. It is extremely unlikely that the year as a whole will show a rate higher than the 4 per cent referred to earlier.

Public Sector Performance : Public Sector undertakings under the Ministry of Industry have in the first 8 months April-November, achieved 90 per cent of the target set for the whole year, at Rs. 414.34 crores against the targetted Rs. 459.44 crores. The November production was Rs. 61.11 crores which was 88 per cent of the target. Major units such as HEC and HMT recorded 90 per cent achievement, while Triveni and Richardson and Cruddas registered 132 and 111 per cent, BHEL 91 per cent, Bharat Heavy Plate and Vessels 82 per cent, MAMC 73 per cent, ISW and Burn 91 per cent. The government also reports that diversification of public investment into various sectors helped increase the registration of new government companies. In 1974-75, 92 new government companies were registered compared to 64 in 1973-74. This was evenly spread in all regions. Tamil Nadu was the only State to attract greater attention both from the government (11 companies with Rs. 31.4 crores capital) as well as the private sector (289 companies with Rs. 42

crores capital). For the country as a whole, 3,607 private companies were registered with a capital of Rs. 402 crores (being a decline from the previous year's 3,713 companies and Rs. 510 crores capital). An interesting development was that in the backward areas of Andhra Pradesh and Orissa the newly formed public sector companies entered the processing and manufacturing sector with greater alacrity and momentum.

National Production Front :

Steel : During the first 8 months of the present financial year, steel production at 36.23 lakh tonnes registered a 16 per cent increase over the same period last year. In November saleable steel production increased by 16.5 per cent at 4.88 lakhs. During the month Rourkela achieved 93.2 per cent of capacity and in December started producing high strength weldable structural steels—which will reduce the cost of transportation equipment like trucks, railway wagons, pipe lines and transmission towers. Durgapur improved its production during November by 41.5 per cent compared to November 1974, being 12.5 per cent more than the month's target, while its ASP operated at 101 per cent of rated capacity. Bhilai produced 1.56 lakh tonnes in November will be exceeding its capacity and plans to speed up its expansion from 2.5 million tonnes to 4 million tonnes. With the commissioning of the 3,200 mm plate mill, it will now fabricate any tubes of ships, sea platforms and other sea going vessels. On December 11, the hot strip mill at Bokaro was commissioned to produce hot rolled sheets, plates and coils needed for heavy engineering, transport and machine building industries. Its first stage of producing 1.4 million tonnes of finished steel is now complete and the next stage is to increase its capacity of 3.37 million

tonnes. With this hot strip mill and Rourkela's rising production, the availability of plates and sheets will be continuously increased. The glut in the steel market continues and so in early December the Steel Parity committee decided that steel plates and forging quality steel consumers will get their supplies directly from producers as do consumers of other steel categories. Also at the same time the government relaxed its stainless steel import policy to allow utensils manufacturers to have access to the metal. Later the ministry also revoked certain clauses of the Iron and Steel control order to make iron and steel and scrap available more freely to the medium and small entrepreneurs in the interior consuming centres. IPC increased in early December the prices of pig iron of all grades by Rs. 9 per tonne and steel items except wheels, axles and sleepers by Rs. 13 per tonne to offset the increased railway freight charges, while ensuring that steel is available at the same price everywhere in the country. The government also announced on December 9 an excise relief of Rs. 150/- per tonne to the steel produced by the mini steel plants to make such plants economically viable, diversify their production and help them switch over to alloy and special steel production. The problems of the plants which have been allowed to be established in an unplanned manner are larger than those which can be met by this excise relief measure. The government has asked MECON and Dastur to study and report on their problems. With the excess steel supply in the country (due to recessionary trends and not to the fact that the country is a large steel producer), the government, which has obtained an export order for 12 lakh tonnes, plans to export Rs. 100 crores of steel this year. On the other hand steel imports have been cut back to Rs. 75 crores for the year, so that the industry now becomes a net foreign exchange

earner. SAIL has developed a 25 year perspective plan aiming at a target of 75 million tonnes at the end of the century. In the plan, in addition to the expansion of the integrated plants, including Salem, Vijayanagar and Vishakapatnam, the sponge iron process and the electric arc furnace will have an important role. A sponge iron unit in Andhra Pradesh with the help of NML and UNIDO and the production of sponge iron based on the natural gas from Bombay High which has substantial quantities are some of the projects in the perspective plan.

Crude: Domestic crude production is increasing, the first 11 months, January-November output being 7.55 million tonnes which was an increase of 7.32 lakh tonnes over last year's first 11 months. The major share of this increased effort was due to ONGC which increased its production from 3.9 million tonnes in January - November 1974 to 4.7 million tonnes in this year's 11 months period. The oil refineries also processed more crude during the period at 199.10 lakh tonnes compared to last year's 190.70 lakh tonnes. The country earned Rs. 12 crores by exporting 1.45 lakh tonnes of petroleum products during January-September. ONGC expects to keep improving its production so as to produce 50 million tonnes of crude during the next 20 years. For this it is setting up an Institute of Research Studies in Baroda to study the latest techniques of recovery norms, water flooding the wells, thermal recovery polymer flooding, imbibition and wettability, acidisation, hydrofracture and mathematical modelling. A natural gas field has been discovered while drilling for oil in the Gulf of Kutch. There are indications that there is a vast oil field in this area, rivalling Bombay High. ONGC has taken steps to drill for oil at Neravelikalapa in Thanjavur district.

The preliminary work which will cost Rs. 2 lakhs will be completed by April. On the effort to reduce crude consumption, work is in progress to reduce fuel consumption by public transport vehicles through improved mechanical maintenance of vehicles, derating of fuel injection pumps and controlling their speed. Also a series of fiscal and other measures are being developed to encourage recycling of used lubricating oils. A public sector recycling plant is to pioneer in this matter. At present 35 licenses to set up such plants at 15-500 tonnes per annum have been issued and a few private plants have been established. The total refining capacity of these recycling plants is about 15,000 tonnes. One of the problems faced by the crude oil refineries is the sharp fall in demand for bitumen which affects the refineries' yield pattern and hence involves an uneconomical use of crude. Bitumen demand has fallen from an annual one million tonnes in the year 1971 to 5.5 lakh tonnes, due to reduced funds for roads (from Rs. 120 crores in 1973-74 to Rs. 45 crores in 1975-76) and the higher bitumen price (Rs. 360/- per tonne). Bitumen manufacture increases middle distillate yields and reduces fuel oil output. The present cut back in bitumen production results also in a loss of Rs. 15.98 crores in foreign exchange per annum. As bulk bitumen sales have been steady, while packed bitumen demand has declined, it is recommended that a bulk only scheme of bitumen production be rapidly implemented and lighter crudes be used in the refineries to avoid reduced production of middle distillates. To meet the 10 per cent rise in OPEC prices (see Vol V p 584), the government announced that from December 1, a rise in the ceiling selling prices of kerosene, HSD and furnace oil by Rs. 120 per kilo litre and the price of

cooking gas by Rs. 166.67 per tonne. As a result, it is expected that the consumption of furnace oil will be further restricted and there will be increased use of coal by industry. In the case of superior kerosene and HSD, the price rise will lead to some reduction in consumption as they form the bulk of petroleum product consumption. In addition the State governments have been asked to streamline distribution arrangements, rationalise transportation costs, local levies and commissions and so supervise the end price particularly in small towns and rural areas, so that the poor majority are not deprived of their share or are forced to pay higher prices. India has concluded an agreement with Kuwait for long term supply of petroleum products and another agreement with Egypt for the supply of half a million tonnes of crude. The government also reached agreement with Burmah Shell to take over its installations by December 31 with a compensation of Rs. 31 crores with all its staff and obligations. Its refinery operates at 3.75 million tonnes per year and can be stepped up to 5.25 million tonnes, using Iran and Saudi Arabian crude and made capable of processing 2 million tonnes of Bombay High crude. Another effect will be that Oil India—a 50-50 joint company of Burmah Shell and Indian government would be used to expand oil exploration operations in North East India. For this a further agreement will be needed as this is the viable alternative to relieving ONGC of the growing heavy burden of oil shore exploration.

Coal and Copper: December coal production is estimated at 8.3 million tonnes. This means for the 12 months, January - December 1975, coal production totalled 95 million tonnes which was an increase of 12 million tonnes over

1974. Consumers' needs have been fully met and comfortable stocks built up. In September 1975 there was a record loading of 9,600 wagons per day which was 1,100 wagons more per day than in September 1974. Work is proceeding on establishing sophisticated washeries and simple beneficiation techniques by the central Institute at Ranchi. The Institute is also advising industries on the type of equipment for using coal that is to be installed to economise on fuel, which takes into account the characteristics of the coal used. The latest technology in raising coal is being used with the help of coal experts from USSR, Poland, France, Hungary, Germany and UK. BCCL is using the UK technique of long wall mechanised mines. Coal India is using German coal blast technology and the Hungarian machine for the rapid development of galleries for long wall block. Murulidi mines are using France's scrapper mining and for degassification at Ahmedabad. USSR is helping in Singrauli, Jayant and a feasibility report at the Jhanga underground mine for producing 2.5 million tonnes. The perspectives of further increasing coal production are bright. Hindustan Copper reports that in the 8 months, April to November, it produced 13,077 tonnes of blister copper and 8,189 tonnes of copper wire, which was a 100 per cent increase of the production in the first 8 months of 1974-75. The November production was 1,963 tonnes of blister copper (1,303 tonnes in November 1974) and 1,528 tonnes of copper bar (680 tonnes in November 1974). The major improvement in production was at Rajasthan's Khetri copper complex, with increased production also at Bihar's Ghatsila complex.

Sugar : To meet the increased cost of establishing new sugar factories, which

for a production of 1,250 tonnes per day has increased 100 per cent during the last 2 years (from Rs. 350 lakhs in May 1973 to Rs. 650 lakhs in November 1975), and in order to move towards attaining the Fifth Plan target of 60 lakh tonnes capacity wherein, of the 106 new units and 76 expansions for a total capacity of 71 lakh tonnes capacity not much actual headway has been made, the government announced a comprehensive incentive scheme at the end of November to take effect from November 1. Under the scheme, new sugar units will be exempted from levy quotas for the first 2 years and in the third year 15 per cent will be the levy quota from only the high recovery areas. In the following 3 years the levy quotas will be increased gradually to 35 per cent. In the case of expansion schemes the free sale quotas will be 65 per cent in high recovery areas and 70 per cent in low recovery areas, gradually declining to 35 per cent in the 6th year. These higher free sale quotas apply to excess production in a season over the average of the past 3 years. Both new units and expansions will be required to pay excise duty in accordance with the normal rates applicable to existing units on the basis of the 65 to 35 ratio of levy and free sale sugar. In mid December, the government also called upon the States to exempt new sugar factories from the cane purchase tax as an additional incentive, recommended by the Sampath committee and urged by IFC and the Banks. With these incentives, financial institutions are now coming forward to finance new units and expansions, so that the stagnation is at last broken. There is also a further urgency in expanding sugar production as it has become a major foreign exchange earner (see Vol V p 588).

Textiles: The World Bank report on the textile industry makes sad reading. Starting with the growth of cloth production at one per cent over the decade 1963-1974 and 1.5 per cent annual decline in per capita cloth consumption in the country from 14.7 metres in 1963 to 12.1 metres in 1974, along with a growth of 12 per cent per year in value of exports, which however was mainly in low quality (grey) cloth which provides no long-term basis for export growth, the report analyses the multiple causes for this poor performance: (a) heavy dependence on the sluggish agricultural sector for its cotton raw materials (which are dirty, variable in staple length, containing a great deal of immature fibres: (b) grossly over spinning cotton to save on raw materials: (c) most of the equipment which is appropriate to labour surplus economies is however in bad and poor condition: (d) lack of specialisation leading to under utilisation of capacity and lower machine and labour productivity: and (e) the system of differential excise duties between hand and power looms which provides an incentive to make inaccurate returns. The mission recommends improvement in cotton, increased use of viscose updating of equipment, the development of a sector of the industry to meet quality exports, a sector which will be capital based and have spin off effects in raising industrial efficiency generally, the development of a labour intensive garments industry by starting with importing cloth for this industry, and a reassessment of Plan targets which are need based and not related to the capacity of the industry to finance the needed investment or sell its cloth in accordance with the double objective of increasing the supply of low cost durable cloth and increasing exports. This is a searching analysis and while some parts, as the need to import cloth to learn from other coun-

tries might seem far fetched, the major recommendations should be reviewed and acted upon. Meanwhile in early December the Union government announced a five point relief scheme for the industry comprising: (1) All financially weak mills including those under the National Textile Corporation are exempted from producing controlled cloth for a year. This will apply also to all mills with good export performance. The weak mills have been identified by the Textile Commissioner. (2) A selective programme of modernisation on a crash basis, with preference to sick and NTC mills is to be executed. Government will guarantee bank loans for this purpose for which a special cell in IDBI from April 1 will function. (3) Conceding the industry's demand for a price rise, a committee under the chairmanship of Mr. S. S. Marathe, Chairman, Bureau of Industrial Costs and Prices will examine the cost structure of the industry producing controlled cloth and on its report to be made within 2 months the government will act. (4) To liquidate accumulated stocks, the mills are permitted to sell 10 per cent of controlled cloth production through their own retail shops and another 10 per cent through approved shops. (The 90,000 bales accumulated is more than double the normal stocks). (5) to enable the handloom sector to sell its dhoties and saris which faces stiff competition from mill made varieties, the Union government will make available funds to them to offer a 20 per cent rebate in December and January, subject to a matching grant from the States. Industrial circles are disappointed that their request for cost price for controlled cloth has not been granted, but the effect of this package will be to reduce such cloth production by 31 per cent. The effect on their prices will need watching.

Agricultural Production: Rice procurement in December pointed to the possibility of exceeding the year's target of 4.6 million tonnes (see Vol V p 661). By mid December the Central pool procurement exceeded 2.5 million tonnes which was near double the 1974 December procurement. Punjab is procuring 10.7 lakh tonnes against its target of 9 lakh tonnes, Haryana is procuring 3.1 lakh tonnes against its 3 lakh target, Kashmir 37,000 tonnes (30,000 tonnes target), UP 3.70 lakh tonnes (5 lakh tonnes target), Tamil Nadu 2.8 lakh tonnes of Kuruva (total target 5 lakh tonnes). Coarse kharif cereals procurement which has no target totalled 1.63 lakh tonnes in mid December and in some areas there were reports of prices crashing. It looks as if the APC target of 5.3 million tonnes of rice procurement will be attained this year. The Union ministry estimates a total food grains output of 114 million tonnes this year due primarily to the well distributed and full South West Monsoon which has produced the good kharif crop referred to earlier. The rains were backed up by good HYV seeds supply, fertilisers and prophylactic measures. Tamil Nadu will have 80 lakh tonnes of food grains (against last year's 58 lakh tonnes, see Vol V p 280 where there is a printing error 75.23 should be 57.23), including 61 lakh tonnes of rice. Kerala is producing about half its rice needs this year. The other States report as follows: Andhra Pradesh with a good crop and Karnataka with 55 lakh tonnes of food grains, Maharashtra with 10.2 million tonnes of kharif food grains, Orissa despite floods exceeding last year's food grains by 12 lakh tonnes at 42 lakh tonnes, MP with 38 lakh tonnes (an increase of 16 lakh tonnes over last year), West Bengal with 62.50 lakh tonnes, UP with 71 lakh tonnes and Punjab with 12 lakh tonnes of kharif rice, 9 lakh tonnes

of maize and 1.16 lakh tonnes of bajra: only in Bihar have the floods reduced the normal 50 lakh tonnes rice yield to 36 lakh tonnes. In Gujarat in the Sourashtra region which produces 30 per cent of the country's ground nut crop, production is 13.5 lakh tonnes and for the State 16 lakh tonnes, which is in excess of all previous records. All oil mills which had been idle for the last 2 years are now in full swing, producing 3,000 tonnes of ground nut oil. Prices of both groundnut and oil have fallen—the former from Rs. 45 to Rs. 34 per 20 kg. and the oil from Rs. 125 to Rs. 84 per 16 kgs. As noted in the last issue p. 14, an additional Rs. 10.40 crores plan assistance was made to irrigation projects in Andhra Pradesh, Kerala and Maharashtra—for the Nagarjunasagar Pochampad, Bhima and Kukadi and Pariyar, Pamba and Kuthiadi projects. To further increase agricultural production, the Union government at the end of November announced a reduction in the prices of fertilisers, ranging from Rs. 55 to Rs. 430 per tonne. Also the import duty on phosphoric acid was reduced from 30 to 15 per cent and the excise duty on single super phosphatic from 15 to 7½ per cent. This reduction should help to counter the reduction in fertiliser consumption which was 28.4 lakh tonnes in 1973-74 and 25.8 lakh tonnes in 1974-75. The July reduction in nitrogen prices (see Vol V p. 463) led to its increased use. Now there is need to ensure such expanded use of potash and phosphates which are needed for restoring soil nutrients. The Union government is launching a feed and fodder development programme in Andhra Pradesh, Haryana, Maharashtra, Punjab, Rajasthan, Tamil Nadu, UP and West Bengal. Under the programme, kits containing 4 kgs. of seeds, each sufficient for ¼ acre is distributed to farmers with instructions for their use. For the next crop season, 3,600 farmers

will be covered, going up to 5,700 in 1978-79. This will be a great help to the animal husbandry industry. The results of the first comprehensive agricultural census of the country released at the end of December show 70 million operational holdings over 162 million hectares of land, the average size of a holding being 2.30 hectares. Marginal holdings (below 1 hectare) are the majority, 49.4 of the country's geographical area is under cultivation, 58.7 millions are individual holdings and 11.8 million joint holdings; 19 per cent are small holdings of 1 or 2 hectares, while medium holdings (4 to 10 hectares) and large holdings (10 hectares and above) account for 2/3 of the aggregate area under holdings. 12.4 million hectares in operational holdings remain unused, mainly in Rajasthan, MP, AP, Maharashtra and Karnataka. Almost 2/3 of the total area under rice cultivation is unirrigated, mainly in small and semi-medium holdings of 1-4 hectares. Hence the census points out that a break through in cultivation techniques in unirrigated areas is the only means of achieving a significant increase in rice production in the country. The greater part of the wheat cultivation in the country is under irrigated conditions (54 per cent) and here again small and semi-medium holdings are preponderant as they are in maize and barley production. In the case of oil seeds, 63 per cent are medium and large scale holding, as is cotton cultivation. Jute is largely cultivated in medium, small and marginal holdings. The census is a valuable document for agricultural planning and should be kept up to date.

Exports: It looks as if this year's deficit will be larger than last year's Rs. 1,164 crores (see Vol V p 402). Between April and October 1975, in the first 8 months, exports stood at

Rs. 2,015.88 crores and imports at Rs. 2,951.40 crores, showing a deficit of Rs. 935.63 crores. If to this is added the Rs. 118 crores for October on account of crude imports, already in 8 months the deficit has crossed the Rs. 1,000 crore mark. The April - June export list shows a serious decline in jute exports, spices, textiles and even tea and oil seeds, where a 3 month decline of about Rs. 40 crores is recorded. On the imports side, there has been no restriction over last year's essential imports which were fertilisers (Rs. 521 crores), food grains (Rs. 758 crores) and Petroleum (Rs. 1,157 crores) and other what are called maintenance imports. There is urgent need both to expand exports and economise on imports. To this end to take advantage of the US decision to enter the Generalised System of Preference scheme from January 1, 1976 recommended by UNCTAD I and II in 1964 and 1968 and earlier introduced by Australia, EEC, Japan, Norway, UK, Finland, Sweden, Denmark, Bulgaria, Czechoslovakia and Hungary and last year by Canada, the commerce ministry is setting up a cell in order to promote an additional Rs. 500 crores exports and expand India's imports into these countries beyond the 5-6 per cent place they now occupy. Of particular interest to India is the US coverage of GSP of such items as black pepper, ginger, mango pulp, linseed cake, oils, ferromanganese, plywood, agricultural implements, hand tools, machine tools, sewing machines, primary cell batteries, sports goods and precious and semi-precious stones, whose exports can be expanded. A series of measures to expand trade with France in bicycle parts, semi-conductor devices, scientific and measuring instruments and new areas to be developed by trade teams visiting the 2 countries were decided during the visit to India of the French Foreign Trade minister in mid December.

To increase exports to the general currency area, the Union government decided in early December to extend the cash assistance scheme to woollen knit wear and hosiery items. At present these items are being exported to the value of Rs. 20 crores to the Rupee trading area, particularly the USSR, but with this incentive its exports to the general currency area will be promoted. US has emerged as a major buyer of Indian cotton shirts, which last year amounted to Rs. 7.2 crores, which under GSP will be further expanded. Total cotton shirts exports which were Rs. 16.55 crores will be near doubled for this year under these arrangements. On engineering exports, the plan is to increase the current Rs. 360 crores of heavy engineering and electrical equipment to Rs. 1,000 crores by the end of the Fifth Plan—which is possible with the expanding and production base represented by BHEL, HEC, HMT and Triveni structurals. On general engineering exports, for April - October 1975, exports amounted to Rs. 184.50 crores which was a 34 per cent increase over the 1974 exports of Rs. 137.49 crores. The target for this year is Rs. 400 crores including a machine tools exports target of Rs. 10 crores, and to achieve that, it is necessary to remove production capacity constraints, exchange rate fluctuations, delay in payment of duty drawbacks and promote more sales hours and participation in trade fairs. SAIL has obtained 15 global tenders for the supply of steel for Rs. 50 crores, mainly to Egypt and the Gulf countries. Exports of automobiles to Gulf countries, Sri Lanka, Africa and Latin America are expanding beyond last year's Rs. 30.2 crores and the current diversification programme in the industry might help. Also iron-ore exports are being increased from last year's 2.44 crore tonnes to the V plan target of 3.55 crore tonnes. This is reflected in MMTC's exports which in

1975 amount to Rs. 180 crores compared to Rs. 138 crores in 1974. Similarly sari exports are being expanded from the 1974-75 total of Rs. 7.5 crores, with particular emphasis on EEC and Middle East Countries. Tobacco exports on the other hand are unsatisfactory, particularly as the opportunities for participating in the expanding world trade in tobacco are expanding. It is necessary for every trade mark to be seized in order to boost exports this year and reduce the deficit referred to earlier.

Aid: In last November and early December, India signed 5 agreements with the UK, totalling Rs. 184 crores, Rs. 17 crores (£ 9.3 million) for the proposed Salaya-Koyalī pipe line, Rs. 110.3 crores (£ 60 millions) as maintenance aid, Rs. 20.6 crores (£ 11.2 millions) for debt refinancing, Rs. 18.4 crores (£ 10 millions) for mixed projects and Rs. 18.4 crores (£ 10 millions) for the coal mining industry (to which reference was made earlier). In these agreements, UK is following the new policy of making grants instead of loans to countries whose per capita income is less than \$ 200, meeting 45 per cent of the debt service to UK due from India, providing in the £ 60 millions part free foreign exchange and 70 per cent of the aid as non project aid—which is a great improvement in the quality of aid. With the conclusion of IDA negotiations of \$ 105 million credit for the fertiliser industry and \$ 150 million for power transmission, India will be obtaining from IDA this year \$ 684 millions in credits, India will also be obtaining assistance from the World Bank's "Third Window" (see Vol V p 591) - making a total of \$ 840 millions from the World Bank group for its fiscal year ending June 1975. Canada will be supplying India with Rs. 37.8 crores (\$ 45.2 million) worth of wheat under its international food aid programme.

International

Bangla Desh: Bangla Desh has a stockpile of 23,000 tonnes of newsprint and with the declining newsprint market both abroad and at home, its Khulna mill has reduced its production to 51 tonnes per day. The government decided in mid November to introduce population planning education under a scheme which will cover 5 million school students and 60,000 teachers at a cost of taka 25 million. Negotiations between the two countries are being prepared for January on the question of the import of 2 lakh bales of raw jute from Bangla Desh. The 2 questions which need to be negotiated are the price per maund of jute and the rupee or free foreign exchange in which the payment has to be made.

World Monetary Reform: December saw preparations for the January 7-10 meeting in Kingston, Jamaica of the interim committee of the IMF Board of Governors and the World Bank joint ministerial committee at which the world economy, increase in members' quotas, the gold agreement and the trust fund, amendment of the IMF articles, the World Bank's third window and commodity problem and agreements will be discussed and hopefully decided. In mid December, ECM finance ministers met and agreed that within the reform package at the last IMF meeting in August (see Vol V pp 589-591), their central banks should buy gold put up for sale by IMF. They also decided that the Swiss Franc will not be included in the monetary snake of the ECM for the present. The group of 10 (the rich men's club) meeting on December 20 ratified the mid December ECM agreement on gold sales to the central banks and reached agreement on currency rates in the world monetary system. Under this decision the rich

countries will, at the Jamaica meeting, press for the central banks to buy 1/6 of the IMF gold contributed by the country and another 1/6 which will be restored to the country both at the official rate of \$ 42.22 an ounce. The gold will be sold by the Central Banks at the open market rate which in December was \$ 140 an ounce and the second 1/6 part's profits will be transmitted to the IMF Trust Fund. This decision runs counter to the IMF charter provision that bars central banks from buying or selling gold at rates higher than the official rate (\$ 42.22 per ounce). This controversy, it is hoped, can be resolved before the Jamaica meeting, so that the Trust Fund's establishment and functioning is not unnecessarily postponed. In early December, the US dollar improved its exchange value in relation to European and Japanese currencies—2.622 marks, 2.6451 Swiss Francs, 4.4620 French Francs and \$ 2.0225 to the pound, primarily because of the relatively lower rate of inflation in the US compared to these other countries but in relation to the Rupee.

Conference on International Economic Co-operation: The April 1975 preparatory meeting on world energy and economic problems which adjourned without an agreement on the agenda (see Vol V p 278), after a great deal of further preparatory work, convened as the Conference on International Economic Co-operation at Paris on December 16-19 attended by 27 countries (8 developed and 19 oil producing and oil consuming developing countries) and made a number of procedural decisions for developing the New International Economic Order, which will reduce existing inequalities between the rich and poor nations. It decided that on February 11 four commissions dealing with energy, raw materials, development and finance should start

their work and the 2 co-chairmen (Venezuela and Canada) and the 4 commission chairmen should meet on January 26 to make the guidelines of the commissions more precise. The OPEC countries want the guidelines to be definite and pinpointed, while the rich countries want to keep their mandates as drafted before the December meeting, with details to be worked out in the other existing agencies such as GATT and IMF, where they have a preponderant voice. This issue goes to the heart of the matter and must be resolved in favour of full and free dialogue aimed at a consensus on the urgent issues facing the NIEO, namely, protection of the poor countries' purchasing power derived from their exports, balance of payment aid and relief, additional drawing rights, debt rescheduling, against the deadline of UNCTAD IV meeting in May in Kenya. In arriving at a consensus on these vital issues, it is important that the rich countries go along with the decisions as otherwise UNCTAD will once more be a facade, where the poor majority make decisions which are not executed.

Commodity stock piles: In mid December UNCTAD published its report on the proposed \$6 billion fund to finance reserve stock piles of several commodities as a means of stabilising their prices. The commodities proposed for stock piling are coffee, copper, rubber, tin, tea, sugar, cotton, cocoa, jute and sisal. \$3 billion will be immediately needed to support commodities currently experiencing depressed markets and another \$3 billion needed on call when required. In one of the 3 alternatives means of financing this \$6,000 million fund proposal, OPEC markets will contribute 25 per cent of the fund, while commodity exporters and importers should

raise the remainder on a 50 : 50 basis. The other 2 alternatives are for the exporting and importing countries to split the whole capital cost equally or on a 60 : 40 basis. It is hoped that the first alternative will be adopted by the countries.

Other UNCTAD Proposals: As a means of economising on existing fertiliser technology which is oil based, increase employment and save on capital cost, foreign exchange and money, UNCTAD has called for global support to the biogas technology developed in India. It produces cooking gas and improved nitrogen fertilisers and can increase rural employment and save on transport costs. In another report UNCTAD proposes that co-operative pharmaceuticals production and technology centres (COPPTECS) be set up in Third World countries with the help of UNCTAD, UNIDO and WHO as a means of going beyond the formulating and packaging stages that a few developing countries engage in and as a means of researching basic medical needs for drugs, arrangements for improving the firms on which imported drugs are purchased, adaptation and development of technologies and finally production of basic chemicals themselves. In a third report, UNCTAD recommends revision of the patent system and proposes an international patent system to promote the transfer of technology to the developing countries. For this, it recommends that a technology transfer centre be established in the country in the ministry of Planning to identify technological needs, collect and store information on alternative sources of technology, evaluate and select appropriate technologies, absorb and adopt foreign technology and generate indigenous technology. In this regard the report makes two important points.

First it recommends that luxury articles like cars, frigidaires, air-conditioners should be imported by most countries, and the cost and investment distortions caused by their local assemblage or production with their undesirable demonstration effect avoided. Second developing countries should find ways of co-operating among themselves to obtain technology on better terms and conditions and create their own technologies to meet their local conditions. Most of these proposals have been made in this country by various committees and discussed in this Bulletin. What is needed is the will to execute them.

Second Development Decade: The UN Committee on the Second Development Decade has a report which emphasises the need for the hard core developing countries to expand public savings and to devise fiscal policies to increase private savings so that the ratio of gross national savings to gross product can be raised. This ratio should be 15 per cent as a critical test of the country being at the point of self-sustained economic and social progress. Some countries, India, Sri Lanka, Tanzania have crossed this threshold and with a systematic effort can further increase their savings ratio. External aid has played a varying role—in some African countries amounting to 6 to 11 per cent of their GDP, in India less than one per cent of its GDP. In Agriculture there is need for expansion and modernisation to accelerate growth, ease inflationary pressures and balance of payments strains, enlarge employment, improve nutrition and increase incomes in the poverty sector. India's secular trend of 2 to 2.5 per cent agricultural increase needs to be stepped up. There is need for a harmonious balance between food production and raw materials production in devising and executing the invest-

ment programme. In industry, there is need for manufacturers, power generation, and transportation to be integrated with agriculture. Here again India's secular Industrial growth rate of 5 per cent is low and can be improved by its heavy industries improving its performance. India's mineral base—iron ore, bauxite, phosphates—is good, calling for more middle level technicians. Its diversified foreign trade can be expanded if the rich countries would lower their tariff and non-tariff barriers. With the adoption of GSP by the US, there may be a beginning in this regard.

World Textiles, Water and Food grains: GATT reports that the world production of textiles fell in the first half of 1975, continuing the declining 1974 trend, and textile exports declined markedly in the period. Third World producers increasing their textile exports marginally from 27 per cent in 1974 to 28 per cent in 1975. The value of world trade in textiles was \$ 32.1 millions in 1974 (a rise of 24 per cent), while the combined value of exports from Industrialised countries fell by 10 per cent in the first half of 1975. Their production in those countries declined by 4 per cent in 1974. Even so these countries were the principal suppliers, providing 62 per cent of the exports both in 1973 and 1974. The Second World Congress on water resources meeting in Delhi from December 13 to 16 urged that water be considered a national asset, that planning for water resources development should be multi-objective based and multi-disciplinary aimed at establishing master plans on a regional or national basis, that conjunctive use of water is necessary, and remote sensing and other new techniques should be explored, and that construction technologies should be suited to local conditions and reduce the damages to the minimum. It laid special

emphasis on proper design of irrigation systems to save water and promote greater agricultural production, and on maintaining water quality and all measures to avoid and control pollution. On the world food grains front, the bad news is that Soviet grain production in 1975 is 80 million tonnes short at 137 million tonnes instead of the target of 215 million tonnes.

This reduces the world food grains stocks and has forced food grain importing countries (from the Soviet Union) like GDR to draw upon west food grain stocks, as it did in importing 3 million tonnes during the year. In its 10th Five Year Plan the Soviet Union is planning an annual grain production of 215-220 million tonnes.

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II Agricultural Development

Paddy:

As noted in the National section, the State expects the decade's record of food grains production of 80.60 lakh tonnes for this year, comprising 61 lakh tonnes of paddy, 17 lakh tonnes of millets and 2.6 lakh tonnes of pulses. Some optimistic estimates forecast the food grains output at 84 lakh tonnes. Of the 67 lakh acres under paddy, 55 lakh acres are to be covered by HYV. In fact out of the 43 lakh acres sown 36 lakh acres are under HYV. Out of the 10 lakh acres under millets to be covered by HYV, 5.31 lakh acres have been covered. In per hectare paddy production, Tamil Nadu at 2,083 kgs. stands second only to Punjab at 2,284 kgs. The good South West Monsoon and North East Monsoon and the water storage position ensure good samba, thaladi and navarai harvests, which are basis for the food grains production forecast. Fertilisers

are well distributed, IR-20, Karuna and Kannagi are freely available, and plant protection and mass farmers contact programme is under way in South Arcot and Chingleput districts. The star performer is, as usual, Thanjavur district where, by the end of December, of the States' 3.05 lakh tonnes which had been procured from the short term kuruva crop, Thanjavur contributed 2.31 lakh tonnes. Every district reports heavy paddy arrivals at the market and procurement due to falling prices. In North Arcot the State Civil Supplies Department is to procure 44,000 tonnes of rice during the samba season for which harvesting had gathered momentum by mid December in Cheyyar, Wandiwash and Arkonam areas. To meet the rush for sales, the Corporation opened 60 more purchase centres in the district, bringing the total of centres to 106. The centres are procuring 10,000-15,000 bags per day—a real record of procurement. South Arcot has procured 21,423 tonnes

of kuruvai rice against the target of 18,000 tonnes through the Corporation's purchase centres at Panruti, Villipuram, Valavanur, Kanai, Siruvanthadu, Tindivanam, Vidur, Ginjee, Ananthapuram etc. Tiruchi procured 6,776 tonnes of paddy, to which should be added the procurement from the 2,18,706 acres under samba paddy. The 9 Modern Rice Mills (MRM) of the Food Corporation, 4 of which are situated in Thanjavur, Mannargudi, Sembanarkoil and Chidambaram have milled about 5,000 tonnes of paddy, which also adds to the rice availability, because of the speed with which the paddy is milled. One mill turned out 4.01 tonnes an hour which is a rapid turnover.

Research Results :

The agricultural department of Anna-malai University announced on December 2 new HYV salinity tolerant strains. They mature in 95 and 105 days respectively, yield 2-4 tonnes more than ADT-31, which is itself a prolific yielder, and are currently a popular kuruvai variety. They have been tried out in sub soil saline water condition in Adur and Thiruvakkulam villages in Chidambaram district, and has grown upto the mass planting stage under saline water conditions after which fresh water treatment speeds maturity. Research into composite high yielding varieties of maize and millets in G. B. Pant University has resulted in the development of 2 composites—syn p 200 kisan and Ant gr. II, which come to harvest in 80 to 90 days, and produce 25 per cent more than the normal varieties. Other releases include rice, blackgram, redgram and soyabean. The latest in soyabean research is the new soyabean variety which yields 70 bushels more than the normal 50 bushels per acre, reduces its height to 30 inches from the normal 60 inches and perform well under tropical conditions (the break through

came in North America). Some remarkable developments are recorded in low cost grain in this State and for other States. Aruna, a radiation induced mutant developed from the traditional HC-6 is a dwarf and matures early. Seed yields of over 3,000 kg. per hectare and 50 per cent more have been recorded. A similar dwarf castor variety is Bhagyal which is shorter than Aruna and matures earlier. There are other varieties of this strain which can be used for pure as well as inter-cropping system. Another break through is the heat treatment of sugar cane fungi, virus and mycoplasma and their associated diseases worked out by the Sugar Cane Breeding Institute, Coimbatore and the Indian Institute of Sugar Cane Research, Lucknow. The remedy involves renewal of the commercial seed with disease free material every 3 or 4 years and for this foundation seed plots should be raised from hot air treated sets. Including machinery and chemicals to prevent secondary infection of the seed cane, the cost is around Rs. 8,000. NCL has demonstrated that virus resistant cane can be produced by tissue culture. To prevent disease and double the income from a unit of the plantation a 3 tier system of cropping in cocoanut and arecanut gardens is prepared. Recent research has shown that inter cropping with tapioca, yams, sweet potatoes, bananas and mixed cropping with cocoa, cloves, nutmeg and pepper can provide the 3 tier canopy in cocoanut plantation. To promote this the Tamil Nadu Agricultural University is setting up a horticultural research station in the Shavroy Hills to research in all aspects of plantation crops, including pepper, cloves, nutmeg and cold vegetables. The most urgent step now is to control the wilt disease attacking the cocoanut plantations in the South which produces 90 per cent of the country's cocoanut. NCL has developed

a cheap method of attaining seedings of hybrid cottage by tissue, which can be used in the Nilgiris.

Farmers Service :

The government plans to establish Farmers Service Societies in different parts of the State so that the inputs needed by farmers are supplied to them in an integrated manner. At present the farmer has to go to one place for his fertilisers, another place for his credit, a third place for his seeds or a fourth place for pesticides. Now one Service Society will be started in each district so that the farmers can get a combined service and together with a credit card system, the possibility of benami transactions will be eliminated. During the current year Rs. 100 crores had been given as agricultural short term loan and Rs. 5 crores as medium term loan and for next year Rs. 115 crores will be so disbursed. In this context the Farmers Service Society can perform an invaluable function in making credit available on time and economically.

Oil seeds :

The State has developed a Plan to increase the production of oil seeds in the 25 lakh acres of the State by over 5 lakh tonnes at a cost of Rs. 1.4 crores. The plan involves supply of mixed fertilisers which has been prepared and tested in various research centres for over a year and assures an increased yield of 2.5 per cent per acre for every 5 kg. application. The scheme also involves supply of improved seeds, of which 7 new strains have been developed in the research stations and the grant of loans to the producers to purchaser of seeds, fertilisers etc. Groundnut production is to be raised from 10.39 lakh tonnes

to 13 lakh tonnes, other oil seeds from 1 lakh to 1.5 lakh tonnes including increasing the acreage of sun flower cultivation by one lakh acre. Included in the plan is the raising of the acreage of pulses cultivation from 20 to 25 lakh acres, use of new short duration HYV 18 strains developed at 1,500 acres Vemban station, and promotion of mixed crop and bund crop cultivation particularly in Thanjavur district. This part of the plan will cost around Rs. 1.5 crores, with Rs. 37 crores being spent this year in increasing pulses output from 2.3 lakh tonnes to 2.7 lakh tonnes.

Cotton :

The acreage under cotton in the State has declined this year rather markedly by 12 per cent, continuing the trend in the last 3 years of reduced acreage from 11 to 7 lakhs. There is already a rather large gap between the cotton needs of Tamil Nadu textile mills, which is 17 lakh bales and the State's cotton production which last year was only 2.3 lakh bales. In face of the shrinkage of the area, the policy is to increase productivity per acre and improve the quality of cotton produced, Suvin which is grown on a large scale over 5,000 acres in the State is of the same quality as the best imported cotton and together with Varalakshmi has become popular throughout the State. In Coimbatore and Madurai areas, farmers are being encouraged to grow parent seeds to the point, where this State is in a position to supply these quality seeds to Maharashtra and Gujarat cotton growers. The wilt disease is also kept under control and the result of all these measures is that though the acreage is declining the output is being maintained at 2.3 lakh bales.

Minor Irrigation :

One of the problems faced in the State is lack of farmer response to the Special Minor Irrigation Programme (SMIP), particularly tanks. This is due to the fact that to use water provided under these schemes on their farms, the farmers have to undertake some construction work themselves, which they are reluctant to do. In view of the large resources invested in the SMIP programme by the government (see MIDS Publication No. 8), the government has decided to impose a betterment levy on all farmers who are potential beneficiaries of an SMIP project within 2 years after completion of the project. This will help overcome the farmer inertia to some extent.

Fish Farming :

As at 1975, the States fishing development plan has resulted in part mechanisation through the distribution of 1,668 mechanised boats to fishermen, along with a further 1,000 mechanised boats currently being produced and distributed. The aim is to attain a fish production target of 4 lakh tonnes of marine fish and 2.3 lakh tonnes of inland fish by the end of the Fifth Plan. This involves a doubling of the allotment under the Fifth Plan compared to the Fourth Plan and negotiations for a world Bank credit of Rs. 30 crores. The Agro Industries Corporation has installed at Guindy the net making machinery imported from Japan. Further a pearl culture centre at Veppalodai near Tuticorin, and a pilot project to produce artificial pearls with the aid of the Central Fisheries Research Unit at Tuticorin, the fishing harbour at Madras port and fishing jetties at Chinnamuttam, Mallipattinam and Kodikarai are being developed. 3,176 fishermen's houses have been constructed and another 900 are under construction

along with 5,000 houses in 42 marine villages.

Coffee :

As forecast in the last issue (p 22), the new International Coffee Agreement was signed at a plenary session of the International Coffee Council on December 4, under which quotas are fixed either on average export performance for the years 1968 to 1972 or the actual average performance for the 2 years of the new agreement, namely 1976-77 and 1977-78. India is choosing the latter option as its exports have been increasing in recent years and will be more than double that of the years 1968-72. Also India will be able to operate profitably the flexible quotas due to the regulated marketing where there are large stocks identified at the time of stock verification. USSR, Poland and Hungary are to join the Agreement and this will further boost India's quota, in view of the increasing exports to these countries. A recent agreement between India and Soviet Union provides for an export of 12,500 tonnes of Indian coffee beans valued at Rs. 15 crores during 1976, plus another 3,000 tonnes in beans or instant coffee. Under the new agreement the quotas will not be operative till 1977, until when only control measures will operate, with stocks verification and statistics. When quotas are enforced, they will be divided into fixed and flexible portions, the latter being based on stocks with the producers. Out of this country's 1.7 million bags of coffee production, 1 million bags are for exports and seven lakh bags for domestic consumption. The Indian Coffee Board announced at the end of December that it will continue the Rs. 5 per kg. subsidy on the special coffee powder blend till 31 December 1976. Due to Brazilian frost, Angolan unrest and

Colombian coffee crop damage which between them account for more than 50 per cent of the world's coffee output, coffee prices are rising and are higher than the peak levels of last year. Indian consumers however will continue to pay at 50 per cent of the international prices. To further increase coffee production in the country, plans have been established to grow coffee in new areas—Andhra Pradesh, Orissa and Assam, which are estimated at 1.5 to 2 lakh acres. In AP, a 5,000 acre scheme at a cost of Rs. 3.11 crores in the East Godavary area, another 2,025 acres in the Vishakapatnam district, in Orissa a scheme for growing coffee on 30,000 acres and in Assam 17,250 acres at a cost of Rs. 17.5 crores have been approved. They are already producing 500 tonnes at Rs. 45 lakhs and this can be rapidly expanded.

Tea :

1975 has been a good year for tea in the country. The first six months shortfall of North India production of 15 million kg. was made up during the year, and with the good South India crop well above last year (5 million kg. in first 8 months), total production is estimated at 500 million kg. which is 7 million kg. above that of 1974. The exports were a little less than last year in quantity but in value higher by Rs. 10 crores at Rs. 225 crores, due to tea prices remaining high, though they began easing in November. World tea production increased above that of last year, mainly due to Sri Lanka, which by October had produced 15.8 million kg. above last year's 165.4 million kg. The improved tea performance in the country was due to good and hard work in the gardens without strikes, railway's speedy transportation services, and the govern-

ment's increased and helpful intervention. The Ministry of Commerce's grant of 10 per cent cash assistance of the FOB value of instant tea, tea bags and packed tea that are exported, the drawback of duty on aluminium foil, RBI's liberalisation of blanket permit facilities for promotional expenses and internal transport subsidy, and the hope of a reduction of the excise in the next budget and an increase in the replantation subsidy and depreciation allowance on field assets—all these have made for increased production. To back up the large investments—Rs. 529.28 lakhs in development schemes, Rs. 1,036.70 lakhs on tea machinery hire purchase and Rs. 73.35 lakhs on irrigation equipment scheme and Rs. 146.23 lakhs on the tea replantation subsidy scheme, there is need for a massive promotion campaign tailored to cover each country and on packet teas—as has been repeatedly emphasized in this Bulletin.

Rubber :

For the year 1975-76 rubber production will be a record 1,47,000 tonnes being a seven fold increase in 2 decades. By the end of the Fifth Plan, production will be 2,00,000-2,20,000 tonnes, using chemical stimulants. Due to the rather low rate of replanting subsidy, the target of replanting 5,000 hectares every year was not reached, the actual replanting by 4,400 hectares in the first 2 plan year. Here also production is being developed in non-traditional areas of Assam, Mizoram, Meghalaya, Arunachal Pradesh and Goa. The production of rubber has risen from 326 kg. per hectare to 760 kg. per hectare in 2 decades. However rubber production meets only 60 per cent of the country's needs and should be further expanded.

III Industrial Development

Neyveli:

The 1974-75 report of NLC makes sad reading. The total mined lignite at 29.44 lakh tonnes was lower than the 33.29 lakh tonnes produced in 1973-74 and the target of 35 lakh tonnes raised in 1973 to 45 lakh tonnes. Net power generation at 2,021 million KWH was stagnant with the previous year's 2,016 million KWH. The shortfall in leco at 18,284 tonnes should be compared to the 24,929 tonnes of the previous year and the target of 25,000 tonnes. Only urea output at 38,195 tonnes went up by 21.2 per cent, though only 85 per cent of the 45 lakh tonnes target and nekolin and clay at 2,682 tonnes and 560 tonnes exceeded their targets. Hence the loss for 1974-75 was Rs. 11.5 crores as against the previous year's loss of Rs. 11.7 crores. The loss would have been greater because of the fall in power generation and slack urea demand, but for the rise in unit sale prices which increased income from Rs. 20.3 crores in 1973-74 to Rs. 33.1 crores in 1974-75. This was not enough to offset the cost escalation. The State depends heavily on NCL for power. Starting in the Second Plan with 250 MW for which 15 lakh tonnes of its planned lignite output of 35 lakh tonnes was to be used, it was raised to 400 MW in 1967 and 600 MW in 1970. This increased power generation target required and increase in lignite production established at 45 lakh tonnes at a cost of Rs. 11.62 crores in June 1973. It was further raised to 65 lakh tonnes to ensure optimum output of power, fertilisers, leco and other by products and the needed equipment for this expansion is being ordered from 1973 (see Vol IV pp 498, 550 and 639 and Vol. V p 285). Total accumulation losses at 31 March 1974 are Rs. 79.74

crores, its gross fixed assets formation has been a low 0.6 per cent in 1971-72, 2.6 per cent in 1973-74 and back to a low 0.5 per cent in 1974-75, with continuous erosion of its capital base and reduced overall funds available for the plants. The government's plan to relieve NCL of this financial menace was discussed in Vol V pp 351 and 352 and so its maintenance and functioning needs to be toned up particularly in relation to expansion programme now underway and prospects of a second mine cut and superthermal plant that are envisaged (see Vol IV p 550).

BHEL's Seamless Tube :

BHEL's seamless tube project outlined in Vol IV p 498 has now been cleared by the Public Investment Board. The estimated capital of the plant is Rs. 80 crores for an annual capacity of 40,000 tonnes of seamless steel tubes, 75 per cent of which will be used by the boiler plant and the rest by ONGC. The billets will come from 3 sources—Mysore Iron and Steel, a Bombay Foundry Arkonam's concast and BHEL, Hardwar. It is a capital intensive project with foreign collaboration.

Pre-stressed Concrete Sleepers and Teleprinter Award :

SERC has produced 200 prestressed concrete broadgauge sleepers under factory conditions. A plant to produce one lakh sleepers a year is the optimum at a cost of Rs. 39 lakhs. The raw materials used are well graded 6 mm to 20 mm size metal, portland cement, high tensile prestressing wire, and good potable water free from impurities. This important break through can also be used for pro-

ducing electric transmission poles, roofing and flooring beams, columns and slabs. A tool engineer of Hindustan Teleprinters, Mr. Rajadurai, was awarded the International Telecommunication Union's World Telecommunication Day award for developing a triangular reamer, which is used in producing punch blocks for perforating attachments of teleprinters, leading to considerable saving of foreign exchange.

SPIC :

SPIC has run into teething troubles in its ammonia and urea plants and has closed the plants down for 6 weeks from November 30 to rectify identified defects in the ammonia equipment, process mechanical improvements in all plants and achieve the optimum functioning of the plants at their rated capacities. Though it has piled up stocks for 2 months for the rabi season, its 40 days shut down involves a loss of Rs. 3 crores (25,000 tonnes of urea) and when it reopens in mid January with rationalisation of prices of naphtha, fuel oil, and sulphur and rock phosphates, it is planned to produce and sell 45,000 tonnes a month at Rs. 6.5 crores. Its sulphuric acid plant went on stream in mid December with an annual capacity of 1,55,100 tonnes.

Textiles :

Rural distribution of controlled cloth in the State is assured by 1,658 retail outlets in rural areas (and 703 in urban areas) operated by district supply and marketing societies and wholesale stores selling controlled cloth. The Union government has provided Rs. 19.22 lakhs as margin money to 35 co-operatives for investment as share capital and the central co-operative banks have been directed to provide the needed cash credit to village co-operatives which are responsible for the

controlled cloth distribution. Special committees have been formed to supervise the village agricultural societies' distribution arrangements along with inspection by department staff.

Sugar :

Following the problems faced by the sugar industry referred to earlier, under the National section, the problem faced by the Southern mills relate to the need for a fair and stable cane price. The four Southern States produce 60 per cent of the country's sugar and for this year, Tamil Nadu mills will be crushing for 200 days, AP mills from 100 days in 1971 to 124 in 1974-75 and Karnataka from 129 to 146 days. Despite this, the Southern mills get no incentive for increasing production, while Northern mills who crush for 80 days get a higher price. Sugar production in the South this year will decline unless a higher sugar price is announced. Also there is need for an effective transfer to the field of the research findings such as those relating to heat therapy referred to in the earlier Agricultural section, and the need for more R and D on sugar cane growing and diseases problems.

Handlooms :

With the US agreement signed at the end of December for increased exports to the US of handloom garments from 62 million square yards in 1974-75 to 75 million square yards in 1975-76, the need for jacking up the handloom garment industry, and ensuring that all exports are really handmade goods becomes urgent. In the State, Tirupur with 1,200 units, Salem with 20, Karur and Coimbatore with 6 each, and an annual turnover of Rs. 27 crores of garments, need supply of stable quality yarn which the mills have

not been supplying them. The needles used in the industry are imported and to prevent their exploitation, the weavers should be given import licenses to import for the needles. Similarly to meet the change in overseas markets (US and Japan) tastes for knitted fabrics, warp knitting machines need to be imported and quality yarn for socks manufactures is needed. At last the commerce ministry has stated that it is examining the proposal to prohibit the manufacture and sale of coloured saris by power looms. The ministry recognises the huge inflow of power loom saris and its depressing effect on the handloom sector. This State has already passed legislation reserving these saris for the handloom sector but the power looms are mainly in Maharashtra and they must be prohibited from fabricating this type of saris.

Leather :

The country will be attaining its leather export target of Rs. 205 crores for 1975-76, in the eight months, April to October 1975, leather exports earned Rs. 107 crores, being an increase of Rs. 16.5 crores over the corresponding 8 months in 1974. Wet blue chrome and tanned hides export were up by 26 per cent, finished leather by 55 per cent, leather footwear by 17 per cent. There is a problem with finished leather exports and production which will not be attaining the Fifth Plan target of 215 lakh pairs, mainly because no further capacity can be created in the organised sector, as the development of footwear has been reserved for the small scale sector. In this context the Development Council for Leather and Leather Goods Industries' recommendation to the commerce ministry to cut the quotas of CI and wet blue leather exports by 30 per cent next year in order to increase finished leather exports does not make sense as the small units

are not equipped to expand their product of finished leather and are awaiting the Service Centres at Ambur, Vaniyambadi, Panipet and Erode in order to increase their finished leather production. To develop these facilities TIIC has made a grant of Rs. 3.25 crores to 60 leather finishing and manufacturing units. The Union government has finally decided to locate the Export Promotion Council at New Delhi and not at Madras and to set up a regional branch of the Council in Madras. This, together with the merger of the Madras and Kanpur councils, are retrograde steps from the point of the expansion of production and exports of finished leather with its main concentration in this State. The Union government has also raised by 20 per cent the air freight rates of finished leather, so that all air lines will compete in clearing the cargo which has been accumulated in the Madras Airport.

Private Sector Reports :

In its annual report for the year ending September 1975, Binny sets forth its diversification plans for an extensive range of ladies cloths and finer countwise product pattern. These plans await long term financial arrangements at lower rates of interest than those prevalent in December 1975. Like other firms, it reports large accumulation of controlled cloth and pleads for suspension of the scheme atleast for a quarter—which has been in effect done as noted earlier. Madura coats in its report for the year ending June 1975 reports sales at Rs. 58.33 crores, with strong demand for synthetic fabrics and exports at Rs. 11.4 crores, which was low because of the contracting overseas demand. Due to recessionary conditions, Rs. 72.60 lakhs were expanded on lay off compensation to workers and some retrenchment of its managerial staff. Its small R and D unit

has developed specialised fabrics and its thread selling organisation widened its marketing base and opened sales depots in 2 other States. The Annual Report of the Deccan Sugar and Abkari company for 1974-75 shows an increase in turnover from Rs. 1, 094.21 lakhs in the previous year to Rs. 1,146.58 lakhs in 1974-75, due to increased sales realisation. It

contracted Rs. 150 lakhs loans from IFC and other term ending institutions to finance its expansion programme. The Pugalur factory crushed cane from 8th August to 30th September and from 1st October 1974 to 2nd June 1974 at a recovery rate of 8.9 and 8.52 per cent. Its distillery operation was expanded, as was its production of carbonic acid.

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IV Education, Science and Health

Educational Reform :

The Annual conference of the Boards of Secondary Education meeting in Bhubaneswar at the end of December called attention to the new pattern of education, 10+2+3, being an opportunity to change the educational system to meet our rapidly changing society and as a means of matching our actions to our words. Instructional material to be produced for this system should reflect attitudinal changes relating education to productivity. At the plus 2 change what is needed is a social transformation where vocational education will not go in for specialisations so much as promote self-employment and vocational competence, using to the maximum existing local resources. At this stage the teachers need not be degree and diploma holders so much as craftsmen, technicians employed elsewhere, and those running their own workshops, and

who know the trade, who may be effective vocational teachers. Even at this pre-university stage marks in examinations may be replaced by grades. Tamil Nadu launched in December with a Rs. 3 lakh grant from the Union government a curriculum renewal project for standards I to V aimed at spelling out the objectives of primary education, particularly for under privileged children, formulation of a balanced functional curriculum, trying out new curriculum approaches and development of instructional arts and effective tools for evaluation. It will be conducted through the teacher training schools at Aduthurai, Tirur and Ranipet, to each of which 10 primary schools will be attached. The second project is a non-formal education project for the 50 per cent primary school dropouts, which would be job oriented and not be based on rigid working hours or stereotyped text books. 100

centres will be started at Coimbatore district and another 100 centres in Tiruchi district. Each centre will serve 30 students in the age-group 15-25. This is a break through in implementing the Educational Perspective Plan of the State (see Vol II No. 9 pp 26-29) and is being spearheaded by the newly formed SCERT (see last issue p 28). The Madras City Corporation is improving the school environment and for this year Rs. 25 lakhs is being spent on 42 classrooms, and next year a further 60 rooms are to be constructed. With the help of a Union government grant, coaching cum guidance centres are being run in the State at Harijan villages to provide both general and technical training to Harijan students for employment in government offices. Also 3 types of pre-examination centres have been set up for them to coach them specially for all India services, State civil services, and engineering services. At the university level, a number of universities have changed the form and content of the external examination question paper. More thought provoking questions, short answer type questions, and multiple choice questions are now in use, as well as objective evaluation systems and improvements in practicals giving weight to process and product of the performance. In the secondary schools of Rajasthan and 500 schools in Tamil Nadu internal assessment has been instituted. In AP, unit teaching and testing and the system of continuous evaluation and attendance are replacing formal promotion exams. Bihar has a phased programme of exam reform, Gujarat has introduced objective questions in its SSC as has Karnataka. In Kerala SSLC exam consist of questions based on pre-planned designs. West Bengal and UP are operating similar reforms. It is time that this triple reform of change in the structure of the question paper, internal evaluation and grading instead of marking

also became the university practice. Madras university has set up a syndicate committee to launch this reform from 1977. The government of AP has taken an important step in university reform in conferring autonomous status on its post-graduate centres at Guntur, Warangal and Anantapur, through which each of these centres will have their own directors, their academic planning boards, Boards of studies and executive council. The directors are in effect mini-vice-chancellors with all the powers of that office—except the conferment of degrees and diplomas which will be by the parent university.

Non-formal Education :

The SITE programme is to be extended beyond the one year initial period and for this purpose the government is allocating Rs. 50 crores. In MP a programme to make 5,000 persons in 1975 literate through 500 block units is being launched by the youth congress. Each unit is to make 10 people literate. MP has one of the lowest literacy rates, having inched forward from 17.13 per cent in 1961 to 22.14 per cent in 1971, when population increased from 32.3 million to 41.6 millions—so that the number of illiterates is greater now. The National Library reports that in 1974-75, 16,182 books were published compared to 17,600 in the previous year, the decline being due to mainly to the paper crisis (see Vol IV pp 192 and 424). In four languages, however, there were a larger number of publications, English 8,171 (7,318 in 1973-74), Oriya 488 (97), Punjabi 213 and Telugu 637. Tamil Nadu was one of the 5 States which produced fewer books in 1974-75 than in the previous period. Children's books were however on the increase. Unesco at an Asian Seminar in December in Kuala Lumpur has recommended that every

country should set up a Children's Book Council to plan, co-ordinate and distribute children's books, and which should be an integral part of their national development programme.

Technical Education :

The country's public sector companies employ over 50,000 managers, of whom 3,000 are senior executives. At present 13 of the units have 13 training institutes. There is need for a programme to develop managerial talent from within the enterprises, so that top managerial posts are not filled by retired or deputed civil servants as at present. For this purpose it is proposed, to start with, to choose some of the 13 institutions to develop inter company collaboration in training managers. This could also lead to operational collaboration between the companies, particularly in dealing with similar marketing problems. The institutes could also help the companies to introduce corporate planning in each unit.

Science :

The World Science and Technology Plan formulated in 1971 by the UN Advisory Committee on Science and Technology around the economic growth concept of environment, population, oceans, seabed and food is to be expanded to take into account the total concept of social, economic and cultural development aimed at the quality of life. Science and Technology is to be used to find pathways for human development with minimum depletion of non-renewable resources, and without degradation of environment and should provide for maximum gainful employment and ensure minimum food, cloth and shelter to every human being. This will involve micro as well as macro planning: micro planning on the steel needed by a country or a large harbour or

oil facility as well as planning for a district or block. This calls for an improved data base, training personnel, and setting up the required institutions. This will bring scientists into the centre of the battle against poverty. With a view to attracting back to the country, the 10,000 scientists abroad and particularly the 1,760 mechanical, electrical or electronics communication engineers and 590 physicists, the Department of Electronics is developing nuclear centres to employ those scientists where selected areas of electronics will be developed on the basis of the approved V Plan projects in electronics and communications. Particularly emphasis is being placed on technocratic enterprises in this context. CSIO has developed a large amount of scientific instruments to meet a major part of the Rs. 250 crores instruments that the country needs during the current plan. In this context, it has established close relations with producers and makes available to them prototype instruments which can straight away go into commercial production. Some 3 major instruments—bubble chamber scanner, monkey chamber, high speed camera as well as a large number of optic and electronic instruments are ready for commercial production. IIT, Delhi has developed biogas technology to resolve energy problems in the country. The technology is based on agricultural and industrial wastes and has developed synthetic fuels which blended petrol can save 20-25 per cent petrol. In the field of agricultural research, a joint ICAR World Bank team is at work identifying major gaps in current research, means of improving the institutions facilities of ICAR and the agricultural universities for more effective research. Special attention is being given to research on food crops like bajra, rice, pulses and oil seeds as well as to animal sciences, soil conservation and water management and pest control.

Health :

Madras Corporation launched once more in December a family planning camp this time at Nummalwarpet, under which the vasectomy operation is performed at Kilpauk Medical College Hospital and a 2 day rest at the camp plus 4 kgs. rice and Rs. 60 are provided to each participant. In order to make the country's family planning programme more effective, the Union panel has recommended that there should be personal supervision by the officers involving atleast 10 night halts outside their headquarters every month, a fortnightly report on problems faced by the block medical officers and a monthly review of the progress and problems at the district level. The Union ministry of health is studying the Shrivastav commit-

tee recommendation (see Vol V pp 5 and 292) for the creation of a para medical cadre to serve the needs of rural areas to co-ordinate the work of doctors and the village level workers and perform simple health care tasks. Also the possibility of allocating every medical college 2 or 3 PHCs to give its student rural experience is under study. In this connection the decision of the Karnataka government to launch a pilot scheme for supplying 100 ayurvedic medical kits as a first step to the introduction of barefoot doctors in the rural areas is an important element. It is planned to train ayurvedic practioners village accountants and educated people in the villages to serve as barefoot doctors. This programme should spread to this and all other States.

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V Employment

Mandays lost in 1974 were almost double that of 1973—being 40.26 million mandays against 20.62 million in 1973. The maximum number of lockouts (182) was in West Bengal with 3.1 million mandays lost. 1974 saw 86 major industrial disputes against 78 in 1973, leading to loss of 30.86 million mandays lost, where again West Bengal accounted for the largest losses (11.12 million) mandays, followed by Maharashtra (8.84

million). The year saw 164 political and sympathetic strikes—almost being an appropriate prelude to the emergency proclaimed in July 1975. The Union labour ministry calls attention to the continuing decline in employment of women during the last 2 decades. In 1951 women in the labour force were 11 per cent. In 1971 it declined to 9. There is a clear case of discrimination in the organised sector. In the textile industry, for instance, 84,000 women were emplo-

yed in 1955 and only 52,000 in 1970—
this is also part of the general unemploy-

ment and under employment situation
in the country.

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VI Other Items

Kalakshetra :

Kalakshetra celebrated its annual convocation and Festival of Indian Arts in December. It is the only higher education institution in the South which has graduate and post-graduate courses in music, dance and drama. There were 15 graduates and 9 post-graduates who received their diplomas at the convocation, which was followed by a fortnight of some of the best performance in Kathakali, Bharathanatyam and Ramayana dances and theatre.

Indian Fine Arts Society :

December is the month of Music festivals in Madras and the three leading societies, the Indian Fine Arts Society, the Madras Music Academy and Tamil Isai Sangam organised a fortnight of musical performances, symposia and lectures at this time. The inauguration of each festival was an occasion for emphasising one aspect of the music field. At the Indian Fine Arts Society the post-graduate course in Music at the University of Madras was announced, in the Madras Music Academy the reason for the Tamil Nadu trinity not working in Tamil was explained, in the Tamil Isai Sangam the

indelible link between dance and music was emphasised.

Legal Education :

Under UGC sponsorship, Madras University organised a Southern regional workshop on legal education. The problems of updating the curriculum, reserving procedural law for study after the degree, transferring post-graduate and research work to university departments and raising the standards of law learning were discussed very fully. The report of the workshop will help the university improve and raise the level of law teaching and research in the University.

Grading :

The UGC also sponsored a workshop of the Southern Universities organised by the University of Madras on December 22 and 23 on replacing the numerical marking system for examinations by the grading system. The meeting was attended by the Vice-chancellors and senior staff members from 21 Southern universities, with observers from the earlier university workshops at Chandigarh and Bombay and UGC participation. The Southern workshop was a culmination of 3 other workshops held

in other parts of the country and resulted in an agreement of all universities in India to switch to the grading system. This is an essential and important pre-condition as the new system cannot work if some universities continue on the old marking system. The workshop defined the objectives of the grading system as being aimed at an objective system of evaluation, making for inter-discipline and inter-university comparability, recommended a 7 point scale, the use of direct grading for internal assessments and conversion of marks into grades for external examinations, the use of a 2 decimal point grade to distinguish between candidates in the same grade, and further recommended that the system be adopted for post-graduate courses from 1976-77 and for undergraduate courses from 1977-78. The report has been circulated to the Southern universities with the recommendation that it be placed before the Universities' authorities for adoption by the universities from the next academic year.

Indian Pharmacological Society :

The 8th Annual Conference of the Indian Pharmacological society was held in Madras on December 28, 29 and 30. The conference considered means of improving teaching and research in pharmacology and making both respond to the conditions in the country. The need to make greater use of Indian medical plants were stressed. The broader issues of making people more responsible for their health, leading to some deprofessionalisation of health care, the need for a strong public sector drug industry in the country which would concentrate on generic and not brand names and provide low cost drugs to the people, and the importance of a science information service to the

pharmacologists on the new drugs were also raised.

Delhi University Correspondence Education :

The 3 week personal contact classes for the 430 students registered for B.A. and B. Com. courses in the Delhi University Correspondence Programme at Pachaiyappa's college during December ended with a valedictory function on December 28 at which the wider objectives of this form of non-formal higher education—of relevance and democratisation were stressed. On that occasion also, the university of Madras reaffirmed its commitment to all forms of non-formal education and offered the Delhi and Madurai University Correspondence Programme its services to publicise its programme in the Madras University area, locate in the university their libraries, and arrange for them contact classes for their students.

Committee on World Social Science Development :

The International Social Science Council set up with representatives of its 14 international disciplinary associations, a committee consisting of eleven Third World social scientists on world social science development. The first meeting of this committee was held at Rio de Janeiro, Brazil from 29 November to 4 December 1975. It defined its mandate as the development of social sciences and a body of social scientists relevant to the Third World societies, and the identification and solving of problems confronted by their societies. As a first inventory it listed 7 problems—Land Ownership and Reform, Resettlement, Decentralisation, Urbanisation, Women, Population, and Inflation—and 2 institutions—Documentation and Data Centres and University

Development—as being urgent in these countries, and decided to launch for 1976 an inter-disciplinary, cross country research programme on Land Ownership and Reform, Resettlement and Documentation and Data Centres.

Canada's International Development Strategy :

The Canadian government invited 30 participants from the Third World, Asia, Africa, Latin America and the Caribbean, to help in the review of Canada's co-operation in the development of the less developed countries undertaken by its agency, the Canadian International Development Agency (CIDA). This is the first country which has subjected its bilateral programme to such an international review by the receiving countries. The meeting was held in Mirabelle, Montreal, from December 8-12. It was agreed that the Canadian strategy with its emphasis on the least developed countries and the most seriously affected, giving priority to rural development, industrialisation, food aid, technology transfers and technical and capital assistance was sound and effective and that what was needed was a similar massive effort by all donor countries if there is to be a breakthrough in the growing poverty and inequalities in the Third World Countries compared to conditions in the affluent one third. CIDA also operates effectively through National and International non-governmental agencies in this development co-operation field and this was commended. The feeling among the Third World countries was that this kind of dialogue was more urgently needed with other rich countries, as Canada's strategy is already closely tailored to the needs and wishes of the Third World.

University Events:

The University of Madras events in December included a meeting of the Syndicate committee on amendments to the University Act, at which a first draft of the amendments was made and submitted to the Syndicate. A first meeting of the conveners of the 6 schools into which the University departments have been grouped was held when the problems of the post-graduate centre at Tiruchy was discussed. The monthly meeting of the Inter-Departmental Council was held and reviewed preparations for the 1976-77 academic programme. A meeting of the general body of the Institute of Traditional Cultures was held at which its constitution was modified to bring in other South East Cultural leaders as members of the governing board. The December meeting of the Syndicate reviewed the Vice-chancellor's fourth set of proposals concerning the affiliated colleges, examination reform, starting a Department of Adult and continuing education, amending the University Act and revising the salary scales of University teachers and took appropriate decisions on each of them.

Special Seminar :

The Seventh session of the special seminar on Tamil Nadu Education 1976-86 was held on December 22 in the seminar room of the Institute at which the paper, 'Learning Achievements and Employment Qualifications', by Prof. S. Sampath was discussed and approved. It was agreed that in the modern complex technological society, training and trained manpower occupy a decisive position and in this it is performance and quality that count. There is need to work out the implications of the State's Perspective Plan which equates the right to education with the right to employment.

January Seminar :

The January Seminar was held in the Institute on Thursday the 29th January, under the chairmanship of Mr. R. Ramanujam, Professor of Economics, D. A. B. Vaishnava College, when the paper "Tamil Nadu Economy 1974" by Dr. C. T. Kurien was discussed. The paper,

as well as a summary of discussion of the same, appears as the first article in this review.

Second Article :

A paper, 'Some Thoughts on Legal Education' appears as the second article.

TAMIL NADU ECONOMY 1974

By

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1. With unprecedented drought, scarcities, power cut and price rise, 1974 was the year of our discontent. In this review I shall examine critically our tale of woes to discover the most vulnerable aspects of the State's economy revealed by the crisis of the past year. I shall bring into the analysis insights I have gained about the working of the State's economy from a two year study I have just completed on Economic Change in Tamil Nadu, 1960-70.

Agriculture : Droughts, Production and Prices :

2. According to a well established ritual in our country failures in economic performances are generally attributed to acts of god and successes in the economic front are credited to the acts of the wise and bold men and women who shape policies. When the rate of growth of State income and per capita State income in 1972-73 turned out to be lower than the corresponding figures for the country as a whole, the official explanation (at least as given by the **Economic Appraisal 1974**) was that the phenomenon could be easily traced to the failure of the monsoons. To prove this point it was pointed out that the

reduction in the State income came mainly from the primary sector known for its dependence on the weather. In his review of Tamil Nadu Economy: 1973 Dr. Venkataswami had pointed out that the evidence in this regard was not adequate. (See **Bulletin Vol V No. 2, February 1975** esp. p. 110). **Economic Appraisal, 1975** again uses the weather as the villain of the pieces, this time certainly with greater justification. The argument usually is that when the monsoon fails, irrigation is reduced, which results in reduction of output and which, in turn, forces prices up. The sequence appears quite reasonable, and yet one must examine the evidence—when and by how much did the monsoon fail, for what crops was there a reduction in irrigation water, by how much did output fall and when did prices rise. I wish to go straight into these questions, and in so doing I shall reverse the order and start with prices.

3. The index of wholesale prices in Tamil Nadu (base 1939=100) rose from 1,653 in 1973 to 2,193 in 1974, the biggest increase in recent years as can be seen from Table 1.

TABLE 1 :

INDEX NUMBERS OF WHOLESALE PRICES - TAMIL NADU (BASE, 1939).

1964 - 720	1969 - 1,067
1965 - 789	1970 - 1,185
1966 - 913	1971 - 1,215
1967 - 963	1972 - 1,327
1968 - 960	1973 - 1,653
1974 - 2,193	

(Sources : Economic Appraisal, 1975. Part II, p. 120)

The wholesale price index consists of two groups, food grains group and commercial products group. The increase in the latter was from 2,017 in 1973 to 2,265 in 1974 (with 1972 being 1,498) while the increase in the food grains group was from 1,192 in 1973 to 2,102 in 1974 (with

1972 being 1,112). Obviously the big increase in the wholesale price index of 1974 was caused by the increased price of food grains. Hence a more detailed examination of the prices of food grains over the year is necessary. The information is given in Table 2.

TABLE 2 :

INDEX NUMBER OF WHOLESALE PRICES - FOOD GRAINS, 1974.

January	1,338	July	2,191
February	1,390	August	2,659
March	1,460	September	2,821
April	1,622	October	2,677
May	1,803	November	2,604
June	1,945	December	2,716

4. Table 2 shows the steady increase in prices from the harvest month of January onwards which happens every year.

The sudden jump in prices came in August. This is the phenomenon that calls for explanation.

5. A possible explanation is that the harvest of early 1974 was poor and so August suddenly turned out to be a lean month. Unfortunately the figures do not support this hypothesis. The Economic Appraisal does not give break down of the output of food grains by months and seasons, but the food grain output of 7,289,000 tonnes in 1973-74 was the highest that the State has ever had with the output figures of all individual crops except ragi being higher than in 1972-73. In the case of ragi the fall in production was only from 289,000 tonnes in 1972-73 to 287,000 tonnes in 1973-74. Hence it

is difficult to accept the story that the fantastic increase in prices of food grains that the State experienced almost suddenly in and from August of 1974 was caused by reduction in output.

6. We must now turn to the alleged relationship between output and the monsoon. If there was a failure of monsoon in 1973, apparently it did not have any adverse effect on food grains production as pointed out in the preceding paragraph. But let us look at the rainfall figures of which we have more details than for production.

TABLE: 3

SEASONWISE DISTRIBUTION OF RAINFALL (in milli metres)

Year	S.W. Monsoon (June-Sept)	N. E. Monsoon (Oct-Dec)	Rest	Total	Food grains production ('000 Tonnes)
Normal*	307.3	449.7	198.7	945.7	
1968-69	270.9	312.1	99.5	682.5	5,062
1969-70	238.4	612.6	185.7	1036.7	5,731
1970-71	318.0	420.2	179.9	918.1	6,706
1971-72	322.5	488.5	147.8	958.8	6,884
1972-73	303.9	607.7	79.1	990.7	7,136
1973-74	332.7	406.7	102.4	841.8	7,289
1974-75	332.1	200.2			

*Average for 50 years ended with 1950.

(Source: Rainfall figures - **Economic Appraisal, 1975** Part II, p. 14.)

Table 3 shows many things. First that the total rainfall in 1973-74 was indeed lower than in previous years, and less than normal, particularly the off-season rains, but that it was not as poor as in the previous drought year of 1968-69. Secondly the S. W. Monsoon of 1974-75 (i.e. of June to September of 1974) was

as good as in previous years, and above normal, but the N. E. monsoon of 1974-75 (i.e. of October to December 1974) was a failure, less than half of what was obtained in the same season during the previous year and way below the normal. Thirdly, (and from our point of view the most pertinent observation) in recent

years there has been no correlation between rainfall and food grains production as food grains production has been steadily moving up these years, reaching the peak figure in 1973-74. From this, we do not wish to argue that droughts will not have any impact on the performance of agriculture and consequently of the economy as a whole. We are not interested in such sweeping generalisations. The point simply is that the failure of the monsoon was towards the end of 1974, that the failure of monsoon in 1974 did not adversely affect the availability of food grains in that year, and that the sharp increase in price of food grains that occurred in and after August 1974 was not the result of crop failure. In other words, while in 1974 there was an unprecedented drought and an unprecedented price increase the evidence is that the drought did not cause the price rise. Secondly, if the price increase was not supply induced, the causes for it must be sought elsewhere, and the gods must be exonerated of all charges of cruelty. All through the big inflationary pressures of 1973 and 1974, I had maintained that our inflation was very much an internal and man-made pheno-

menon. Since an analysis of inflation per se is not the issue here, I shall not go into details. (Those interested in my analysis of the Indian inflation may look up my contribution to the discussion of the problem in *Swarajya*, Nov. 1974). However, as a rider to the discussion of monsoon, production and prices it may be added that the failure of N. E. monsoon of 1974 did affect the food grains production of 1974-75 (i.e. the harvest of December 1974-January 1975) bringing it down possibly to 5,129,000 tonnes but that during 1975 the price of foodgrains, especially rice, returned to the pre-August 1974 level.

7. Having seen the hollowness of the widely held notion that drought caused a crop failure in 1974 and that it led to an increase in prices, we can examine the performance of agriculture in the State in 1973-74 and 1974-75 on the basis of the figures given in the **Economic Appraisal, 1975** so as to get a more adequate picture of what happened in 1974. Table 4 gives the figures to compare the production of the major crops in 1973-74 and 1974-75 with figures for 1969-70 also given to indicate trends.

TABLE 4 :
AGRICULTURAL PRODUCTION

(Production in '000 tonnes)

Crops	1969-70	1973-74	1974-75
I. Food grains—(Total)	5,731	7,291	5,129
1. Rice	4,012	5,595	4,166
2. Cholan	617	563	270
3. Cumbu	325	297	141
4. Ragi	283	287	256
5. Maize	15	16	9
6. Other cereals	369	314	141

(Production in '000 tonnes)

Crops	1969-70	1973-74	1974-75
II. Commercial Crops :			
1. Sugarcane	1,190	1,373	1,189
2. Groundnut	804	1,163	902
3. Gingelly	39	40	30
4. Cotton	324	341	270

(Source : Economic Appraisal, 1975—Part I - p. II).

The Table shows the drastic reduction brought about by the drought in the case of all crops. The Appraisal, explains that there was an almost 20 per cent reduction in the area under cultivation of food grains and similar reduction in the case of commercial crops also, except sugarcane. A comparison of the 1969-70 figures with those of 1973-74 shows that the trend has been for the production of rice and the commercial crops to go up while the output of the millets has been decreasing. And when there is a drought the worst affected are the millets.

8. The causes and consequences of the fall in the output of the millets are worth considering. My study of Economic Change in Tamil Nadu: 1960-70 shows that a major change in the agricultural sector in the State in the sixties, particularly towards the end of the decade has been a shift from the inferior cereals to paddy which has continued into the seventies also. By analysing the phenomenon, it has been possible to identify two main factors responsible for the shift. The first is the fact the per acre return for paddy is considerably higher than for any other cereal, (for instance, the average per hectare gross earning from paddy for the period 1969-71 was Rs. 1,663, from cholam Rs. 520, cumbu Rs. 420, ragi

Rs. 592 and maize Rs. 695). Hence anybody who had the facilities to do so would move out of millets into paddy. The facilitating condition is primarily irrigation. The irrigation policy, as also the rest of the agricultural policy since the late sixties, has been oriented towards enabling the more affluent section of the farmers to bring about an increase in output quickly. While during the fifties and the first half of the sixties the emphasis was on major public irrigation schemes, since then there has been a visible shift to the subsidising of private irrigation schemes, particularly wells and tube wells. If Government canals and tanks can be taken as public irrigation and other sources (private canals and wells, primarily) as private irrigation, area under the former increased from 1,784,000 hectares in 1969-70 to 1,852,000 in 1973-74 while that under the latter moved up from 841,000 hectares to 1,078,000 hectares in the same period. The supply of electricity to the agricultural sector and the number of pumpsets energised also show equally impressive increase. Electricity made available for irrigation purposes shot up from 1,037 million units in 1969-70 to 1,559 million units in 1973-74, a more than 50 per cent increase (compared to the increase in total utilization from 4,532 m.u. to 5,414 m.u. in the same

period). The number of pumpsets energised stood at 344,483 in 1968 and 410,119 in 1969, and shot up to 681,258 in 1974. All these have been measures undertaken to protect the agrarian economy of the State from droughts, but it is easy to see that the beneficiaries of all these measures have been the more affluent farmers who have been given protection against drought as well as all the facilities to shift from millets to paddy—a very attractive proposition indeed. The brunt of the drought, then, has been borne by the marginal farmers in the dry regions who, out of necessity, continue to struggle in the cultivation of millets. It will, of course, be argued that under our present system there is no alternative but to support and subsidise the larger and more “viable” farmers if the primary aim in a period of drought is to ensure that output is maintained at as high a level as possible. And that is precisely the point. It will be revealing some time to work out a cost benefit calculation of the drought, costs to the public and benefits to whoever happened to get them.

9. It is not only the producers of millets who are affected by the drought. The drastic reduction in the production of millets adversely affect those for whom millets are the staple diet. Millets are consumed primarily by the small farmers who cultivate them for their own needs as well as by agricultural labourers. The phenomenal increase in the number of agricultural labourers has been one of the most striking aspects of the economic change in the State, in the sixties. According to the occupational classification of the 1971 Census, out of 14.7 million workers in the State, 4.6 million were cultivators and 4.5 million were agricultural labourers. Comparison of the

situation in 1961 and 1971 is made difficult because of the change in the Census definition of ‘workers’, but after making all possible adjustments I am convinced that there was an enormous increase in the number of agricultural labourers in the State in the sixties; and my conjecture is that the trend has continued into the seventies as well. If this is true the number of those who live on millets has been increasing and the output of millets has been sharply declining especially as a result of the drought. Did the drought affect agriculture in the State or the small farmers and the agricultural labourers?

10. There is one more aspect to be considered in this connection. The growth in the number of those who have no direct claims on the produce of the land leads to an increase in the market demand for food grains, especially in the urban and semi-urban centres to which they naturally tend to move. (Incidentally, one of the most revealing aspects of the study of Economic Change in Tamil Nadu has been the connection between the growth of agricultural labourers, of the urbanisation process and of the so called unorganised sector). This means that even small shortfalls in the output of grain can lead to much more acute supply-demand imbalances, and consequently price variations. In the absence of a carefully worked out distribution system critical shortages can develop even during “normal” years, which will get enormously magnified during periods of drought especially when traders are always on the look out to make profits out of scarcities. A long term remedy for drought, therefore, calls for not only measures to increase output, but also a carefully worked out distribution system involving procurement, buffer stocks and retailing channels.

11. In this connection a question must be raised about the long term trends in production and productivity. It has been noted already that 1973-74 saw the record output of food grains. In terms of productivity also the figures are impressive. Average yield of rice per hectare moved up from 1,954 kg. in 1972-73 to 2,035 kg. in 1973-74. The productivity of cholam, cumbu, ragi also showed impressive upward movements. Pulses and groundnut also showed improvement in productivity. However, the foodgrains production of 72.9 lakh tonnes was below the Fourth Plan target of 79 lakh tonnes. Within the food grains group rice, of course, is the most important item. Rice output between 1960 and 1968 was around 35 lakh tonnes (35.5 lakhs in 1960-61, 35.2 lakhs in 1965-66 and 35.5 lakhs in 1968-69). The introduction of high yielding varieties gave a big boost to the output of rice which moved upto 40.1 lakhs in 1969-70 and 50.0 lakhs in 1970-71. But since then the increase has been just moderate, 53.0 lakhs in 1971-72, 55.7 lakhs in 1972-73 and 55.9 lakhs in 1973-74. What has happened to the 'Green Revolution'? According to official statistics only 45.4 per cent of total paddy area was under HYV in 1969-70 which has since then moved up to almost 78 per cent. If this is correct, then extension of the HYV programme shows very striking diminishing returns. Why is this so? It cannot be because of the inadequate consumption of fertilisers, for although the consumption of fertilisers has been low and below the requirements, total consumption has been rising over the years. (2.23 lakh tonnes in 1969-70, 2.96 in 1970-71, 3.47 in 1971-72, 2.82 in 1972-73 and 3.37 in 1973-74). The steady extension of the HYV programme and what appears to be a levelling off of the output of paddy certainly calls for closer examination. Let me throw in one more

bit of rather intriguing evidence. In the decade of the fifties—long before the Green Revolution was thought of—the output of paddy in the State showed an 84 per cent increase with the average yield of paddy going up by 29.4 per cent. In the sixties (i.e. from 1960-61 to 1970-71) output increased by 41 per cent and yield by 34.4 per cent. We have seen above that after 1970-71 the increase in paddy production has not been particularly impressive. Surely, the Green Revolution has not yet performed the miracle!

12. In closing this section I would like to suggest the following problems that need to be studied in some depth. The first is the Green Revolution phenomenon, what accounts for its apparent weariness? Secondly, a careful study of the millet economy of the State is called for. We know where millets are grown. But who produces them? What sort of a market do they have? What proportion of the total output is marketed? Who are the consumers etc. Thirdly, more detailed studies are needed on the factors that influence the market supply and the market demand for food grains in general with the regional variations in them. Such studies are necessary if a reasonable distribution system is to be developed.

Industries and Power :

13. During the sixties and early seventies there was very striking industrial growth in the State characterised by 'diversification and sophistication'. One consequence of this has been that industry in the State is no longer closely related to agriculture unlike in the period when the textile industry used to dominate the State's industrial economy. Thus agriculture and industry have their separate "laws of operation" in the State

today. For instance, when agriculture registered significant increase during the period 1969 to 1973, industrial growth was unimpressive (a point that Dr. Venkataswamy emphasised in his review paper last year). 1973 was a

particularly bad year for industry with a "sharp declining trend" as the **Economic Appraisal** puts it. 1974, particularly the first three quarters, showed signs of recovery as seen from Tables 5 and 6.

TABLE: 5

INDUSTRIAL PRODUCTION, 1973 & 74, SELECT PRODUCTS.

Products	Units	1973	1974
		Jan-Sept	Jan-Sept.
1. Cotton woven piece-goods	million metres	105	107
2. Cotton Yarn	tonnes	103,819	121,496
3. Cement	'000 tonnes	1,577	1,767
4. Sugar	'000 tonnes	264	354
5. Tea	tonnes	32,250	30,394
6. Safety Match	thousand gross boxes	29,352	37,926
7. Electricity Generated	Million Kwh	4,912	5,315
8. Motor vehicles	Nos	4,807	7,220
9. Tyres	'000	3,147	5,190
0. Bicycles	'000	248	339

(Source : Economic Appraisal, 1975. Part I, p. 41).

TABLE: 6

INDEX OF INDUSTRIAL PRODUCTION, 1973, 1974.
(BASE-100)

Serial number and Industry	Weight	1973	1974	Percentage change over the previous year	
		January-September	January-September	1973	1974
(1)	(2)	(3)	(4)	(5)	(6)
1. General Index	100.00	170.4	196.5	-3.9	+15.3

	(1)	(2)	(3)	(4)	(5)	(6)
II. Producer's Goods Industries—						
(a) Basic Industries—						
1. Fertilisers ...	1.25	131.0	127.2	—6.7	—3.0	
2. Cement ...	4.00	187.1	209.6	—19.1	+12.0	
3. Heavy Chemicals	1.39	159.2	194.1	—24.7	+21.9	
4. Electricity	16.41	292.0	316.0	4.6	+8.2	
(b) Capital Goods Industries—						
1. Motor Vehicles	3.32	128.9	177.6	+17.4	+37.7	
2. Power Transformers	0.23	532.8	424.9	—5.3	—20.3	
(c) Intermediate Goods Industries—						
1. Cotton yarn	40.95	113.5	132.8	—5.9	+17.0	
2. Rubber Products	2.77	217.3	347.5	—1.0	+59.0	
III. Consumer Goods Industries—(Durable and Non-Durable).						
1. Sugar	3.82	379.5	508.6	+16.2	+34.0	
2. Tea	4.06	114.0	107.4	—9.3	—5.8	
3. Hydrogenated oil	0.41	62.1	67.7	—58.0	+9.0	
4. Cotton woven goods	10.27	76.0	77.2	—5.5	+1.5	
5. Safety Matches	1.85	188.7	243.7	+9.5	+29.1	
6. Wheat Products	0.43	145.7	88.0	—51.6	—39.7	
7. Motor Cycles	0.43	303.3	389.2	+3.3	+28.3	
8. Bicycles	1.88	156.8	214.5	—19.3	+36.8	

(Source : Economic Appraisal, 1975, Part I, page 38)

Table 6 shows that unlike the —3.9 per cent rate of growth of 1973, there was a +15.3 per cent rate of growth in 1974 and that the better performance of 1974 was shared by most items listed (as seen

in absolute terms in Table 5 as well). But the performance of fertilisers was still poor and that of power transformers was poorer in 1974 than in 1973. Power transformers have been showing

a sharp downward trend from 1972 onwards; the performance in 1974 was the worst ever in the history of its production, but no explanation has been put forward for the poor performance. It is worth noting that rubber products (mainly tyres) and motor vehicles which picked up remarkably in 1974 ran into difficulties in 1975 because of the recessionary trends. Cotton yarn which has the largest weight in the index of industrial production also staged a recovery during 1974. The all round improvement in the industrial sector is attributed to the improved power generation, more comfort

table raw materials position in respect of important industries, increased institutional assistance to industries and better climate in labour-management relationship. But in view of the big increase in mandays lost due to strikes and lockouts (from 2 million in 1973 to 4.4 million in 1974) the last claim at least seems to be of doubtful validity.

14. Since 1973-74 was the final year of the Fourth Plan a long term assessment of industrial growth is relevant. Comparative figures for Tamil Nadu and All-India are given in Table 7.

TABLE: 7

GROWTH IN THE INDEX OF INDUSTRIAL PRODUCTION (IN PERCENTAGE)

Period	Tamil Nadu	All-India
Third Plan	6.0	6.9
Annual Plans (1967-69)	5.3	4.2
Compound growth rate (1961-73)	4.1	5.2

(Source : Economic Appraisal, 1975 Part I. p. 44)

The Table shows that industrial growth in the State during the Fourth Plan was lower than during the Third Plan and that during the periods of the Third Plan, Annual Plan and the Fourth Plan industrial growth in the State was lower than in the country as a whole. Of course, the poor performance of the industrial economy of the State in 1973 has adversely affected the long term growth rate, but 1973 was a poor year for the country as a whole as well. Hence the

slowing down of industrial growth has to be taken serious note of in the State which has been earning for itself a name in the industrial sphere. A positive feature of industrial development in the State during the Fourth Plan has been the beginning of the location of industry in districts like North Arcot, Ramanathapuram and Kanyakumari.

15. In 1973-74 there was a significant

expansion in the small industries sector. The number of small industries registered went up from 31,350 in 1973 to 42,616 in 1974. It must be noted that these figures do not necessarily indicate the growth of small industries as such. Registration of small scale industries is still voluntary and an increase in registration can simply mean that more of the existing units have registered themselves. Because the various forms of government subsidies and assistance are made available only to registered units, registration has received a big boost in recent years, especially in the neighbourhood of the major industrial cities, Madras and Coimbatore, which together account for 42 per cent of the total number of registered units in the State. My study shows that in spite of all efforts to achieve a greater geographical spread of small industries, their urban concentration if anything has only increased.

16. For the handloom industry 1974 was a year of a double crisis. Till the middle of the year it faced the problem of scarcity of yarn. When that problem was happily solved, the industry had to face the slump noticed in the cotton textile industry at the national level. Hence, although there was a big export boost in 1973-74 (Rs. 1,570 lakhs as against Rs. 650 lakhs in 1972-73) there was an acute problem of undisposed stocks by the end of 1974. The weavers co-operative societies were left with undisposed stocks to the value of Rs. 17.22 crores and the stocks with the private sector amounted to Rs. 24.47 crores. The industry had to turn to the government for support which was given in the form of subsidised sales and relief measures. That an industry that employs some 2.5 million people has to face

frequently the alternating problems of scarcity and slump is another telling commentary on our economic system which cannot be overlooked when we are confronted with many radical proposals which purport to rehabilitate sections of society without reference to the working of the system as a whole.

17. It has been noted already that the power situation in 1974 was better than in 1973. There was a 15 per cent power cut in force from 1st October 1973 which was raised to 30 per cent on 1st April 1974 and again to 60 per cent on 8th May 1974. With improvement in storage position by the end of August 1974 the power cut was lifted with effect from 21st August. But because of the failure of the N.E. monsoon a 40 per cent cut was again enforced from 1st December 1974 which also formed the first step in the big power cuts of 1975. Last year's review has a detailed examination of the basic power problem in the State, and hence a brief discussion will suffice here.

18. Between 1972-73 and 1973-74 the installed capacity in the State increased from 2,171 Mega Watt to 2,254 Mega Watt with no addition in 1974-75. The 2,254 Mega Watt of installed capacity comprises of 1,224 MW Hydro and 1,030 MW Thermal indicating the vulnerability of the power sector to the vagaries of the monsoon. The generation and purchase of power in the State was 7,105 million units in 1973-74, 3,702 m.u. from Hydro, 1,171 m.u. from Thermal and the rest, 2,232 purchased from other States. The position in 1974-75 was also fairly similar. The figures show that while the ratio of installed capacity between Hydro and Thermal is roughly 55:45, the ratio of generation between the two is roughly 75:25 indicating

the relatively inadequate utilisation of Thermal capacity. As a matter of fact both hydel and the thermal installation

show very poor capacity utilisation Table 8 gives the relevant figures over a period of time.

TABLE : 8

POWER : CAPACITY UTILIZATION (IN PERCENTAGE)

	1955-56	60-61	65-66	70-71	71-72	72-73	73-74
Hydel	55	45	23	31	35	39	34
Thermal	31	42	53	28	34	29	31
Total	47	44	32	30	35	35	34

(Source : **Economic Appraisal**, 1975, Part, I p. 54)

Such low levels of capacity utilisation is the crux of the recurring power crisis in the State. It may be noted that in terms of installed capacity Tamil Nadu holds the second place in the country, next only to Maharashtra, and that the State has about one-half of the total capacity of the entire Southern region. Unlike Karnataka and Kerala Tamil Nadu can legitimately complain that its hydel capacity cannot often be adequately utilised because of the frequent failure of the monsoons. But the chronic under utilisation of our thermal capacity cannot be explained away. "Explanations" are invariably put forward, technical problems, strikes, and in 1974 alleged shortage of coal because of the railway strike. But for a State perennially plagued by power shortage these are not adequate explanations. As one with no expertise in this area I am intrigued by the situation. If there is any convincing explanation of this mystery I hope the forthcoming Economic Appraisal will attempt to enlighten public opinion.

19. In the meanwhile it must be noted that the State's Fourth Plan had targetted power availability (including purchases) of 8,771 million units for 1972-73 and 9,859 million units for 1973-74, the last year of the Plan. So, the actual availability of 7,105 million units for 1973-74 fell far short of the Plan target. Further, the total sales during 1973-74 was only 5,414 million units for 11 months upto end of February, or around 5,900 units if an imputation is made for March as well. Thus there was a gap of around 1,200 million units between power available and power sold which is about 17 per cent of the total availability. For the preceding year the gap calculated was 22 per cent. There was, thus some improvement, but the gap was still higher than recognised transmission loss of 12 per cent. This again, calls for some explanation.

Manpower Utilisation :

20. According to the 1971 Census, out of a total population of 41.02 million in

the State 14.74 million were treated as "workers". Of these about 65 per cent were in primary sector, 15 per cent in the secondary sector and 20 per cent in the tertiary sector. It is well known that the extent of manpower utilisation in the primary sector cannot easily be estimated. In the secondary and tertiary sectors also proper estimates, even notionally, can be made only for the "organised" component. Taking the two non-primary sectors together, the organised component was about 30 per cent, or a little over 10 per cent of the total workforce in the State. Employment figures can at best, be given only for this small segment. I shall first bring together the figures available pertaining to the organised sector and then shall comment on the nature of manpower utilisation in the State economy at large.

21. The total number employed in the organised sector as on 31st March 1974 was 1,629,100 compared to 1,630,100 on 31st March 1973. The figure came down to 1,610,700 as on 30th June 1974 and then moved upto 1,631,000 as on 30th September 1974, the most up to date figure available. Hence from the point of view of employment, 1974 was a poor year. This is particularly disturbing because in the past the organised sector was growing at about 2 per cent per annum and 1974, as already seen was a year of industrial recovery in the State. The organised sector consists of two parts, public and private. Public sector employment moved up from 959,300 in 1973 to 980,200 in 1974. The increase in the public sector came about essentially in services, and the decrease in the private sector happened largely in manufacturing, construction and services. Taking the organised sector as a whole, again, there was a 5,800 reduction in manufacturing and 6,300 in construction with some 7,000

increase in the services category. Apart from the reduction in total employment these movements out of "productive" to "unproductive" areas are another special feature of the employment situation of 1974.

22. Against the fall in actual employment there was an increase in the number of employment seekers. 420,500 registered themselves in employment exchanges in 1974 compared to 407,700 in 1973, but only 36,400 could find jobs. The number of applicants on live register at the end of March 1974 was 593,600 which moved upto 634,300 by end of September. In other words if a little over 16 lakhs of people were employed in the organised sector in mid 1974, more than 6 lakhs (even according to employment exchange figures) were seeking jobs—a staggering 40 per cent of the total who were employed. Of these slightly over 3 lakhs were unemployed compared to 2.4 lakhs in the previous year. A breakdown of the educated unemployed shows that the number of those with S.S.L.C or its equivalent increased from 2 lakhs in 1973 to 2.5 lakhs in 1974, of graduates from 40,000 to 48,000 and of post graduates from 4,000 to 5,500.

23. In the light of these alarming figures, some comments about the long trends on manpower utilisation in the State will be appropriate. In the first place, we may notice that the organised sector in the State shows very slow increase in recent years, culminating in a negative growth rate in the year under review, something that has not happened during the past 10 years. Secondly, it may be noted that the increase in the organised sector when it does take place is largely an indication of increase in government services. Thirdly, while the share of national income originating from the secondary sector has been

increasing over time (17.6 per cent in 1960-61, 23.6 per cent in 1970-71 and 23.1 per cent in 1973-74) the share of workforce in the secondary sector shows very little change. This is an indication of the capital intensive nature of the industries that are increasingly being housed in the State. The inability of the State's industries to absorb the growing labour force has indeed led to an increase in the share of the primary sector during the sixties and the seventies

so far. In this sense, in spite of all the industrial increase that the State has been having of late, real experience of the State is one of "de-industrialisation," a retrogressive transformation.

24. These problems of a long term nature related to the structure of the economy should not escape our attention when we are preoccupied with short term issues however serious they may appear to be at the moment.

* * * * *

Summary of Discussion

At the discussion of the paper at the seminar held in the Seminar room of the Institute on Thursday 29th January, 1976, the chairman pointed out that the two volumes of the Tamil Nadu Economic Appraisal, 1974, should be read together with the allocations under the relevant heads in the budget. The performance during 1974 has been satisfactory in the area of foodgrains production, but the employment picture was dim and power generation well below installed capacity.

The author stated that the economy could be appraised from different angles; a general descriptive account of sectoral performance or a deeper analytical perspective into patterns of ownership, economic activity and accrual of benefits—who owns what, does what and gains what. A recently completed report by the author, "Economic Change in Tamil

Nadu", provides some insight into this process. The year under review was an unusual one, creating varying impressions and beset with drought, price rise and power shortage. The linking of high prices and the fall in production of foodgrains with the failure of the monsoon does not bear scrutiny. Contrary to popular impressions, the foodgrains production in 1973-74 was higher despite less rainfall—and the steep price rise can be accepted as a man made phenomenon. Further, paradoxically prices fell to pre-August 1973 levels in spite of a fall in production in 1974-75. The mechanism of price rises cannot be explained away in terms of the effect of drought on agricultural output. The Appraisal figures for 1969-70 and 1974-75, reveal a 20 per cent reduction in the area under foodgrains and commercial crops, except sugarcane.

Further the trend has been for the production of paddy and commercial crops to go up at the expense of millets. The drought, therefore, affects the marginal farmer cultivating millets rather than the farmer engaged in paddy and sugarcane cultivation. The millet economy of Tamil Nadu needs more intensive study, as the reduction in millets output affects the agricultural labourer. Another effect of this change in pattern of production is the increase in agricultural labourers. A second valuable study would be on "Green Revolution" as the area under HYV production is 78 per cent of the total paddy area. The statistics relating to area and production under HYV show that when the area moved up from 40 to 70 per cent, there was only a marginal increase in production. Yet another aspect which requires to be studied carefully is the relation between market surplus and market demand as with increasing urbanisation and sub-urbanisation and increase in the number of agricultural labourers, fewer people have a direct claim to produce from the land and even a small shortfall leads to serious distribution imbalances and variations in prices. Any distribution mechanism has to consider these factors. Regarding industrial growth, performance during the fourth plan period had been poorer than during third plan, which represents the leap forward of the sixties in Tamil Nadu, even this was not in production but mainly in the housing of industries. A crisis area in early 1974 was the handloom industry which suffered due to yarn shortage and poor offtake despite subsidies and export promotion. Coming to power generation, two outstanding features were evident. Tamil Nadu has one of the highest installed capacity for power generation amongst the States—1,224 MW Hydro and 1,030 MW Thermal. The figures show that while

the ratio of installed capacity between Hydro and Thermal is 55:45 the ratio between the two for generation is about 75:25. There was also unaccounted gap between power generated and power sold. The manpower and employment statistics present disquieting features. The number of persons employed in the organised sector fell in 1974 and among the job seekers registered with the employment exchanges, a significant proportion was educated. In the public sector, however, there was an increase in the services sector and not in the production sector. In fact an increase in output together with the fall in employment call for a re-thinking on our policies. The problems faced by the Tamil Nadu economy, as highlighted by its performance in 1974, are basic in nature and require fundamental solutions.

The analysis of the performance of agriculture, industry, power generation and employment carried out in the paper reveals unusual insights and fulfils one of the functions of economics which is to explode popular myths. A study of economic trends as compared to other States, based on data from the R. B. I. Rural credit and Assets Survey, the 23rd round of the N. S. S. (unpublished), Economic Monitoring Service and the Tamil Nadu Economic Appraisal convey some indicators of relative development. Tamil Nadu stands high in human assets, in irrigated area and arable land, forest land, power installation and generation, education and resource mobilisation. In spite of these advantages there is a falling index in industrialisation and utilisation of power. All the four documents corroborate the decline in rural levels of living by criteria of assets owned and consumption levels. The analysis in the paper suggests three comments First,

the price rise in foodgrains cannot be blamed on the weather. With reference to the sharp price rise in 1973-74 the impact of inflation was felt by different States at varying times and was aggravated by the expectation of further price rises. The ordinance promulgated allayed this fear. A local explanation for the rise in price of rice in Tamil Nadu was the moving of stocks away from production centres, chiefly Thanjavur, during the brief period when controls on the inter-district movement of rice was lifted. Second, a review of production showed that a large part of the area under HYV was in Thanjavur where production approached Green Revolution levels. Of the country's area of 33 million hectares only 6 million hectares are under HYV for the whole country, where more than one crop is grown. If this is accepted, then there is only insufficient evidence for an evaluation of the HYV programme. Third, manpower and employment statistics are disturbing particularly in view of the absence of data for the unorganised sector and rural employment. In this connection it was pointed out that the growth of agricultural unemployment was due mainly to technological changes, more landlords taking up cultivation due to land reform policies, the moneylenders becoming landlords and mechanisation and not necessarily due to urbanisation and suburbanisation. A query was raised whether the position in 1976 has changed compared to 1974. An observation was made that the figures presented were in the nature of estimates and there was bound to be some variation in the final figures. The rising trend in foodgrains prices was a usual phenomenon after May and June. The abnormal rise in 1974,

in spite of high production, was due to an anticipation of delayed monsoon. The figures given in the Appraisal were not for highlighting achievements but were indicators of trends in the State economy. The Appraisal was described as a useful document with a fund of information. An opinion was expressed that the causes of prices fluctuation are not easily identified. Agricultural effort in the last few years has been to increase production of a highly water intensive crop - paddy. If the efforts had been diverted to other crops requiring less water, growth rates might have been higher. There has not been any regional assessment of water requirements. With reference to the optimum utilisation of water for cultivation it was suggested that sprinkler irrigation and drip irrigation could be tried with advantage. Additional potential water resources could be created by desalinisation and artificial rain. The diversion of existing water supply for HYV paddy, has led to decline in the area under pulses. Further the HYV seeds have been indiscriminately used without taking soil suitability into consideration. As a possible alternative, efforts should be made to evolve drought resistant strains of paddy. In the area of power, hydel resources could not be augmented much more. In the generation of thermal power, however, besides the constraint of irregular coal supply, there is room for considerable improvement. In the field of manpower utilisation the significant educated unemployment was owing to the fact that education has not led to specific marketable skill formation and measures have to be devised to correct this misinvestment.

The Appraisal document is a valuable source of information and if the targets were given along with the performance figures, it would complete the perspective. The economy of Tamil Nadu could not be studied in depth through data restricted

to a period of one year. The paper identifies some long term trends therein and seeks to establish the causes for a deviation from normal sequences in light of the evidence that is available.

Some Thoughts on Legal Education*

The Problems :

The UGC Workshop on Legal Education for the Southern Region is an important event. Higher Education in the Country and in the State is in need of revision and restructuration because, among other things, its products are not only increasingly unemployed but, what is more alarming, increasingly unemployable in our society.

I welcome the Chief Justice and the assembled scholars who are to deal with one of the key sectors of our higher education system, the legal education sub-system.

I look to the Workshop to produce three practical results in the form of guidelines :

- a) A modernised law syllabus
- b) A multi-disciplinary—dare I hope inter-disciplinary—basis for law studies
- c) New learning methods and post-graduate education

Now, for a word on each.

The Law Syllabus :

There are many facets in the revision and updating of our law syllabus. I will refer to one facet.

I start with the basic criticism of our legal education which is its remoteness from the political, social and moral realities of law. This abstraction is seen in :

- 1) The excessive influence of the practice of law, demanding purely legal knowledge and its routines
- 2) Teaching law as a system of set rules divorced from social reality

If this criticism is valid, and I believe it is, I would like to advise that in framing a modern law syllabus, we reject the false alternatives of either training men to work in law, in the legal profession or of training men to understand the actual nature of law.

The first is professional. The second is scientific.

I would like to plead that in framing the syllabus we combine the two. We should frame a syllabus to educate both in the practice of law and in all the problems connected with law. Then our law syllabus will become an amalgam of practice and theory, of profession and science and that is what I look forward to.

.....i Disciplinarity :

Such an approach to the framing of the law syllabus brings us to the multi disciplinary approach of law studies.

* Extracts from a speech made by Dr. Malcolm S. Adiseshiah to the Workshop on Legal Education held at the University of Madras, on Saturday December 20, 1975.

Here, I would like to stick my neck out and repeat to you what I tell my colleagues in the University every day.

There are no economic problems or solutions in our society.

There are no physical or chemical problems or solutions in our society.

and to you I would like to say,

There are no legal problems or solutions in our society.

There are problems of poverty, unemployment, a stagnant economy, corrupt practices and corruption, black marketing and smuggling: all of which are various forms of fight for power or resources within our families, between groups, castes and classes.

And so I would like to look to the new ideal lawyer—who knows his law but who also knows the political and social contexts in which all law has always to be applied.

I look to the new law student and the new law teacher who never forgets the political, economic and sociological aspects of the juridical problems that he is called upon to solve. This for me is the start of multi-disciplinarity, which is the integration of law with the other social sciences.

Learning methods and postgraduate education :

On the basis of modernised syllabus and integrated view of law and sciences, we need the new text-books, new documents and new methods of teaching and

learning which respond to our conditions in India to day. I would like to see for instance our law educators writing a book on the emergency which explains the distinction between legal order and legality, between law and order and the rule of law (By the time the book is ready for publication, the emergency would have lapsed and the book need not be submitted to the censor and could become a good text-book) I look to the workshop laying down guidelines for the learning tools for our law students that we need to day.

There are important guideline needed for our postgraduate education in law. First, there is the postgraduate course, the LL.M. which is the crucial key for equipping good and sound law teachers for our Universities—a sound, appropriate and viable LL.M. course. Should it include a dissertation as recommended by the Poona Seminar and if so what should be its purpose and content?

And then there is the area of legal research starting with the Ph.D. (as one who has received several LL.D's to which I am not in any way entitled, I would like to see this degree flow out of juridical research grounded in our times and in our societies). Research in the area of legal studies is the irreversible input to make those studies both relevant and real and counter the abstraction which is the basic criticism that I referred to at the start.

Semester pattern :

I would like in this connection, of the guidelines for teaching and learning of law, for the workshop to take up the question of the semester pattern for legal education. Not only is this the pattern of teaching and learning in most countries today: there is a very real danger that following

the engineering and medical programmes of studies, undergraduate and postgraduate education in the industrial sciences, social sciences, human sciences and the languages having decided to adopt the semester pattern will leave legal education as the only branch of learning using the out-dated monologue, magisterial method—the lecture method. This will be a disaster that I would like to you to avoid.

The Problem of numbers :

I know that there is a problem of numbers among law students. When I was a student, the law college in Madras was the home of homeless, the refugee of the rejected, its enrolment ranging from 200 to 300. Today the same college has not only increased its enrolment by some 300 to 400 per cent, it has had to select more than twice that number. This is an opportunity as well as a challenge.

I do not subscribe to the popular neo malthusian view that mass education must mean poor education, that quantity can only be attained at the cost of quality. On the other hand, I am glad to see greater accessibility of legal studies to our students particularly from the disadvantaged sections of our society who have for

generations been kept out of such education. I also know that the condition of legal education today are such that the students feel frustration and purposelessness to the point where whenever students violence starts, it always starts in the law college: I have the greatest difficulty in finding examination centres for law college students as the other affiliated colleges are reluctant to offer hospitality to this group of so called troublemakers.

But we have the resources to reform and restructure this system. We have the UGC law panel; we have the Legal Education Committee of the Bar Council; we have our Universities, and above all we have our law teachers and law students who can effect this change if they have will and are given their head. Let us employ additional staff, including part-time staff, reduce our class strength, organise tutorials and seminars and self-study sessions, rely increasingly on internal assessments, and reform the structure of our question papers for the external examinations in order that legal studies may become what they should be—a decisive intellectual and moral instrument for our fast developing society and our country which has emerged as a great power in our world.

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The activities of the Institute are :

- Studies and action-oriented research in micro-development problems;
- Documentation and library service in development programmes;
- Exchange and dialogue at the State, National and International levels on development issues;
- Publication of papers and research results of the Institute.