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EDITORIAL—SOME HIGH LIGHTS

I General Economic Scene

State:

Appropriation Bill and Third Pay Commission: In mid September, the Tamil Nadu Assembly passed the first supplementary estimates for 1978-79 as the Appropriation Bill amounting to Rs. 22,52,51,000. A week later the government announced its decision on the report of the Third Pay Commission (see Vol VIII p 445) benefitting 7.6 lakh employees who will get a pay rise of Rs. 20 to Rs. 130 costing the state Rs. 37 crores a year now, rising to Rs. 67 crores in 1983. The main decisions are: (i) the pay rise of Rs. 15 to Rs. 30 will include the interim relief of Rs. 10/15 granted from 1 April 1978 (see Vol VIII p 258): (ii) retired employees will get a 5 per cent increase in pension ranging from Rs. 10 to Rs. 25: (iii) the honoraria of village officers have been raised by Rs. 15 per month and their consolidated travel allowance raised from Rs. 12 to 30: (iv) the pay scales have been rationalised, reducing the number of categories from 76 to 20, with the dearness allowance and interim relief merged with the pay: (v) the new pay structure is linked to the all India consumer price index of 320 and dearness allowance in future will be granted under the Union government formula as and when the index's 12 month average increases by 8 points over 320: (vi) house rent and city compensatory allowances have been liberalised and the existing pay ceiling for their eligibility have been removed: (vii) under the revised structure, the pre-tax ratio between the lowest pay and the highest pay is 10:1 and the post tax ratio 8.8:1: (viii) under the new scheme, most employees on completion of 10 years of service can move to higher posts irrespective of vacancies: (ix) rental in government accommodation in rural areas will be reduced from 10 to 5 per cent: (x) selection grades which will benefit 50,000 employees have been created for the lowest grade: (xi) the government has accepted in principle other recommendations on expansion of rural services and part time employment of locally recruited persons, authority to delegate responsibility, to increase, where necessary, streamline and in some cases abolish special pay for certain posts, with a transition for existing holders of such posts. The first reaction is that the report and government decisions have been fair and just. The government has provided Rs. 30 crores in this year's budget to meet this important decision and expects help from the Seventh Finance Commission to whom this matter had been represented (see Vol VIII p 168).

State Credit-Deposit Ratio and Loans: Further to the inter-state analysis of the State Domestic Product in the last issue (p. 497), the RBI statistical tables accompanying that analysis show that Tamil Nadu has the highest credit-deposit ratio at 110 followed by Karnataka at 98 per cent and Maharashtra at 82.5 per cent. All the other 19 states are below the all India level of the credit-deposit ratio of 76.84 per cent, indicating that the deposits mobilised in those states were less utilised for advancing loans in these areas. On December 31, 1976 the total deposit stood at Rs. 17,635.95 crores and bank credit at Rs. 13,552.69 crores. In 1975 Tamil Nadu's share in all India credit was 10.3 per cent and declined to 9.6 per cent in 1976 as did that of Karnataka and Maharashtra. The per capita bank credit in the country was Rs. 247.2, Tamil Nadu having the third highest outstanding credit at Rs. 1,293 crores and per capita credit at Rs. 314. In terms of deposit mobilisation Tamil Nadu stands fifth with Rs. 1,169 crores which was 6.6 per cent of the all India total deposits. Following the August announcement of the 20 state loans, (see last issue p 498), the subscriptions were opened and closed on September 12 resulting in total subscription of Rs. 296.31 crores, including Rs. 44.24 crores received by way of conversion. Tamil Nadu was one of 15 states which got full allotment at Rs. 26.45 crores against the Rs. 24 crores that had been notified.

Panchayati Raj (Asoka Mehta) Committee: The report of the Asoka Mehta Committee on Panchayati Raj institutions (see Vol VIII p 494) was published in August recommending the restructuring of the Panchayati Raj structure to ensure continuous functioning, periodic elections, and functional and structural links to ameliorate the conditions of the poor which the committee somewhat optimistically computes at 20 per cent of the population. In view of location specific and growing technological complexity of development projects, the district should be the first point of decentralisation in each state, devolving most of the district level developmental functions and corresponding financial and administrative functions on the Zilla parishads which should have a majority of elected members. The Zilla parishads will have a number of committees whose Chairmen will form a standing committee, thus enabling political parties to compete in the elections but after to co-operate on common tasks. Because the spatial focus of most of the development projects will increasingly be multi-village and as villages are increasingly developing external linkages with other villages and towns, it does not recommend the village as the unit of decentralised development. But in view of the villages developing extra local links for input supplies, product marketing and credit flows, it recommends Mandal Panchayats as a further step in decentralisation below the Zilla parishad level. Its view that Zilla Parishads and Mandal Panchayats will be handling Rs. 10,000 crores, including Rs. 7,000 crores in institutional credit for rural development, is really the crux in the sense that unless there is financial decentralisation by the states to these bodies, this will be a nice theoretical frame which will be still born. Tamil Nadu which through its Chief Minister was represented on the committee has entered a note of dissent, which while accepting the other recommendations prefers its own Block Development Councils (see Vol III pp 5-6, 91, 555-556) and its officers. This is not serious because the report of the committee is not an administrative strait jacket on decentralisation. What matters is whether there will be real financial and administrative decentralisation to the various local government units.

Power: September saw a normal power situation in the state. The Union government reports that the state's power demand, is 1,620 MW per day and consumption 31.26 million units daily. In mid September agreement was reached between Kerala, Tamil Nadu and Karnataka on power sharing, under which Tamil Nadu will draw 4 million units a day from Kerala and Karnataka 2 million units daily from October 1. The financial situation of the State Electricity Board is not satisfactory. As at June 1978, industries using high tension power owed the Board Rs. 13.68 crores, MALCO alone owing Rs. 10 crores. The other defaulters are textile units which are sick. *It is not surprising therefore that* the Board reports a budgetary deficit of Rs. 21.12 crores for 1978-79. The capital receipts for the year are estimated at Rs. 92.76 crores and expenditures at Rs. 113.83 crores—that is, Rs. 45.77 crores for Tuticorin stage I, Rs. 10.27 crores for Tuticorin stage II, Rs. 1.5 crores for Suruliyur hydel, Rs. 2 crores for Pandiyar-Punnapuzha, Rs. 3.10 crores for Kadamparai hydel, Rs. 2.20 crores for Servalar hydel, and Rs. 11.5 crores for the energisation of 25,000 pumpsets. The annual report of the Board also states that it will not participate in Idukki second stage (see Vol III p 694) as Kerala had not been receptive to the proposed joint financing of the project. To cover the Board's commitment of Rs. 15 crores on account of the Union excise levies on coal and power generation (see Vol VIII p 207), the government in accordance with the Bill passed by the Legislature in September is to levy a central excise surcharge of 3 paise per unit on all consumers except agriculturalists from March this year. Taking the southern region as a whole, the delay in setting up thermal plants, due to delay in supply of equipment by BHEL and KLK is serious. It has affected both the Vijayawada and Tuticorin thermal plants, the former sanctioned in 1973 but to be commissioned only in December 1979. Secondly, seven 220 KV intra state power transmission lines with a total circuit length of 782 kms planned for completion last year, 1977-78 have slipped to the current year and may also to the next year due to technical constraints. There are 11 hydro electric projects in the region, including Kundah IV and Suruliyur, which are to be commissioned during the Plan period. The Plan envisages installation of 1.7 million KW in Andhra Pradesh, 1.2 million KW in Karnataka, 0.8 million KW in Kerala and 1.4 million KW in Tamil Nadu and to match this generation, a heavy transmission plan of 7925 circuit KM of 400 KV and 220 KV lines for bulk transfer of power from new generating stations to reinforce the grid system has been completed.

For the country, the power situation improved during September. The Union energy ministry reported that power generation during the first five months, April—August, increased by 14 per cent, reducing the country's power gap between demand and supply from last year's 15 per cent to 9 per cent. Karnataka announced in September that the existing power cut for all categories of consumers except HT consumers was being removed from October 1 till December end, HT consumers being given their full needs through night time power supply. The first unit of the Rajasthan Atomic power station became critical after an interval of 15 months in mid September, starting with a generation of 70 80 MW and going on to the full 200 MW by the end of the month. Tarapur which has been refuelled is producing 200 MW in its first unit and 190 MW in its second unit. In early September, the first 3 gasifiers of the large coal based Ramagundam plant was fired and began functioning. Haryana which had a good power position in September is reducing its power rates to bring them into line with the rates in other Northern region states. The Talcher thermal plant in Orissa with a capacity of 200 MW, however has reduced its production because of coal shortage (it needs 65,000 tonnes a month). The multi-disciplinary teams studying deficiencies in the country's power plants as part of project renovation has identified problems facing 31 projects relating to process control instrumentations, boiler and thurbo generator plant and some of their auxiliaries as well as in the operation and maintenance of the plants. The renovation includes modification and rectification of deficiencies without too much resource expenditure or protected shutdowns and covers replacement of defective components and instruments and the treatment of water used in the boiler. Renovation has been completed in Bhatinda, Santaldih, Panki, Kothagudam, Badarpur and Faridabad, leaving the remaining 25 units that have to be attended to. A Union Cabinet Committee is overseeing the speedy commissioning of six new power projects with a total capacity of 4230 MW in the southern and western regions. The capacity expected to be commissioned during this Plan period is 1,760 MW, including 210 MW in Neyveli Second Unit, the first 210 MW unit in Ramagundam, the first 210 MW in Raichur in the South and Satpura II, Trombay and Korba. The Cabinet Committee studies have resulted in instruction to power stations in Maharashtra, Andhra Pradesh and Madhya Pradesh to move as much coal as possible by road, particularly if they are within 40 km of the collieries to supplement railway coal movement which is being monitored by the Railway Board control room. The major issues about the country's power situation relate to the feasibility about the Plan target on which comments were made in the last issue (see pp 498–499). The Union ministry once more in September reiterated its intention of realising this year's target of 3857 MW of extra generating power capacity and fulfilling the plan target of 44,000 MW, which is a doubling of the present generating capacity. The ministry's stand is based on the fact that 23 per cent of the plan outlay is in the power sector, the reduction in the power gap referred to earlier, the improved performance of the power plants and the action being taken to counter slippages in new projects. As an incentive to further and better effort this is a sound approach. The problem however is that this year's target has no relation to last year's achievement which was statistically 2,000 MW, but was in terms of commissioned works less than 1,500 MW, including 900 MW installed in just one month, March. There are slippages in the delivery of BHEL equipment in terms of defective equipment, there is the absence of a coordinated policy on energy which is now divided between the ministries of energy, science and technology dealing with solar, wind and tidal sources and biogas, petroleum and chemicals dealing with oil, and natural gas, and atomic energy dealing with nuclear energy and there is the varying performance of the State Electricity Boards who are responsible for 92 per cent of the country's energy generation and distribution and over whom the Union ministry has no control. The Union minister held four regional meetings in September in Madras for the Southern states, in Bombay for the Western states, in Calcutta for the Eastern states and at New Delhi for the Northern states with the state power ministers and their officers to identify problems faced by each state in order to remove them and enable the South to reach its target for this year of 795 MW, the West to attain its target of 1,270 MW, the North to reach its target of 1,250 MW and the balance for the East and the Central Electricity Authority. This is a necessary and sound effort of the ministry doing its home work in relation to the overly large target for the year. The Ministry of Agriculture pointing out that agriculture which contributes 50 per cent to GNP consumes only 15 per cent of electrical energy (Tamil Nadu 25.5 per cent) has proposed that a certain percentage of additional power generation ranging from 6 to 33 per cent (which is overall 18 per cent of the additional 18,000 MW power to be generated in the Plan) be earmarked to enable farmers to utilise fully the irrigation potential created by ground water development. The September end Conference of state ministers of minor irrigation and command area development have also recommended increasing rural electrification, with a review of the farmers' power tariff in order to achieve the Plan target of 9 million hectares from minor irrigation schemes. The Rural Electrification Corporation has launched a new programme for large scale energisation of 13,560 irrigation pump sets in such areas, starting with 25 projects for which it will lend Rs. 2.78 crores and ARDC Rs. 5 crores—the first joint project undertaken by the two agencies.

Zonal Council: The Southern Zonal Council with the Chief Ministers of the 4 Southern states and Pondicherry met on September 25 in Madras under the Chairmanship of the Prime Minister who is also minister of Home Affairs and decided: (a) the National Development Council will examine how the collections on the Central excise on power referred to earlier is to be passed on to the states: (b) the Conference of energy ministers will decide about the sharing of the energy generated by the central super thermal station of Ramagundam and Neyveli II between the Southern states: (c) on the devising and enforcement of laws to punish adulteration of food and drugs: (d) about a recommendation for higher price support to cotton to prevent land under cotton in Karnataka, Andhra Pradesh and Tamil Nadu being diverted to other crops: (e) on the need to ensure full implementation of the Family Planning programme and prevent its slippages: (f) to refer to the conference of labour ministers the question of removing disparity in wage rates in the beedi, handloom, cashew and fisheries industries in the region, allowing for specific local conditions in each state: (g) to promote more effective tribal development in the states through cooperatives, land distribution and help in using the land productively and development and preservation of trees: (h) to refer to the conference of bankers which the Union government was calling, helping the State Scheduled Caste Development Corporations through differential interests, more liberal loans and not asking for individual guarantee: (i) also to study the establishment of a Leather Corporation to help the scheduled castes: (j) that the Tamil Nadu request for a 25 KM dry belt around it and for inter-state coordination in control of liquor transport is to be studied and acted upon by the other states and (k) that the Zonal Council is to meet every 6 months in place of the present 2 years cycle, the next meeting to be in Kerala.

Cauvery Waters: The Chief Ministers of Tamil Nadu, Karnataka, Kerala and Pondicherry met as agreed on September 3 to discuss and agree on the sharing of the Cauvery waters. Tamil Nadu's note containing fresh proposals, replacing the 1976 suggestion of the group (under which it claimed that 1.6 lakh hectares of land in Thanjavur district and the neighbouring areas will be without irrigation) was discussed, but as the note had been received late, and some further clarifications were needed on its proposals, it was decided to meet again on October 9 at Bangalore to attempt to arrive at an agreement. The first reaction of Kerala and Karnataka was that they could not agree to the new proposals from Tamil Nadu. However all the Chief Ministers are anxious to arrive at an agreement and it is to be hoped that the October meeting will achieve this.

Palar Floods: Palar river in North Arcot experienced unusual floods at the end of September causing loss of 9 lives and damage to huts, cattle and property that had been developed in the river bed and banks The floods were due to wide spread rains in the hilly tracts bordering Andhra Pradesh and the catchment areas and the consequent floods in the 2 jungle stream which join the Palar at Vaniyambadi. The encroachment of the channel beds by beedi and tannery workers particularly between Ambur and Vaniyambadi and that of the cultivators has restricted the river channel and led to the rapid rise in the water level. The adequate maintenance of the river bed is a long term task of the state government and local authorities to prevent such future mishaps.

Transport and Communication: In September, the disputes between the Southern and South Central Railway on the working of the mail, express and passenger trains between Madras and Vijayawada and the superfast Tamil Nadu, Coromandal and Ganga-Cauvery express and the Nayudupettah-Tondiarpet sections were settled at a meeting of the Railway Board and the two unions of the two railways. In order to ease cargo congestion in the Madras Port, export cargo is to be admitted into the transit sheds of the Madras Port against firm shipping programmes. Also the present practice for allotment of berths –wheat export (one berth), fertiliser import (one berth), sugar export (one berth), cement import (one berth), export vessels (two berths) – are to be changed and berths for export cargo will be allotted only after the shippers aggregate sufficient volume of cargo. Further two teams are at work daily visiting ships to remove bottlenecks and take speedy decisions. Also the management of labour, the shifts and the short supply of labour had reduced the average productivity of a worker handling general cargo from 98 tonnes in January-March to 84 tonnes in April-June and in the case of bagged fertiliser from 133 tonnes to 110 tonnes in the same time period. Absenteeism was high ranging from 25 to 30 per cent. On air transport, it is reported that the recently commissioned integrated air cargo complex at Meenambakkam increased air cargo exports by more than 50 per cent during February-July, averaging 1,130 tonnes per month compared to 700 tonnes earlier, with leather accounting for 75 per cent of the exports and textiles 20 per cent. The mini customs house earned about Rs. 13 crores during the period. The Union government is providing the state with funds for the permanent restoration of the National Highways damaged by the November 1977 floods (see Vol VIII pp 1 and 2) and for which an estimated Rs. 3 crores is needed and will be granted. For the present, Rs. 30 lakhs have been spent on temporary restoration. Now the permanent work is starting with the widening and strengthening of the Grand Southern Trunk Road from the Madras Corporation limits in Guindy upto Meenambakkam airport, providing four lane-traffic and adequate illumination. The Union Government is also expanding the Coimbatore - Salem coaxial route at a cost of Rs. 2.6 crores, starting with a detailed survey of the route. On completion of the project in December 1980, STD service will be provided at Bhavani, Tiruchengode and Namakkal and improved inter-working of the trunk automatic exchanges at Madras, Mangalore, Coimbatore, Ernakulam, Trivandrum and Madurai.

Housing and Tourism: The first of the 3 sites and services schemes launched by the government in the 34 hectare complex at Arumbakkam was readied in a little under year for housing the weaker sections of society. The infrastructural facilities like roads, underground drainage, water supply and lighting have been completed and the first group of settlers will move in by mid October. The Arumbakkam project costs Rs. 184.20 lakhs and the other two at Villivakkam and Kodungaiyur that are now taken up will cost Rs. 748 lakhs. MMDA and Tamil Nadu Housing Board are jointly executing the projects, providing three types of schemes linked to the paying capacity of the EWS groups. The first is a core unit in a plot of 40 square metres plus Rs. 500 worth of building material repayable in monthly instalments of Rs. 22 for 20 years. A second is a partly built house in 46.4 square metres, a core unit plus Rs. 500 building materials repayable in at Rs. 33 monthly in 20 years. The third is a base with kitchen, a room and core unit in 46.57 square metres to be paid back at Rs. 70 per month in 20 years. At the fourth Southern Regional Tourism Ministers Conference in Hyderabad on September 19, the poor tourist trade in the south— only 15 per cent of tourists who come to India, came to the south - the need for the Southern states to form a consortium to develop its tourism and the Union government opening the skies for travel trade with the free sky way as in Europe were emphasised.

Tenancy Legislation and Agrarian Conditions: The legislative assembly in September adopted the Tamil Nadu Cultivating Tenants (Protection from Eviction) Second Amendment Bill extending the protection to tenents from eviction up to January 15, 1979 and the Tamil Nadu Cultivating Tenants (Payment of Fair Rent) Amendment Bill which fixes December 1979 for relinquishment of excess lands by cultivating tenants in Kanyakumari district to get the benefits under the Act. The government also in September constituted a 3 member committee with the Food Secretary as Chairman to examine and recommend the revision of the minimum rates of wages for agricultural workers, the last revision having been in March 1976. A socio economic survey conducted by a Madras college in Thorapakkam village and its 3 hamlets show that the people are poor, 56 per cent of its 450 families belong to the scheduled castes and tribes and backward classes, the annual income per family is Rs. 1,500 to Rs. 3,000, the literacy rate is 40 per cent, matriculates are 6 per cent of the total population of 1,600 and one graduate, 485 persons are employable, only 260 employed with good response to self-employment projects like dairying, poultry farming, bottling soda water but showing aversion to financial aid from outside. The reasons for this last finding should be investigated.

National :

Floods : The floods in August and the damage cause was referred to in the agricultural production section in the last issue (p 511). In September the whole of North East and Central India—Assam, Bengal, Orissa, Bihar, Uttar Pradesh, Haryana, Punjab, Himachal Pradesh, Rajasthan, Madhya Pradesh, Jammu and Kashmir, parts of Gujarat and Delhi were inundated by floods which had not been witnessed for over a hundred years. The country's hydrologists attribute this diastrous flood wave to a strange misbehaviour of the south west monsoon which originating in the Bay of Bengal instead of as usual travelling down to the Arabian sea, changed its course half way through towards the end of August, moved along the Jamuna, developing a deep depression, which as it moved down, increased the river flows and resulted in the flood catastrophe. The total damage to life, cattle and crops, house and public properties has not yet been estimated. In early September the official estimate was loss of human lives ranging from 900 (with several additional deaths in the Murshidabad district in West Bengal which along with Calcutta affected a second flood damage at the end of September), of livestock—4,000, standing crops over 5.1 million acres. The total area affected was 8.7 million hectares in 46,166 villages and a population of 32.4 million. Advance Plan assistance of Rs. 86.75 crores was given to 8 affected states and Rs. 7.5 crores in foodgrains. This was a severe experience in what has become an annual feature of floods, which is due to grossly mismanaged land and water system. The floods are caused mainly by soil erosion due to destruction of the natural vegetation cover of the soil in turn caused by deforestation, conversion to agricultural lands or overgrazing. Around 60,000 million tonnes of soil are displaced because of water erosion every year, causing silting of the river beds and raising their level and reducing the carrying capacity of the river. As short term measures, a plan to save 8 million cattle hit by the floods and a similar plan to save the crops have been formulated by the Union government, under which rawmaterials fortified cattle feed and intensive animal health care have been started by the States Animal Husbandry staff assisted by the Indian Veterinary Research Institute, National Dairy Research Institute and the Agricultural Universities. Also FAO's World Food Programme has made a grant of $ 3.9 million in emergency food relief for flood victims and foreign and Indian voluntary contributions in cash and kind are being rushed to the affected people. The Union government has announced a series of short term and long term flood control measures for Rs. 700 crores over the next 5 years, compared to Rs. 630 crores spent since 1951. The long term plan includes additionally afforestation and soil conservation schemes, construction of storage reservoirs and integrated water resource development in various river basins. This work is being undertaken by an interdepartment group of 14 persons representing the Department of Agriculture, Irrigation, the Central Water Commission, the Planning Commission, the Chief Conservator of Forests, the Chief Engineers, Flood Control of Uttar Pradesh and Bihar.

Sixth Plan: The Planning Commission reported in September, the time by which states were to have sent in their plans that they were apparently waiting for the Seventh Finance Commission recommendations before making their submissions. The Union Cabinet in a review of the Plan in mid September decided to advance the date for the fulfilment of Plan targets in respect of important priority areas of development, like the provision of free employment for which banks are to be asked to increase their loans (for self-employment schemes) at a meeting of the Chief Executives of the public sector banks to be called by the Finance Minister. There is to be a new thrust on rural development which was discussed at the Chief Ministers Conference in regard to drinking water supply and provision of house sites to landless labourers which are advanced from 1983 to 1981 and which will influence the content of the annual plans for next year 1979-80 that are now being formulated. The Planning Commission has also asked the Central ministries to select those schemes for their annual plans which have a high employment potential, involving employment growth being faster than output growth and choosing the appropriate technology for this purpose. The Ministries have been asked to furnish information on expenditure, outlay and employment in the various Plan programmes and have been given a format to collect information on the employment generated for educated and uneducated persons and for technical and non-techical persons separately. During September, the Commission held a consultation with some economists on the Plan's Employment proposals at which questions were posed as to the employment strategy and the feasibility of the growth targets. There was also questions about employment growth outrunning income growth, leading to low per capita incomes and the extensive institutional changes which will be needed in land reforms, rural works, small industries promotion, calling for a political will and commitment. Some of the economists feel that educated unemployment was a low priority area as the persons were from well to do sector of society. The need for regional data base on employment was emphasised as 75 per cent of unemployment was concentrated in 5 states, Kerala, Tamil

Nadu, West Bengal, Bihar, and Uttar Pradesh. For a rural household to earn Rs. 3,660 a year to stay above the poverty line, the household will have to be gainfully employed for at least nine months in a year. It was pointed out that a major constraint in the way of making small scale and cottage industries successful was the lack of marketing information. Market research was needed to enable an entrepreneur to set up his unit. Some computations were discussed which showed that the incremental income per project in some sectors would be below the poverty norm, while the poorest will improve their condition, which is important in a situation when unemployment is 21 million person years and those below the poverty line 296 millions. On the resources mobilisation side, the Commission has asked the states to widen the sales tax net, rationalise its structure, enhance the rate and curb tax evasion, as a result of which it suggests that an additional revenue of Rs. 1,000 crores per annum can be obtained.

Prices and Anti-inflation: The wholesale price index for August showed a marginal rise of 0.2 per cent for the month at 186.2 for the week ending August 26. The major price increase registered during the month was 7.4 per cent for pulses, 2.8 per cent for jute textiles, sugar and edible oils by 1 per cent, metal products 0.9 per cent, while cereals declined by 0.4 per cent, and fibre by 1.4 per cent, the others being stable or registering 0.2 to 0.6 per cent rises. On the side of the inflationary pressure, though money supply declined during the month of August by Rs. 170 crores, it was Rs. 2,714 crores higher than a year ago. During the first quarter, money supply increased to Rs. 1,367 crores, compared to last year's first quarter increase of Rs. 761 crores. RBI explains this as being due to conscious action to stimulate the economy, seen in budgetary deficits as a response to larger developmental outlays and continued inflow of foreign exchange, the credit needs to support larger stocks of foodgrains and sugar and to stimulate industrial production. Also to increase production of major oil seeds, the government decided to raise the minimum support price for groundnut, sunflower seed and soyabean to Rs. 175 per quintal, being an increase of Rs. 30 for soyabean, Rs. 15 for groundnut and Rs. 10 for sunflower. On the other hand, cereals fell in price due to the record production of 126 million tonnes in 1977–78, improved procurement and free movement of cereals in the country. Similarly the average retail price of sugar after decontrol registered a small decline at about Rs. 3 per kg plus 15 to 20 paise in rural areas. The Planning Commission was not in favour of sugar decontrol because 65 per cent of sugar was being consumed by levy sugar consumers at Rs. 2.15 per kg, who now have to pay Rs. 3. On the other hand, the free sugar users who had to pay Rs. 4 per kg are now able to get it at Rs. 3. In the South at least this is not a straight situation as the poor could not afford levy sugar and there was some black marketing. Against the National Agricultural and Marketing Federation (NAFED) as advance action against price rises in essential commodities contracted for import of 57,000 tonnes of pulses and held a stock of 13,000 tonnes of groundnut oil. The RBI issued instructions to banks to obtain its authorisation before issuing any fresh non-borrowing limits, going beyond the previous instruction to seek such approval when the borrowing exceeded Rs. 2 crores. In the case of small industries, however, simplification of procedures, uniform application of rules and waiving of margin money clause have become the new norms, which needs the recommondation of the committee chaired by the Commissioner, Small Scale Industries. RBI is of the view that the overcrowding bank branches in urban centres is not healthy and leads to some non-viable branches and that there is need to expand branches on rural areas; but it has also not accepted the James Raj Committee recommendation to put a ceiling on branch expansion of public sector banks as that would prevent the growth of well managed banks. The expert committee on consumer price index chaired by N. K. Rath (see Vol VII p 438) submitted its report at the end of August recommending that the new index base should be 1971, which should be introduced at the earliest, replacing the compilation and publication of the 1960 based series. A new family living survey should be conducted within 18 months and the intervals between such surveys should be 5 years. It has also recommended continuing the present basis of selection of centres from 3 groups—factory, mines and plantation for compiling the index. Three members of the committee in a note of dissent have stated that black market prices, which the committee recommended need not be collected for the index, should be collected as only then will the actual prices paid by workers be known. Reference is made to the 1947 ILO recommendation which states that when illegal prices are charged openly to the group to which the index applies, such prices should be taken into account. The government is not in favour of the collection of black market prices.

Gold Sales: At its 10th auction on August 30, RBI raised the minimum and maximum price for sale of gold from Rs. 711-721 to Rs. 731-751. It received a lower number of bids-1,640 compared to 1,935 at the last auction, but accepted a larger number of 699 in place of the previous 605. It sold 935.3 kg of gold valued at Rs. 686.25 lakhs. So far in 10 auctions 11,075.62 kg have been sold for 7,280 20 lakhs. The price of gold which reached a high Rs. 764 for 10 grammes on August 31 fell on September 1 to Rs. 760. In the 11th auction on September 13, RBI sold 821.1 kg of gold for Rs. 610.60 lakhs to 686 bidders. The minimum reserve price was raised from Rs. 731 to Rs. 741 and the maximum from Rs. 751 to Rs. 761. The market price on that day was Rs. 764 and 22 carat gold ornaments sold at Rs. 703-Rs.706.

Economy : The review of the Economy by RBI and the world Bank are both positives, with some cautionary comments by RBI. The RBI report refers to the food and foreign exchange reserves which gave the economy in 1977-78 a degree of resilience, though the foreign exchange reserve which is equivalent to 9 month's import requirement is not too large in an economy in which agriculture is subject to sharp output fluctuations, and underlines the importance of continuing increase in exports, as a long term imperative. The increase in agriculture production may be difficult to sustain in the coming years due to the usual climatic factors, the structural weakness of the primary industry and the uneven spread of the new technology. Moreover a decentralised pattern of growth centred on small farms assumes an administrative, marketing, credit and extensive infrastructure, which are yet to develop and in the absence of a self sustaing and growing agriculture, the effect of agriculture output on manufactures, particularly those dependent on it for their raw materials could be serious. Any fall in agricultural production would send up prices despite the buffer stock because of the effect on industry, and the lower the incomes of the farmers. Hence the need to keep expanding agricultural production. The report noted some improvement in investment and warns on the need to expand power which will otherwise be a break on industry as it expands. Similarly the development strategy involving decentralised rural and small scale industry calls for quickly rectifying the inadequate infracstructural and marketing facilities that it calls for. The report also cautions on the inflationary pressure in the economy seen in the 15.6 per cent growth rate in money supply during the last 3 years. This also rules out according to RBI, any lowering of interest rate, which would also lead to inappropriate capital intensive techniques and lower the viability of banks. It calls attention to the increasing reliance of state governments on transfers from the Union by way of shares in central taxes, grants and loans (amounting in 1977–78 to Rs. 1,059 crores which was double that of 1976–77), the unimpressive record of the states in mobilising additional resources (which was Rs. 65 crores in 1971–78 compared to the previous year's Rs. 107 crores) the total states deficit for the year of Rs. 257 crores and the large and persistant overdrafts of the states, on which it suggests that the Union and state governments mutually workout arrangements for clearing the inordinate high level of over drafts (see last issue p 503). The World Bank report for 1978 also surveys the Indian economy, notes its strong points of food and foreign exchange reserves, the accelerating pace of irrigation growth from half a million hectare in 1970–71 to 1.5 million hectares in 1977–78, the increased production of hydel power, iron and steel, the remarkable achievements of the country's dairy industry particularly the Amul Co-operative and the first essay of the World Bank into financing of petroleum exploration in Bombay High with a loan of $150 million.

Industry and DICs: CSO reports in September that there has been a 8.1 per cent rise in the first quarter of 1978–79 in the country, with June index of 143.7 being a 6.2 per cent rise over June 1977 and a rise of 5.6 per cent during the first six months, January–June 1978 compared to the first six months of 1977. The industrial growth for the four months April to July 1978–79 is reported to be lower at 7 per cent, which is still a 50 per cent increase over growth during the corresponding period in 1977–78. Some of the industries where the growth rate during April–July has fallen are steel (8.5 per cent), copper (27), railwagons (1), pig iron (–3), tea (–5), flour milling (–7) and newsprint (–2). The cabinet committee referred to earlier is part of the multi prolonged strategy used for increasing the production of even minor industries which do not have a great weight in the industrial production index, in order to ensure an equispread industrial growth this year. At the cabinet meeting, causes for lags are probed as for instance the blaming of labour as a cover for managerial slackness in certain collieries, which is brought to light and remedied, or the hold up of steel supply to the railway because of the dispute over its price which was resolved by ordering the supply and keeping for later the setling of the price dispute, or the decision on the spot to import locomotive engines because BHEL could not meet the fast increasing demand. In regard to the recently launched District Industrial Centres (DIC), a major problem that they face is the shortage of finance due to the limited area of operation of the branches of the nationalised banks which average 5 to 10 km, whereas the DIC cover the whole district and find that the branch refuses to cover an entrepreneur outside of its 5 to 10 km radius. There are also differing evaluation of the viability of a village project which is drafted and recommended by a DIC credit manager but rejected by the bank. One way of correcting this situation is to establish a branch of the lead bank in a district of the DIC, whose credit managers could manage the branch bank. Most DICs are currently making surveys in villages having a population of more than 1,230 persons, in order to identify local available raw material, the type of industry that can be established, and entrepreneur availability. Also Collectors are organising coordinating meetings of officials to sort out the problems faced by the officers. It should be remembered that the villages have had more than their share of surveys and coordination. Now it is time to move to delivery of the industrialisation programme which DIC represents. The position of the DIC credit manager is crucial to the success of the scheme and so his position should be strengthened and safeguarded.

Public Sector Performance and Pretest Census: The 10 public sector undertakings under the Department of of Industrial Development produced Rs. 11.28 crores during June 1978, which was an increase of 14.3 per cent over that of July 1977. Cumulatively the production for the 4 months period, April–July, was Rs. 41.61 crores which was 11.15 per cent over the corresponding period of last year. The three top producers were Instrumentation Limited which produced Rs. 1 crore (128.5 per cent of the target), HPF which was Rs. 3.66 crores (102.23 per cent of the target) and Bharat Opthalmic which at Rs. 5.12 lakhs was 102.40 per cent of its target. Other undertakings with a good production record were cement corporation (78.6 per cent), National Industries (60.7 per cent) and Artificial Limbs (33.7 per cent). The 16 public sector units under the Department of Heavy Industry also report that they increased the value of their production during the first 5 months, April to August by 41 per cent at Rs. 354.92 crores compared to Rs. 251.25 crores during the same period last year. Engineering projects increased their production by 25 per cent (Rs. 37. 05 crores), BHEL by 38 per cent (Rs. 200.66 crores), HMT by 109 per cent (Rs. 59.73 crores), HEC by 138 per cent (Rs. 24.80 crores). During August, these 16 units produced goods valued at Rs. 80.49 crores which was 17 per cent higher than the August 1977 production. The census commission began on September 15 a pretest in some districts and towns to find out whether the census questionnaire for the 1981 census was easily understood by the people. The questions being pretested are those relating to age, sex, migration, other languages known, fertility. The census of India will be taken in February—March 1981 on the basis of the preparatory work.

National Production Front:

Steel: Government reports that steel production increased in August to

5,82,600 tonnes of saleable steel, 7,32,120 tonnes of ingot steel, with Bhilai producing 1,63,000 tonnes of saleable steel, Bokharo 71,800 tonnes, Rourkela 1,00,000 tonnes, Durgapur 64,300 tonnes and IISCO 45,200. IISCO attained 118 per cent of its target, Rourkela and Bhilai 96 per cent and Bokaro a record in hot metal, hot rolled coils, cold rolled coils and switch output. In fact Bhilai and Rourkela report a profit of Rs. 60 crores for 1977-78, Bhilai's production for the year being a record 2.71 million tonnes of ingot steel, using 98.2 per cent of its saleable steel capacity. The other public sector units incurred losses due to cost escalations, the period of running in for Bokharo, but mainly due to insufficient use of capacity. Mini steel plants also report an increase of production of 27 per cent in the first quarter of this year at 4.72 lakh tonnes. Diversification of mini steel industry to benefit from IDBI soft loan schemes, increased availability of steel scrap, the scrapping of excise duties on ingot and rolled products and the import of 2 lakh tonnes of ferrous melting scrap have helped in this increased production. But the future is not bright. The integrated steel plants in the public sector are running out of coking coal. At September 1, steel plants report stocks of 2.75 lakh tonnes, enough for 6 day's consumption and on September 7 the stock was 2.05 lakh tonnes. Hence there is fear of a sharp rèduction in steel production in the coming months, as in addition to inadequacy of coal supply, the shortage of power and the flood havoc have worsened the situation. It is urgent that the coal supply position of the industry be immediately improved. A number of measures are underway to improve the working of the plants. Bokharo and Durgapur will have their own power plants with 180 MW and 120 MW respectively within the next 3 years, thus relieving them of their dependence on uncertain DVC and giving Bokharo a total of 290 MW and Durgapur 230 MW inclusive of their existing plants. Rourkela has launched a massive Rs. 350 crores modernisation and diversification programme to be completed in 1982, which includes the country's first Rs. 109 crores silicon steel plant and Rs. 95 crores two slag based cement plants. SAIL has decided to use to the full stainless steel capacity of the three plants in an integrated programmes. It will expand the Durgapur Alloy Plant produce 90,000 tonnes of stainless steel castings to be converted into hot rolled coils at Bokharo and further rolled at Salem. This will reduce dependence on imported stainless steel, lower costs and shorten the time. The expansion of Durgapur alloy from 1,60,000 tonnes to 2,60,000 tonnes will cost Rs. 50 crores and will be completed in 42 months. Bokaro will roll them in its hot strip mills and Salem in its cold rolling mill. Rourkela engineers and staff have devised a new technology of gas distribution engineering at a cost of Rs. 70 lakhs which provide flexibility in operating the gas grid and reduce the gas shut down needs of the major production units. SAIL is building a buffer of critical steel items to meet the needs of priority sector consumers and to prevent steep price rises. For this year SAIL is importing 2.98 lakh tonnes of steel item which are in short supply. SAIL also reports an improved offtake of steel items estimated at 8 million tonnes for the year against 7.213 million tonnes in 1977-78, with production reaching 10.2 million tonnes. Further the pig iron and steel products (2,12,000 and 1,50,000 tonnes) supplied to small producers are expected to double this year as in the first 5 months April to August 1,09,000 tonnes of steel products has been supplied and 1,60,000 tonnes of pig iron. It is now supplying the North Eastern region customers with iron and steel materials by road without any additional cost to the buyer. During August, 477 tonnes of steel material were moved from the Gauhati stockyard to these places and supplied at stockyard prices. Imported steel items however have had their prices raised from Rs. 54 to Rs. 100 a tonne, which under the pool price arrangement will mean that domestic steel price will also rise.

Crude: The government reports that the demand for petroleum products has exceeded estimates. Against the anticipated 3.5 per cent increase in motor gasoline, the actual increase in April-July has been 7 per cent, in kerosene 10 per cent instead of 7 per cent, HSD 11 per cent instead of 9 per, cent,and aviation turbine fuel 100 per cent instead of 7.4 per cent. ONGC is therefore planning a renewed drive for both onshore and oilshore exploration. In the Cauvery basin, ONGC will go ahead on its own ending the partnership with the Asmara group, Oil India will have collaboration with British or US firms for the Mahanadi exploration and ONGC will intensify its efforts off the Kerala coast, develop further the Bombay High and Bassein structures and extend operations to Andaman—Nicobar area. Also it is intensifying its onshore explorations both to ensure an adequate reserve to production ratio and meet the expanding future demand for petroleum products. One source of foreign supply is the Soviet Union which has offered to supply crude beyond 1980. Several industries in the northern region report shortage of furnace oil in September, due mainly to the new railway transportation arrangement. In the context of these shortages, IOC's save oil campaign is timely, also taking into account that the country's recoverable reserves are only 360 million tonnes which at the annual rate of use of 20 million tonnes will last only 18 years. During the current year the total demand is placed at 28 million tonnes of which 14 million tonnes will be from indigenous sources. IOC reports a record turnover of Rs. 2,999.63 crores for 1977-78, processing 10.1 million tonnes of crude and increasing its petroleum product sales to 16.8 million tonnes. This increase of petroleum product consumption beyond the 25 million tonne mark needs watching. The Union government has approved a Rs. 58 crores joint project of HPC and BPC for production of cooking gas (LPG) from Bombay High which will provide gas to 1.14 million consumers. The negotiations on the takeover of AOC are to be resumed in October and it is hoped that a final settlement will then be reached.

Coal: The critical coal supply position in the country results from transportation bottleckness which can be remedied, declining output which can also be righted and the poor quality (ash content) of our coal. A review of CIL shows that upto September 15, its production from April of this year was 38 million tonnes which is 4.5 million tonnes short of the target. If there is no improvement, this will make a shortfall of 7.8 million in the year's target of 101 million tonnes, a serious shortage of coking coal for the steel plants and wide ranging effects on industry in general. CIL has been asked to take short term measures to increase coking coal production and open new mines. The government also approved 4 new coal mining projects in Western Coal Fields Limited with a target production of 1.87 million tonnes calling for a capital outlay of Rs. 45.31 crores. CIL has also advised industrial units to make timely arrangements to switchover to lower grade of coal, as coal quality will deteriorate over the years. The government is also examining the proposal to lease mines abroad to increase its import of coking coal on a long term basis. It is also setting up a monitoring cell in the Department of Coal for the continuous monitoring of production. CIL also reports that as a result of improved operational efficiency and economy measures, it has reduced production costs by Rs. 1.50 to Rs. 2 per tonne in 1977–78, which has been taken up in the wide spread between its costs which have gone up from Rs. 45 in 1973-74 to Rs. 71 per tonne in 1976–77, while the price increased only from Rs. 41 to Rs. 65 per tonne in that period. It also reports that it is introducing a new marketing strategy which will assure a more rational distribution and after sales service. On the transport side, despite the arrangements to meet the coal needs of southern industries through its regional offices, at the end of September the industries were seriously short of coal which the Department of Coal attributes to the non-availability of railway wagons. This is remediable and should be.

Ore and Other Metals : The Union government has decided to enlarge the role and functions of the Iron ore Board into a Mineral Development Board in order to integrate the planning and development of essential minerals comprising iron ore, manganese, chromite, vanadium, titanium, tungsten, magnesite, nickel, kyanite and sillimanite. Non–ferrous metals are in short supply. Hindustan copper could supply only 25 to 30 per cent of the registered requirement in July and August, and only 15 to 25 per cent in September and the rest has had to be imported. Again only half of the requirements of tin was supplied by MMTC in July, August and September and only a part of the zinc demand, despite the doubling of the production of zinc and zinc ingots compared to last year according to Hindustan Zinc. A 10 year agreement has been concluded between Hindustan Zinc and IFFCO as a result of which phosphoric acid will be produced at HZL plants which have trebled the production of sulphuric acid to 78,746 mt. in 1977–78. With regard to copper, Hindustan's Coppers, Malangkhat Copper Project in Madhya Pradesh will have an open cast mine and a concentrator plant for the production of 2 million tonnes of copper ore per annum which will produce 21,000 copper metal per year at a project cost of Rs. 90 crores.

Cement and Sugar: In view of the short supply of cement (see last issue p 509) 12 states and 2 Union territories are introducing schemes for the direct control of cement distribution from October 1. The common features of the schemes are: (1) statutory licensing and direct appointment of stockists by the state governments, (2) introduction of the permit system to regulate the sale of cement to members of the public and (3) creation of the administration machinery to implement the scheme. The Cement Controller will make bulk allotment to the 12 states and 2 Union territories and indicate the factories which will supply the cement. The state government in turn will divided the allocation between government departments, bulk consumers and sales to the public through approved stockists. The government has allocated 6.2 lakh tonnes of cement to flood hit areas to meet their additional needs, and so a small cut has been made in the 1978 fourth quarter allocation to the states to meet this need, exempting from the cut the smaller states and Union territories which receive less than 10,000 tonnes quarterly, the central Electricity Authority, the Central Water Commission and the defence establishments. With regard to sugar, the Union cabinet approved in early September its sub committee's recommendation to build a sugar buffer to keep prices stable, the exact amount to be decided later when the prices are stabilised. The suggestion is to maintain a stock of 5-10 lakh tonnes and entrust it to FCI for operation. The financial implications and the technical problems involved in maintaining the buffer need further consideration. Towards the end of September, sugar was selling at Rs. 2.50 to Rs. 2.60 per kg, which is not liked by the industry. The government would like the price to stabilise at Rs. 2.75 per kg. In order to clear its massive sugar cane arrears, the ministry of Agriculture has recommended that the margin money for the sugar industry to secure bank loans be reduced from 15 per cent to 5 per cent, a proposal under study by the Finance ministry which has asked the banks not to insist on regularisation of industry accounts for a period of 2 months to start with. On the export side, the government plans to do away with international trading houses and sell sugar from government to governments. STC has begun this with 71,000 tonnes sold to Sri Lanka, North Korea and Maldives.

Cotton, Textiles and Drugs: The 1977-78 cotton season recorded a production of 75 lakh bales against the Cotton Advisory Board's estimate of 69 lakh bales, which, with fall in cotton consumption due to use of non-cotton fibres by the textile industry, involves the start of 1978-79 with a carryover stock of 22 lakh bales Cotton growers are concerned about the effect of this large stock on prices and have suggested either a large export of cotton or for the Cotton Corporation of India to build a sizeable buffer. On the textile side, NTC reports that its cumulative losses which amounted to Rs. 160 crores seemed to be ending, as in August it made a profit for the first time of Rs. 24 lakhs. The ministry of Industry's programme of modernisation, rationalisation of the work load, bulk procurement of raw materials, diversification and improved marketing is now paying off. The textile policy (see last issue p 509) promotes the handloom sector and polyster blend khadi fabrics, creates additional loomage in the handloom sector and in place of exempting 135 out of 235 composite mills from producing controlled cloth has broad based the burden of subsidising the controlled cloth scheme on the entire industry and the production of 200 million metres of controlled cloth by NTC. Now the problem is to ensure its distribution so that it reaches the poor. The Planning Commission has computed that to attain the target of Rs. 1,900 crores of drug formulations, an investment of Rs. 500 crores would be needed in the next five years. Of this amount, the industry should invest Rs. 115 crores and the rest will have to come from the banks. This estimate depends on the validity of the assumption as to the degree of obsolescence, government purchases of drugs, and outlay of public health scheme.

Fertilisers and Irrigation: There is a serious situation on fertilisers where on the one hand the gap between production and demand is estimated at 8,40,000 tonnes this year and on the other hand the average capacity use of the industry is 65 per cent. This is serious not only because of the investment waste involved but also because the gap will widen to 1.2 million tonnes by 1982–83, on the assumption that the capacity use will rise to 75 per cent. Because of the substantial addition to capacity this year, the gap will decline to 5,50,000 tonnes but thereafter widen. This means that even in the Seventh Plan there will have to be heavy imports, with uncertainty as to the developmant of nitrogenous and phospharic capacity in the world. Here the large buffer stocks in the country may be of some help. In mid September, the Union government introduced a scheme to compensate fertiliser manufactures for the extra cost on road transport of indigenous fertilisers and a similar scheme is to be operated for imported fertilisers, as one means of easing the pressure on the railways. The scheme will operate till March. On the irrigation front, the all India minor irrigation conference referred to earlier has proposed 10 measures to accelerate the flow of institutional finance into minor irrigation, schemes, namely expeditious preparation, processing and implementation of schemes, simplification of application forms, streamlining procedures for scrutiny of loan applications, active involvement of revenue staff, village level workers and boring machines in the collection of loan applications, sustained drive for improving recoveries and lending eligibility of banks. Also the state ground water and minor irrigation departments should be strengthened for faster preparation and scrutiny of ground water schemes. The target of energising 20 lakh pumpsets during the Plan period should be attained. The ultimate scope of developing the irrigation potential from minor irrigation schemes is estimated at 55 million hectares—40 million hectares from groundwater schemes and 15 million hectares from surface water schemes. Such is the crucial importance of executing the conference decisions.

Agricultural Production: With the close of the 1977–78 agricultural season, the agricultural ministry released data on the very good production registered for the year. Foodgrains production was 126 million tonnes against 111.6 million tonnes in 1976–77, an increase of 12.9 per cent, with rice production increasing by 23.4 per cent from 42.8 million tonnes in 1976–77 to 52 8 million tonnes, wheat increasing by 8.3 per cent, pulses by 6.2 per cent, other cereals by 4.2 per cent, cotton by 22.8 per cent sugarcane from 154 million tonnes to 180 million tonnes (16.9 per cent) with sugar production increasing from 48.4 lakh tonnes to 64 lakh tonnes, oil seeds from 78 lakh tonnes to 90 lakh tonnes, groundnuts from 52.6 lakh tonnes, to 60.7 lakh tonnes and jute from 70.8 lakh bales to 71.2 lakh bales (despite floods). The area under HYV increased by 13.1 per cent, though it was short of the target by 4 million hectares (38 million hectares against target of 42 million hectares) fertiliser consumption increased by 25.7 per cent from 34 lakh tonnes to 43 lakh tonnes (lower than the target of 50 lakh tonnes), and agriculture credit of Rs. 1,726 09 crores from Rs. 1,574.96 crores in 1976-77 against the year's target of Rs. 2,214.57 crores. Thus this record agricultural production can be attributed to good rains plus increased use of fertilisers and availability of short term, medium term and long term credit. For the current year, 1978–79 despite the damage to the standing crops from floods estimated at 3 million tonnes of food-grains, the increased production from other areas due to abundance of water in the reservoirs, the overall food output is expected by the ministry to exceed last year's 26 million tonnes. Guidelines for agricultural practices in flood hit areas have been evolved and sent out, an assured quantity of seeds is available, and the fertiliser supply will continue to increase. ICAR has sent interdisciplinary teams to flood hit areas when the waters receded, which analyse the nutrient status of the soils, the nuture and extent of salt deposit, and the problem to be solved in raising rabi crops. Since wheat sowing will be delayed in these areas, varieties suitable for late sowing are being made available. The ministry has formulated an 8 point plan to increase gram production in the rabi season, involving mobilising the entire staff, making available phosphatic fertilisers by September 20, along with arrangements for pesticides and plant protection and good quality seeds. Uttar Pradesh is pushing ahead with its irrigation programme to cover 50 per cent of the total sown area during the Plan period, involving major project construction of barrages and dams, tube wells and lift canals and agreements with Bihar and Uttar Pradesh. The Food Corporation, to save post harvest losses, is mechanising the seiving of foodgrains that it procures in Punjab, Haryana and Uttar Pradesh from April next. The RBI annual report referred to earlier calls on commercial banks to dovetail their agricultural credit schemes with the development activities of other agencies and farmers as one means of ensuring that increasing credit facilities will generate incremental incomes to all agricultural borrowers. One result of the continuing good foodgrain output is the increase in the buffer stock this year to 20 million tonnes. The time has come to examine the economics of the buffer stock operation. One element is that it assumes that because buffers will even out supply fluctuations, demand can be taken for granted. In a lean supply season the demand in our poor country does not increase as the low offtake for public distribution shows, because the poor majority does not have the purchasing power and the rich minority have an inelastic food grain demand. Hence buffers in our country do not stabilise supply in our country unless the food is given away. Short of that, the buffer can be used to subsidise the food consumption of the destitutes (extreme poor), and it can be used for a massive food for work programme. The size of the buffer according to the Juneja Panel (see Vol VIII p 143) should be 10–12 million tonnes plus an operational stock of 3.5 to 8.5 million tonnes. The government however decided on a flexible line of 3.5 to 8.5 million tonnes but for the present of 20 million tonnes. The main problem is storage and on this early and quick action is needed. At mid September the Agricultural Prices Commission came out with its recommendation for a procurement price of Rs. 82 per quintal of paddy (compared to Rs. 112.50 per quintal of wheat for the year 1978–79 marketing season). This involves a five rupee increase from Rs. 77 to Rs. 82 for the coarse variety of paddy. It has also recommended the procurement price of Rs. 78 per quintal for bajra, maize, ragi, which is an increase of Rs. 4 per quintal. After consultations between the Union and state governments on the price issue, with all states pressing for near parity of rice with wheat prices, at the end of September, the Union government announced that the procurement price of paddy at Rs. 85 per quintal with the same Rs. 85 per quintal for coarse grains which with the issue prices remaining unchanged involved a subsidy of Rs. 13 per quintal for rice and Rs. 26 per quintal for coarse grains. This would bring the price of fine and super fine varieties of paddy near or above the Rs. 100 mark. The Union government has called the attention of the states to poor implementation of land reforms: only 2/3 of the land known to be surplus has been so declared, of that only half has been taken over and is yet to be distributed, ceiling laws are not being vigorously implemented, the surplus declared is not being takenover by the state and allotted to the eligible categories, land records are not being updated, tenancy reform is yet to be pushed to ensure that the rent does not exceed the national norm of 1/5 to 1/4 of the gross produce, the indefinite right of resumption should be abolished, the interests of the tenants and shareholders should be recorded and the whole programme should involve the beneficiaries—the tenants and the landless through village committees.

Exports: The trade balance for the first four months, April—July, 1978 shows a deficit of Rs. 250 crores. For 1977-78 as a whole the deficit was Rs. 705 crores (see last issue p 512). Exports during the first four months of 1978-79 were Rs. 1,634.06 crores and imports Rs. 1,913.82 crores. Compared to the first four months of last year exports have declined by 1.5 per cent from Rs. 1,658.19 crores mainly in tea, coffee, cashew, animal feed, cotton fabrics and readymade garments. The items which showed an increase were machinery, transport equipment, precious stones and metals. As has been emphasised in the Bulletin, the adverse trade balance does not matter. What matters is the decline in exports which was a low growth of 5.4 per cent in 1977-78 compared to 27 per cent in 1976-77. It is hoped that the smaller decline of the growth of exports in the first four months of this year will continue. The government has taken measures to encourage exports and has set up task forces to expand trade in electronics, leather, handicrafts, gems and jewellery, project exports and agricultural products. The cash compensatory system has been remodelled and the import policy has been liberalised, following the recommendations of the committee chaired by Secretary, Technical Development in the Ministry of Industry, under which special import facilities are available to small scale units, the import items and replenishment for electronics have been revised, actual users who are eligible for the special facility under export oriented units can import directly canalised items, and some items from the banned lists have been removed. Handloom exports are expanding, during the first four months, April to July, amounting to Rs. 80 crores, being a 14 per cent increase over the first four months of 1977-78. Exports of cotton handloom readymade which declined last year have increased by Rs. 14 crores at Rs. 46 crores during the April—July 1978-79 period. The government has allowed as a special case the export of 800 tonnes of turmeric to Japan and 2,000 tonnes to other countries. Under the agreement worked-out with the US, 10.5 million square yards of mill made apparel will be exported to the US (this regulates the misstamping of mill cloth referred to in Vol VIII p 338). In addition, in September the US reduced the tariff on a number of export items of interest to India, such as jute, mica, mango and iron products. Exports of rayon, synthetic textiles during the first five months, April—August rose from Rs. 13.73 crores to Rs. 14.54 crores, and the target for the year is Rs. 55 crores. The export duty on tea was reduced from Rs. 5 to Rs. 2 per kg. from September 7, with a reduction in the export ceiling from 225 million kg. to 200 million kg. Also the Commerce Ministry is examining the EEPC for a cash compensation scheme not as at present for 1 year but for 3 years. The export of industrial castings, particularly to the US where the demand for castings is increasing every year by 3 to 4 per cent is expanding. Processed food exports are also rising rapidly, within the food item exports which amounted to Rs. 90.217 crores in 1977-78. On the other hand, among the set backs are the system of fixing floor prices for the export of certain construction materials which has led to various malpractices, difficulties in the way of doubling Indo-Soviet trade because of the difficulty of the USSR in absorbing double the amount of Indian exports, the rather extravagant import figure of Rs. 804.65 crores in July compared to the monthly average of Rs. 500 crores, the fall in the exports of some major chemicals in the first five months April—August which brought down exports for this period to Rs. 52.71 crores against the target of Rs. 88.33 crores, the difficulties in mica exports (railway movement, port mismanagement, shipping lines delays) from the Calcutta port, and the decline of 11 per cent in exports to West Germany during April - August 1978-79, which started from mid 1977 and is due to the declining performance of cotton goods, oil cakes, cashew, groundnuts, and chemicals, calling for a more active promotional campaign.

Aid: The World Bank's annual report for the year ending June 1978 shows that India received $ 1,281.5 million as aid from the Bank and IDA (including $ 664.5 million for agricultural and rural development, $ 105 million for industrial development, $ 120 million for telecommunication, $ 87 million for urban development) and, as noted earlier, it made a first loan of $ 150 million for oil and gas exploration in Bombay High on June 30, 1977. In September, notes were exchanged with Japan for a loan of 500 million Yen for the import of Japanese cement for the construction of flood prevention projects and houses in the cyclone hit areas of Andhra Pradesh.

International :

Pakistan: India and Pakistan signed in early September a wheat seeds agreement, under which India will supply Pakistan with 5,200 tonnes of different varieties of wheat seeds in order to increase wheat output in Pakistan. The seeds are to be supplied in a phased manner, which will coincide with the rabi season needs in Pakistan. India has similar agreements with Bangladesh and Yemen and is emerging as a seed exporting country.

World Monetary Reform: The Interim Committee of the Board of Governors of IMF recommended in September the allocation of a further 12 billion SDRs over the next 3 years and the raising of the overall size of the IMF quotas by 50 per cent, which is an increase equal to 20 billion SDRs in the Fund's current quotas. There are now 9.3 billion SDRs issued by the Fund. The 12 billion SDRs increase is thus a major expansion. The Fund World Bank's development committee has recommended doubling of the World Bank's capital, and if with that the President of the World Bank's proposal for a further sixth replinishment of IDA is accepted, the two institutions will emerge with vastly expanded resources. The voting imbalance in favour of the west, however, continues, and the declining dominant position of the US dollar means a multi key currency system which may mean a period of instability. The Fund notes that the depreciation of the dollar is good because it reflects rising domestic prices, and so the changes in exchange rates in the US and over the past two years in general have aided the external adjustments process. What is worrisome is not the adjustment but the large day to day movement in rates due to rumour and speculation. While India, Korea and Malaysia experienced substantial overall balance of payments surplus, in 1978 there will be an increase in current account deficit in Asia, which would nevertheless continue its strong external payments position, continuing the options of the countries for import liberalisation, tariff reduction, and investment stimulation, rather than raising their exchange rates. Ghana announced a 38 per cent devaluation of its currency Cedi against the dollar in September, the new rate being 2.75 Cedi to the dollar.

World Economy: The annual reports of the World Bank and IMF presented to their Annual Meetings in Washington in September set forth for the usual review of the world economy. The World Bank calls attention to the serious world food problem centred among the low income food deficit countries of South Asia and Africa which today have a food deficit of 12 million tonnes and which will be 80 million tonnes by 1990, which means hat with their limited foreign exchange resources they will not be able to buy food, so that they must grow their food on their lands and give this the highest priority. The report also calls on developed countries to refrain from introducing new quantitative import restrictions in order to contribute to the trade expansion of the developing countries. It refers to the inflow of remittances by the migrating nationals from India, Pakistan, Bangladesh, Sri Lanka and Nepal to the West Asia countries, and as the migrants are wide ranging from unskilled to highly skilled, the remittances must be benefitting the poor sections in each country. It suggests that these governments should draw up priority investment schemes to use these resources. Over the next decade it has been estimated that the total financial needs for petroleum development in the oil importing developing countries will be $ 60 billion a year, which will have to come from foreign investors and oil producing nations. The Fund Bank Development Committee underlined the urgency of the developed countries moving to the UN 0.7 per cent target, (which will not be reached even by 1985 at the present rate), in view of the fact that even with a 5 to 6 per cent growth rate 600 million people will live below the poverty line in 2000 AD; it condemned the growth of protectionism and called for a quick decision on increase of the World Bank's capital resources and on the IDA replenishment, as noted earlier. The World Bank report called on each country to take action to go beyond the traditional welfare programmes and redistribution of an inadequate national income to assisting the poor to become more productive through operating specific antipoverty programmes at the national, regional and international levels. Increase in the World Bank resources is urgent, for without such an increase, the Bank will have to cut its lending programme from $ 7.6 billion to $ 5.9 billion and reduce its real commitments by 6 per cent. What is needed according to its President is an increase of the Bank's capital by $ 30 to 40 billion, 90 per cent of which is callable capital. The IMF report calls attention to the halting process of recovery from recession of the industrialised countries because of the slow down of investment resulting from the cost push inflation which has eroded profit margins, and introduced uncertainties in international economic relations. Production in Western Europe has lost its upward momentum, so that the gap between actual and potential output in these countries is 9 per cent for West Germany and 20 per cent for Japan. Only in the US has output expanded, so that its gap is a low 5 per cent. High unemployment and inflationary fears have slowed down economic growth, and while Japan and Germany have not enlarged their imports resulting in huge trade surpluses, others have reduced their imports so that would trade which expanded at an annual 12 per cent in the decade before 1972, it fell later to 9 per cent and is now 4 per cent. The less developed countries are losing in their export effort, which command low prices while their purchases from the industrialised countries are at increasing prices. The floating exchange rates which IMF accepts for the present as inevitable are hurting the poor countries, because their rates are pegged to those of the developed countries whose variations results in losses to them. The Fund has a monitoring device over exchange rate variations, but this does not help the poor countries, who should build up their reserves and then negotiate on a little less basis of inequality with the industrialised countries, until they have a real voice in world monetary reform and relations. On the migrant workers in West Asia referred to earlier, 11 countries have 23.94 lakh workers in that region whose remittance in 1977 were $ 5,963 millions, of which India's is $ 1,000 million, and Egypt $ 1,025 million. It recommends national policies to maximise the investment potential in the home countries of these remittances and advises the West Asian countries using these workers to arrange for the workers not to be exploited by middlemen, so that the migration which this year will lead to $ 10 billion in remittances can benefit every country and all persons.

UNCTAD: The Trade and Development Board of UNCTAD meeting in Geneva in September has led to narrowing the gap between the industrialised and developing countries in the setting up of a Common Fund under the integrated programme for commodities to the point where it is likely that the secretary general of UNCTAD could call a negotiating conference on the Fund in November. The differences between the 2 groups of countries which are now narrowing are the view of the developing countries that the Fund should finance buffer stocks as well as market promotion, research and development, while the industrialised countries want the Fund to concentrate solely on financing the buffer stocks. If this trend towards an agreement continues, the Fund could come into being at the 1979 UNCTAD conference in Manila.

Common Wealth Finance Ministers Conference: The Common Wealth Finance Ministers Conference in September in Montreal called for a reversal of current trends towards protectionism, a reduction of the large and persistent current surpluses of some of the industrialised countries, and for policies to restore sustainable world growth. It supported a major increase in the World Bank capital and IMF quotas, a new issue of SDRs, the negotiations for the UNCTAD Common Fund, and for the sustained expansion of world trade, and the structural changé to bring about an efficient and equitable distribution of production within the world economy.

World Trade: GATT reports that the value of world trade was $ 1,120 billion in 1977, showing an increase of 13 per cent over 1976, but in terms of volume it declined from 11 per cent in 1976 to 4 per cent in 1977. The share of manufactures increased by 15 per cent and primary products by 11 per cent. The increase in value terms was higher for agricultural products than for minerals. In industrialised countries the volume of imports fell from 15 per cent in 1976 to 4.5 per cent in 1977, and exports from 11 to 4.5 per cent. Exports to developing countries expanded faster and imports from them at a lower rate. Total exports of oil importing developing countries declined from 15 per cent in 1976 to 2 to 3 per cent in 1977, while their imports increased in both years by 2 to 3 per cent. Their manufacture exports declined from 30 per cent in 1976 to 7 to 8 per cent in 1977. Their terms of trade which improved slightly in the first half of 1977 declined in the second half. The exports of the oil exporting countries stagnated, while their imports were increased by 18 per cent. GATT reports that the US statement that it will not be able to obtain congressional approval for extending the waiving of counter vailing duties on subsidised exports from EEC countries may endanger the success of GATT multilateral talks on trade liberalisation. The EEC exports mainly food stuffs and agricultural products are valued at $ 500 million. It is to be hoped that this issue will be resolved, as the GATT talks are now in the last phase in Geneva.

TCDC: The United Nations Conference in September in Buenos Aires on Technical Cooperation among Developing Countries (TCDC) decided to institutionalise technical cooperation among developing countries, which was at first opposed by the OECD countries but was finally negotiated and accepted. As a result there will be an operational secretariat in the UN to promote this cooperative programme. Funds for it will be provided from the UNDP resources and the industrialised countries have agreed to increase their voluntary contributions to help developing countries to exchange more technology and experts among themselves. This decision is a step in the realisation of the New International Economic Order (NIEO). The 30 point document which sets forth the conference decisions calls on developing countries to exchange more of their experts, home grown technology, locally adapted western knowhow and research, and training facilities through bilateral and multilateral agreements In view of the lack of progress and delay in reaching agreement on NIEO this TCDC decision becomes urgent and appropriate and will lead to greater national and collective self-reliance. The developing countries cound not get agreement on the precise quantum of aid from UNDP, nor an expansion of their 6 seat majority in UNDP's 48 nation Governing Council by opening it to all UN members for some decisions about the programme of $ 2.4 billion for five years. But this is a first step and the rest will come.

UN Law of the Sea: The seventh session of the UN Law of the Sea Conference carried forward the compromise agreement of the sixth session (see Vol VIII p 333) which would permit parallel exploitation of the sea bed resources both by the International Seabed Authority (ISBA) and an individual country or a contractor sponsored by a country. A negotiating group, which had been set up to recommend the financial payment to ISBA to be made by the contractor, proposed two alternative formulae for the payment, after the contractor had presented to the authorities 2 sites of equal value, one of which would be exploited by Enterprise, the operational arm of ISBA, and the other by the contractor. The alternatives were: (a) the contractor would pay $ 500,000 as application fee plus an additional annual fee of $ 1 million plus an annual production charge at the rate of 7.5 per cent of the production for the first 6 years, 10 per cent for the next 6 years, and 14 per cent for the remaining 8 years: or (b) the contractor would pay $ 500,000 admission fee plus $ 1 million as annual fixed fee plus an annual production charge of 2 per cent of the production for the first 6 years, 4 percent for the next 6 years, and 6 per cent for the remaining 8 years plus an annual share in attributable net profits at the rate of 40 per cent for the first six years, 70 per cent for the next 6 years and 80 per cent for the remaining 8 years. Alternative (a) would earn ISBA $ 740 million in 25 years and (b) $ 1,100 million. Now that the opposing positions have been narrowed down to these 2 formulae, it was decided that the Eighth session should convene in Geneva on March 19, 1979 to reach agreement on the mode of payment by the contractor. At the seventh session, the US proposal to proceed unilaterally to enact legislation for the exploitation of the sea bed resources was opposed by all the developing countries, some of the developed countries like Norway and Sweden and the communist countries and was therefore dropped.

World Sugar and World Health: In 1978–79 there is likely to emerge a world surplus of 1.2 million tonnes of sugar, according to a London sugar study, based on production of 91.25 million tonnes and consumption of 90.05 million tonnes. The International Sugar Agreement is beginning to be felt, with export quota allocations forcing many member producers to restrict forthcoming production. This along with rising consumption encouraged by low world prices will prevent a large surplus being created again this year, like the 7 million tonne surplus in 1977–78. On the health, an important WHO conference on Primary Health Care meeting at Alma Ato (USSR) called on governments to increase their health budgets and reshape their health systems so that essential health care is provided to every citizen. This path breaking meeting defined primary health care as essential health care made universally accessible to all people through the latter's full participation and at a cost that the community and country can afford, involving preferential allocations of health resources to the social periphery as an absolute priority—and as part of the new objective to eliminate mass poverty in the developing countries by the developing countries themselves.

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II Agricultural Development

Paddy and Other Crops:

As against the last year's paddy production of 62 lakh tonnes, the government estimates that this year the output will be 65 lakh tonnes. In September, the early harvests of kuruvai was taking place and the continuing rain during the month augurs well for the samba crop whose preparations have started. There is one problem that is of concern to the farmers and that is the government has not announced the procurement price for the coming year—the state government was pressing for a decision of the Union government for a higher paddy price which would be nearer the wheat procurement price, as noted earlier. The price of Rs. 85 per quintal announced at the end of September by the Union government, will now lead the state government to announce its procurement price. Also the Food Corporation of India and the State Civil Supplies Corporation have not received instructions on procurement paddy. Price in the Thanjavur district markets decline in September at Rs. 60-64 per 57 kg compared to Rs. 70 a year ago, with price offered by the government lower at Rs. 44-51. In this connection as predicted in the last issue (see p 517) the Kerala decision to fix the procurement paddy of Rs. 120 per quintal is having wide ranging effects. The Union government objects to this decision on the grounds that it was taken without consultation with it, that the increase was too high (from Rs. 82 to Rs. 120) and that the major part of the Kerala rice supply comes from other states where farmers get only Rs. 82 per quintal Kerala's public distribution system at the rate of 320 grammes per head per day needs 28 lakh tonnes of rice a year, and the Kerala government points out that 16 lakh tonnes are imported from outside and the rest produced within the state, of which the state procures 35,000 tonnes (in 1976-77). It also points to its higher cost of production and wage rates and that the market price of paddy is Rs. 115 per quintal, so that the procurement price of Rs. 120 is only Rs. 5 above. There are still some questions to be resolved—one is whether the support price would apply to all 3 categories into which the paddy fields have been divided, and the other is the extent to which the ration price should be raised to relieve the public subsidy burden. In this state, all restrictions over movements and zonal systems have been abolished except the restriction on movement to Kerala which involves a 50 per cent levy. The government has no reason to go in for a masssive procurement programme because at the rate of 60,000 tonnes per month needed by its public distribution system, it has more than year's stock, so that the kuruvai procurement will be guided by (a) avoiding distress sales by farmers and (b) adding to the buffer stock. In the matter of paddy yield per hectare, Punjab, Haryana and Tamil Nadu are at the top of the country's paddy producers according to 1976-77 figures provided by the Agricultural Prices Commission. With an All-India average of 1,108 kg. per hectare, Tamil Nadu at 2,129 kg follows Punjab 2,583 kg and Haryana 2,468 kg. The Commission does not recommend a procurement target suggests examinging the problem of specification in respect of the moisture content of paddy and proposed measures for the regulation of markets, enlargement of marketing yards, provision of proper storage and transportation so that the procurement price is actually realised by the farmers.

Research Results:

Research at AICRIP, Hyderabad shows the close correlation of good management practices with paddy output. When wrong culture practices were used, Sona paddy yield dropped by 30 per cent. The practices which do not involve any cost relate to the use of old seedlings, deep trench planting, wider spacing than is good for the variety, unchecked weed growth, inefficient use of fertilisers and poor water use. For improving kharif paddy, it recommends use of IR-20 for low lands, Pusa 2-21 for upland, kaling I and II and Jaya for summer, puddling of 10 cm depth in preparing the land, drilling or drubbing of seeds and transplanting of 40-60 days old seedlings depending on whether they are early or late varieties, split application of fertilisers, the use of zinc, copper and molydenemum and of azolla and leaves of ipomea and crop diversification as management practices. The proper use of the land becomes urgent every day. Our land area is 328 million hectares in India, the net area sown 139 million hectares, cultivable waste 16 million hectares, forests 65 million hectares, pastures 13 million hectares, orchards 4 million hectares. The food requirement per person needs 0.4 hectare and housing per capita 0.08 hectare, and against this total of 0.48 hectare, what is available is 0.34 hectares. This is not all, with population growing by 5 million a year, the use of our diminishing per capita soil resources, intensifying our research on estimating the productive capacity of our varying saline, alkaline, acid and water logged soils, and developing methods of using them optimally, and above all diffusing the results to the farmers become imperative. In place of the current 27 per cent of the area being covered by reconnaissance surveys including 4 per cent with detailed surveys there is need for complete soil resource maps, and updated data which now the National Bureau of Soil Survey and Land Use Planning just set up by ICAR can conduct. 63 lakh hectares have been surveyed and some important results obtained such as that coconut grown in Tumkur and Hassan districts are superior to those grown in Bangalore, oranges grown in the Punzya soils of Nagpur are better than those grown on linga soil and so on. In regard to water management, in which there is lot of waste (45 per cent of the country's water is used in paddy cultivation), maximum paddy yield and 15-20 per cent saving in irrigation water are obtained if shallow submergence of 2-5 cm of standing water is followed. For crop diversification, the use of short duration, photo insensitive and fertiliser responsive varieties of rice yields the best results. Between kharif rice and rabi wheat a crop of moong or summer maize can be grown. Research has also shown that there are leguminous plants which leave a sizeable quantity of nitrogen in the soil through the action of bacteria, and by using the efficient strains, a large number of new strains from the recognised rhizobia is produced by mutation, particularly in the case of soyabean. The use of this genetic engineering technique to other oil seeds and pulses in our country might be pursued. IARI research indicates that paddy farmers can save upto 30 per cent of costly chemical nitrogen by the application of blue green algae which is less than 1/3 as costly as nitrogen. The Periakulam Horticultural Research Station has developed a variety of tomato, PKM-1, using radiation to bring about the necessary mutation. PKM-1 yields 32 tonnes per hectare, starts yielding from the 95th day upto 135th day, so that it can be grown in short spells and the fruit is firm and can be transported. It is cultivated between June and October, uses 500 gms of seeds per hectare and requires both farm yard and chemical fertilisers in specific amounts. Research on coarse grains is being concentrated to match wheat and paddy research and the first results are the rabi sorghum hybrids of CSH-7 and CSH-8R and similar bajra hybrid which is resistant to downy mildew disease. In pulses, one variety of Bengal gram for Central and Southern India and two for Northern plains were released two varieties of arhar for the south and one improved variety of cow feed. In cotton, several early maturing varieties, H-655, F-414, 3K-97 etc. have been released. The cotton pest prodenia has for the past 2 years damaged the cotton crop in the Theni area in Madurai district and on this, the Tamil Nadu Agricultural University has developed the use of nuclear polyhedrosis virus as a pathoyan-cum-pesticide, using extracts from diseased caterpillars mixed with mollasses. Now it should be sprayed widely in the area and the effect demonstrated to the cotton growers. The government is installing 30,000 community bio gas plants in the country this year. In addition to generating power for pump-sets, it is a source of rich manure for the crops which may make a serious difference to total food grain output.

Fish Farming and Poultry Farming :

This year's fisheries development programme includes the setting up of fish farmers' development agencies which will promote inland fish culture in Tiruchirapalli, Dharmapuri and Madurai districts. Also a Rs. 13 lakh scheme is underway to develop brackish water fish farming at Killai in Chidambaram taluk. The Tamil Nadu Poultry Development Corporation has an agreement with the Syndicate Bank for the development of 1000 units with 100 birds each as a start of a net work of poultry cooperative societies to help augment the income earned by the small and marginal farmers and landless labourers members. With the stable market assured by the Corporation, each member can earn a minimum of Rs. 100 per bird per month. The Corporation plans to extend the number of birds laying eggs from the present 15 lakhs to 25 lakhs. It has a hybrid hatching unit—the only one of its kind in the public sector in the state and the country—and proposed that every unit be supplied with 105 birds, each 8 weeks old. Thus for 1,500 units set up in the four districts of Chingleput, North Arcot, Salem and Madurai, 1,57,500 chicks are being reared and replaced by the same numbers every 16 weeks for 4 cycles till the bank loan is repaid. The Corporation has an assured market for eggs in the government and semi government organisations and hospitals. In the Namakkal—Tiruppur and Coimbator areas the farmers have taken to poultry farming readily and there are 12 lakh birds in this area. Poultry farming is fast developing as an important cottage industry. A vaccine to combat cold in poultry is being manufactured at the the Institute of Veterinary Preventive Medicine, Ranipet and is a great boon to this industry and the farmers. The Corporation has also a giant feed mixing plant at Nandanam to produce four tonnes poultry food per hour at a low cost. Also a poultry insurance scheme under the United India Fire and General Insurance Company is functioning to cover risk from fire, diseases, accidents, damage of sheds and riots and strikes.

Animal Husbandry:

The government is planning to start a milk powder plant with a capacity of 10,000 tonnes per day at a cost of Rs. 1.75 crores at Krishnagiri in Dharmapuri district under the Draught Prone Area Programme. Also Union government approval has been requested for starting baby food manufacturing plants in the state starting with a milk powder plant at Erode at a cost of Rs. 7 crores. It is also proposed to start 150 chilling plants in the state in the two plan periods. The state will receive Rs. 4 crores for implementing the second phase of Operation Flood under which 8 districts—Chingleput, South Arcot, North Arcot, Salem, Dharmapuri, Coimbatore, Nilgiris and Madurai will be intensively covered through organisation of milk producers cooperative societies and a milk producers union and as a result all towns with a population of more than 50,000 will have good milk at economic prices. The state government has in this regard decided to adopt the Gujarat pattern for increasing milk production, increasing the state's cattle wealth, improving its quality (the present average yield is half a litre) and providing employment in rural areas.

Tea:

The tea industry faces short term and long term problems. In the four months April–July 1978, all export indices were down—exports declined from 55-63 million kg in April July 1977 to 43 million kg, exports earning declined from Rs. 152 crores to Rs. 86 crores, and the unit realisation from Rs. 27.33 a kg to Rs. 20.03 during this period in the two years. The estimates of total exports for the year vary from 160 million kg to 200 million kg which was last year's exports, the domestic market availability going up from last year's 330 million kg to 400 million kg with domestic demand estimated at 346 million kg, leading to further price declines. It is against this, that the Union government announced on September 7, as noted earlier, an immediate reduction in the export duty from Rs. 5 to Rs. 2 per kg and reduced the export ceiling from last year's 222 million kg to 200 million kg for the year. Also 80 per cent of the tea is to be offered in the domestic markets for auctions to ensure easy indigenous availability. Tea producers are not happy with the export ceiling and more particularly with the decision to sell 80 per cent through auctions, as it reduces their manoeuverability to obtain better prices. There is a world increase in tea production by 3 per cent against the demand increase of 2.6 per cent. Hence tea producers at a meeting in Colombo ending September 1 from 8 countries discussed plans for building a buffer stock of tea to regulate the world price of tea. On production prospects, while South India tea gardens in the first half of 1978 had good rainfall, North India reported unfavourable conditions. From the long term point of view, the Tea Board calls for a drive to increase the area under tea, because though 1977 production saw a record 560 million kg India's share of world production has declined from 42 per cent in 1951 to 31 in 1977 due to increased production of

East Africa. The country's share of exports have also declined from 42 per cent in 1951 to 38 per cent in 1977 due to on inadequate rate of growth and the sharp increase in domestic demand. The Board plans to bring 4,000 hectares additionally annually under tea production and undertake replantation, replacement and rejuvenation over another 4,000 hectares. Following a new plantation of 2,000 acres in Manipur, there is need for developing tea plantations in non-tiaditional areas like in Manipur, Mizoram, Arunachal Pradesh, Nagaland and Sikkim, and also there is the need to establish a research programme on which a start has been made at Kurseong to investigate the problems faced by tea gardens in the hilly areas of Darjeeling. The development finance for this purpose for the Plan period needed by the tea industry is estimated at Rs. 268 crores of which, Rs. 84 crores will be provided by the industry and the balance of Rs. 184 crores by the financial institutions. In this connection, the Board suggests the formation of a Plantation Finance and Development Corporation which could take care of term lending to the major plantation crops. Tamil Nadu which has the highest tea yield per acre is planning to set up 6 more cooperative tea factories at a cost of Rs. 7.5 crores in the Nilgiris in the next 5 years, which will make 17 such cooperative tea factories in the State.

Coffee :

Coffee production for this year is expected to reach a record of 1,20,000 tonnes and against the domestic consumption of 45,000 tonnes (38,000 tonnes in 1976, 44,000 tonnes in 1977), 75,000 tonnes will be available for export, but with Brazil and Colombia back again in the export market, Indian coffee exports are not likely to exceed 55,000 to 60,000 tonnes. In fact against the 1977-78 export of 55,827 tonnes earning Rs. 230.24 crores, in the 3 months April to June 1978 coffee exports were only 14,337 tonnes earning Rs. 38.40 crores. Tamil Nadu which produces coffee over 28,068 hectares (the third in the south) has 11,832 small plantations (4 hectares and less), 355 medium (4 to 10 hectares) and 340 large ones (above 10 hectares). Nagaland reports that coffee plantations have been introduced in 3 districts and will have its first crop in 2 or 3 years. On the world front, it is estimated that the world coffee production for this year 1978-79 will be 75.4 million bags, which is an increase of 9 per cent over last year and the exportable surplus is 56.5 million bags compared to last year's 51 4 million bags. (A bag is equal to 60 kg) Consumer countries on the executive board have informed the International Coffee Organisation that they are willing to review the coffee agreement and negotiate a fresh export quota, controls and prices which will make quotas operative when prices fall and suspend them when prices rise. This is a response to the falling trend of coffee prices.

Rubber :

The government reversed its August decision not to import rubber (see last issue p 520) in view of the continued short supply which meant that in early September the tyre industry had less than 3 to 7 days stock of natural rubber, and its continued high price, which even at the end of September was Rs. 1,200 to Rs. 1,225 per quintal. Hence the government decided immediately to import 15,000 tonnes, and STC moved fast to import the entire amount by

September end. 3,000 tonnes arrived from Sri Lanka on September 23 and the rest will arrive from Vietnam. There is need for a careful study of the needs of the rubber user industries and the real production potential of Kerala, so that the producers and users can be on firmer ground than they are now.

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III Industrial Development

Hindustan Photo Films:

Hindustan Photo Films reports that it earned a profit of Rs. 164.10 lakhs in 1977-78 against the previous year's profit of Rs. 42.63 lakhs. Sales turnover had increased by 14 per cent and further production was 9.22 million square metres. The accumulated loss of the factory by the end of 1977-78 was Rs. 16 crores and the wiping out of this loss in the next few years depends on the company developing new products and modernisation and expansion. The company projects for the manufacture of colour films, positive and negative, sophisticated X-ray products and still films await early Union government decision. The company has urged the government to review the excise and import duty on jumbo films and remove the restrictions on import of Cameras and their accessories. The Madras unit of the plant at Ambattur will go on stream by March 1979 for the manufacture of industrial X-ray films, graphic arts paper and photo chemicals. It has offered its facilities to the state government in the setting up a District Industrial Centre in the Nilgiris. Its direct distribution system introduced in July (see Vol VIII p 471) is being expanded by 5 more depots in addition to the existing 7, and its marketing net work of authorised dealers and actual user consumers is also being expanded. It reports as a result the saving of Rs. 4 crores in commission to 11 distributors. It proposes an immediate expansion of its offices and depots by locating one in every state, which will save 4 per cent in the double sales tax on customers. It also reports that the demand for cine colour films is rapidly expanding and so it is stepping up its production. The demand has increased from 20,000 rolls of cine colour positive films per month to 30,000, and the balance will be met by imports. Also in response to increased demand, high speed still films production has risen from 8 lakh rolls to 12 lakh rolls per month.

Madras Fertilisers Limited:

Madras Fertilisers reports that in 1977-78 it sold 6.12 lakh tonnes of products to a total value of Rs. 114 crores, making a net profit of Rs. 11.57 crores. Its safety performance is notable, with 7.9 million man hours (1,319 days) of accident free operation. Its intensive product promotion programme extends over 1.5 lakh acres in 3 southern states covering 69 villages, and in its rural development programme it will be taking up 9 more units covering 2.90 lakh acres in 96 villages. It plans to increase *ammonia production* of 750 tonnes a day with 100 per cent capacity utilisation.

Cellular Calcrete and Sakthi Pipes:

The Assembly Public Undertakings Committee points out that the Tamil Nadu Housing Board's Cellular Calcrete Plant at Ennore is increasingly falling short of capacity use every year. The heavy investment in the plant had not attained its objective and the plant was incurring heavy losses. The cost of the plant set up with foreign collaboration was initially Rs. 185.77 lakhs in 1966 which increased to Rs. 365 lakhs in 1971. As *against* the expected daily average output of 500 cubic metres, the 1972–73 production was only 36 cubic metres, falling to 16 and 21 cubic metres in the next 2 years and has been 85 cubic metres in 1975-76 and 116 cubic metres in 1976-77. The cost of calcrete work compared to masonry work was expected to be 16 per cent cheaper but became 64 per cent costiler. The sale price which was to be Rs. 52.83 per cubic metre rose to Rs. 113 per cubic metre upto September 1975. The Committee questions whether the project feasibility report was really sound and has decided to review this project again. The Committee has also critically reviewed the performance of Sakthi Pipes against the massive assistance of Rs. 190 lakhs given to it by government, with a commitment of Rs. 281 lakhs. The company manufacturing cast iron pipes with a rated capacity of 50,000 tonnes from July 1966, closed down in May 1968 for want of orders. On the request of the company and in view of the involvement of government finance in the company, the government placed bulk orders without calling for tenders with the company for 30,000 tonnes of pipes during 1969–71 for the states water supply and drinage schemes. In spite of large government aid, the company supplied only 4,270 tonnes of pipes by March 31, 1971 and 3,741 tonnes in 1971 - 72. The government took over its management in January 1973 and even so production was 12,000 tonnes in 1973–74 and 10,000 in 1974–75. The Committee has recommended that the government fix responsibility for this mess and for the *fact that it has been closed since* March 1977 for want of orders for even the small amount of pipes it has produced Hence the Committee recommends that the scheme of reorganisation now being evolved with the help of ICICI should protect the interests of the government and provide for repayment of the government loan and advances which have been made.

Madras Refineries:

Madras Refineries reports processing during the 9 months ending March 31, 1978 2,096 million tonnes of crude which was 112 per cent of capacity and has recommended to the government expanding its capacity to 3.5 million tonnes per annum from the 2.8 million tonnes current capacity at a cost of Rs. 6 *crores*. The *South* needs an additional 6 million tonnes of crude by 1984–85, and for this it has recommended that a new plant be located at Manali, as the latter has advantages over Cochin or *Visakapatnam*. The government has approved the project for the production of 20,000 tonnes per annum of high grade paraffin wax now in short supply. The production which will use the slack waxes in its lube oil complex will start in 1981. It has also proposed a project for 30,000 tonnes a year of linear alkyle benzone, a base material for detergents, at a cost of Rs. 40 crores. With a gross profit of Rs. 5.5 crores, the company has almost repaid its dollar loan, with only one instalment to be paid on January 1, 1979 and the rupee loan will have been repaid by March 1979. It reports that the controllable operating expense per tonne of processed crude has been reduced by Rs. 10.

Textile:

The state government has asked the Union to delegate to it powers to prevent textile mills from producing cloth reserved for handlooms. It reports that there are 50,000 power looms in the state, of which 20,000 only are registered and that the inspection of the looms show how they were violating the law on reservation of cloth for handlooms. The South Indian Mills Association (SIMA) has joined the country's mills in urging the government to continue the duty free import of viscose staple fibre, in view of the fact that in the country only 2 firms produce the fibre totalling 71 million kg in 1971 to 86 million kg 1977 againt the demand by the mills of 69,000 tonnes a year. The domestic production cannot meet even the demand of mills who blend the fibre with cotton or wool and certainly not the results of the multi fibre policy under which atleast 10 per cent of all fibre used should be manmade. The government has devised a policy which will help investment and development of manmade fibres within the country, while canalising the imports of the fibre till a major part of the demand can be met by domestic producers.

MALCO and Soda Ash:

MALCO reports that during 1977 its production was a low 17,036 tonnes being 68 per cent of installed capacity (in 1976 it was 18,968 tonnes which was 67 per cent of capacity). The year recorded a loss of Rs, 159 lakhs. The poor performance of the company is attributed to the low levy prices (Rs. 7,500 per tonne against the cost of production of Rs. 9,000), the power cuts during the year, though for 1978 the state government has made available 67 MVA to maintain a production rate of 23,300 tonnes per annum and the fact that input costs have been increasing— the electricity tariff is high and a concession rate is needed as implied in the Union government's Aluminium Control Policy. The company is planning to change its sales mix and diversify into manufacture of extrusion and sheets. The State government is reviving the Tuticorin Alkali chemicals (TAC) for the manufacture of soda ash and ammonium chloride at Tuticorin. Originally conceived as a joint TIDCO-SPIC project, it was not proceeded with because SPIC could not contribute its share. After a fresh project appraisal, it has been decided that TIDCO will execute the project, have a substantial portion of the equity and issue share to be public. The project will use salt available in the Tuticorin coastal area and ammonia from SPIC and will be located near it.

Paraffin Wax, Cement Supply and Rice Mills:

In September, the Everest Oil Corporation formulaised its production of paraffin wax from waste slack wax, with an initial capacity to produce 100 tonnes per month which is to be expanded and also to produce petroleum jelly. The crude wax is procured from Madras Refineries as noted earlier and processed by conventional lube method by circulating hot water. With regard to cement, the Tamil Nadu Civil Supplies Corporation announced that it will issue cement from its godowns from September 27. Five bags per month will be issued to each person against his family card. Above that amount, on production of building plans approved by Madras Corporation or MMDA or a local body, 140 bags will be issued for construction upto 500 square feet, 280 bags upto 1,000 square feet and 420 bags above that. The cost of cement will be Rs. 21.74 per bag for imported cement and Rs. 21.05 for indigneous cement inclusive of tax. The government also announced that a survey was being completed on the number of rice mills in the state and on completion of the survey, the mills will be taken over by the government.

Handloom :

3.35 lakh pieces of handloom woven blouses inspected by Textile Committee and awaiting shipment pending the allotment of quotas to the US referred in the last issue p. 523, were still uncleared at the end of September, as against 29.96 lakh pieces of this category of garments from the mill made sector having been allotted quotas for US export. The serious difficulties that this involves for the handloom weavers is leading to various forms of agitation in the state. The EEC quotas have been used up; the exports of real Madras handkerchiefs to West Africa are declining and other items like towels are facing restrictions from several importing countries. This had led to a sharp fall in the price of handloom fabrics and has thrown several handloom workers out of employment. There is need now (a) to clear the stocks for exports, (b) get more handloom weavers on the Apparels Export Promotion Council and (c) announce the policy for 1979 based on the 3 immediately precedent quota years.

Leather :

Leather exports during the first 5 months, April to August, earned Rs. 133.90 crores, compared to Rs. 103.90 earned during the corresponding poriod last year (an increase of 29 per cent), against the year's target of Rs. 330 crores, which at this rate of exports will be achieved. The demand for Indian buffalo and cow hides, sheep and goat skins, finished leather and leather goods, particularly garments and leather footwear is increasing in the foreign markets. The Indian Institute of Foreign Trade has suggested that an increase in the duty draw back rates paid to leather garment units, the setting up of leather unit near slaughter houses and greater participation in leather fairs would increase exports of leather garments, particularly to US and Canada. As exports of finished leather exports recorded a sharp rise of 88 per cent during the five months, the government is considering reducing the export quota for semi finished leather by 25 per cent of the 1972 level. Otherwise the best leather is exported and the left over second rate leather is used for finished leather and leather products which brings down the quality of the exported leather goods. A national workshop on our leather industry called by the government has recommended the realignment and redefinition of areas of specialisation among the Union and state governments to avoid duplication among the various agencies, STC to be responsible for the international marketing of leather, Bharat Leather Corporation to be the apex national body coordinating and monitoring the various state leather corporations, the building by STC of buffer stock of scarce bulk chemicals like wattle extract and chrome powder, STC to market finished leather by small tanners and establish warehouses in various overseas centres, and the Khadi and Village Industries Commission to be made responsible for upgrading the quality of hides and skins by improved methods of flaying, curing and preservation. It also recommends rationalisation of the present system of cash incentives and higher incentives for high quality leather and footwear. The role of small scale industrial development corporations would be to upgrade skills, conduct orientation programmes and provide consultations and training services, with CLRI and others doing basic research for the development of the industry.

Private Sector Reports:

The annual report of Kothari Sugar and Chemicals for the year ending June 1978 records a total cane crush of 4.14 lakh tonnes (against the previous year's 2.84 lakh tonnes), a profit of Rs. 33.61 lakhs (against the previous year's loss of Rs. 51.17 lakhs), the improved performance being due to better planting of sugarcane at both of its factories, higher yield per acre, and develomental activities of the company. The Kottur factory would have done even better if it has not been for the devastating cyclone and floods, and at the Sirugappan factory the infrastructural problems are being effectively tackled, so that the coming year's production should be even higher. The annual report of the Chemicals and Plastics India Limited for the year ending March 31, 1978 refers to its record production of PUC resin and the expanding demand for it, the production in January–August 1978 being 5,972 tonnes which was an improvement of 45 per cent over the corresponding period last year. Its modernisation programme at a cost of Rs. 300 lakhs to be completed in 2 years will increase the company's capacity to 20,000 tonnes per annum of PUC rasin. It also reports government concurrence in obtaining from goodrich the VCM containment technology which will minimise pollution and risk to workers. The company made a pre-tax profit of Rs. 154.85 lakhs for the year.

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IV Education, Science and Health

Unrest in Educational Institutions:

September witnessed a rather sharp increase in unrest in universities and colleges involving 9 universities—Madras (in as many as 11 colleges), Madurai, Osmania, Viswabarathi, Dibrugarh, Patna, Lucknow, Hubli and Bangalore. The causes for the unrest were varied—a statement by a minister about Indian girls becoming middle eastern wives, delay in disbursing scholarships, demand for resignation of the Vice-Chancellor, recruitment of local people in government projects, examinations, introduction of mess system in the hostel, price of sweets and in Madras mainly the demand of teachers for implementing the agreed UGC scales (see Vol VIII p 291) and providing them security of service, and disputes with bus conductors which every time has a kind of multiplier effect–both horizontally spreading from one college to another and from one university to another, and vertically involving teachers, public, police and becoming violent. There is no simple over all solution to this varied manifestation of unrest except patient and careful negotiations on each issue to meet each set of local circumstances. The teachers agitation ended with the agreement of the government pay the UGC scales directly to the teachers, as many of the private colleges had refused to accept the prior condition imposed last march, that they will have to recruit their staff on the basis of the UGC scale guidelines, and in turn the government did not implement the UGC scales.

Educational Reform :

1979 has been declared by the United Nations as the International Year of the Child and as part of it, the Union and state governments have declared that throughout the Sixth Plan the assault on destitution among children will be sustained, so that no child is left destitute or uncared for by 1983. A decision to this effect was taken by the Conference of State Ministers of Social Welfare at the end of September, with emphasis on programmes of integrated child development. For the handicapped, it was decided to reserve a certain percentage of seats in colleges and in employment as is being done by Union institutions. In September, the Central Board of Secondary Education approved the scheme of allotting one fifth of the school hours to socially useful productive work (SUPW) (see Vol VIII pp 232 and 476) which will cover 1,200 secondary schools affiliated to the Board. From 1979, the Board will be reverting to the system of passes and failures, with physical and health education being one of the subjects and SUPW being subject to a practical test. From the next academic year, the weekly work load will be reduced to 32 hours and economics and commerce have been dropped from social sciences in the list of the compulsory subjects. The Board has revised all text books with emphasis on the 3 language formula, all this in accord with the Ishwarbai Patel Committee report referred to above. The Board decided in accordance with the Malcolm Adiseshiah Committee recommendations to give students in the higher secondary classes the freedom to offer general education or vocationalised courses or a blend of the two (see Vol VIII p 232), as a means of promoting both self-reliance and vertical mobility. The student will be examined in 5 subjects at the end of Class XII, with a compulsory core language, and SUPW being compulsory for general education students, who can also choose condensed vocational courses like shorthand and typewriting. A general foundation courses is compulsory for students choosing vocationalised subjects. The vocationalised courses are those recommended by the Committee such as maintenance of TV sets, refrigeration, secretarial practices, nursing, optometry.

The syllabus is broken into units and nodules to be offered as electives. The system of marks will be followed in the final 12th year examination and passes and failures indicated, with the chance given to improve performance to any student. Another working group chaired by the Education Secretary has decided that vocational facilities be strengthened in 1,500 of the existing 10,000 higher secondary schools and junior colleges which are terminal for some 8 lakh students, with provision for 500 new schools in a phased manner in the next five years. This would divert 3.5 lakh students among the 12. 8 lakh students, who enter the 11th standard each year into the vocationalised stream, while another 2.5 lakhs who pass the 10th standard will enter polytechnics, ITIs and vocational institutions. In Tamil Nadu, the Directorate of School Education has taken up a survey of 6 districts, including Tiruchirapalli, Coimbatore, Madurai and Madras on various types of vocation which could be dovetailed into the new pattern of education. All higher secondary schools in the state have been asked to set up panels of representatives of industry to advice on vocational training. For this year 23,000 students have opted for vocational courses in 320 schools. About 50 vocations under the categories of agriculture, home science, commerce and business, engineering and technology and health have been introduced. NCERT reports that its National Science Talent Scholar Scheme on which since 1964 Rs 60 lakhs a year has been spent in selecting and providing scholarships to talented school students has not proved a success. Many of them go abroad to study and live there; right now 900 of them are abroad. Also NCERT is concerned that every year, Delhi students get a major part of the award: in 1975 for instance 145 out of the total 372 NSTS scholarships went to Delhi students. From Rs. 150 per month at the school stage to Rs. 400 per month at college, each student costs NCERT Rs. 39,000, so there is the temptation of Delhi parents to invest Rs. 1,000 or Rs. 2,000 in coaching schools to ensure 90 or 100 per cent success in NSTS examinations. There is also the expert assessment that the talent scheme has failed in its purpose of identifying talent, as 85 per cent of the NSTS scholars do not progress beyond the M.Sc. final stage. To remedy the high drop out rate, the scholarship have been changed to National Talent Scholarship since 1976. In September the President of the Republic inaugurated the Perarignar Anna University of Technology in the Engineering College, Guindy Campus, Madras, with Mr P Sivalingam as Vice-Chancellor. It is to be noted that at long last the realisation of the project will improve and enhance technological education and research in the State.

Technical Education :

The Maharashtra Government announced in September that it is starting postmatriculation 3 year medical courses from 1979-80. It will be the equivalent of B. Sc. in medicine, and the graduates will be allowed to start practices in towns and villages with a population of less than 10,000. The cost of the course will be small if it is taken up by the universities. The Applied Nutrition Programme (ANP) came for critical review at a national government sponsored seminar held in Hyderabad at the end of August. About 806 million pre-school/school children days and about 177 million pregnant and nursing mother/women days were fed under the programme.

However only 63,318 villages out of 6,30,000 villages (10 per cent) were covered under ANP, which 39 villages per block and only a third of the total blocks were covered. The Panchayati Samiti which is entrusted with the administration of the schemes only selects the villages for the ANP, and after that has no more interest in the programme. Also each block which is under ANP should have one Mukya Sevika and five gram sevikas to do nutrition education, but most states have not provided this essential service, and there was little coordination of the various nutrition schemes. While there was complaint about the lack of funds, in most states the resources have been underutilised, as in Maharashtra which in the last 4 years used only 42 to 53 per cent of ANP resources, and while 80 per cent of the salary allotment was being spent, programme utilisation such as horticulture was 5 per cent and animal husbandry 10 per cent only. Supplies and equipment from abroad to the extent of Rs. 20.90 lakhs were piled up in various places because the statement governments did not know the clearance procedures. Also some of the foreign supplies were inappropriate such as barbed wire, poultry netting, transistor radio, pressure cookers, kerosene lanterns, duplicators, calculators, and tape recorders. Some more basic problems about ANP were raised in the seminar, such as whether it was any use to teach nutrition when 40 per cent of the people lived below the poverty line, and the assumption that the planners are wise and the rural people ignorant on the basis of which borrowed western models of health and nutrition are forced on the rural people. Also the eternal question as to whether we should first concentrate on increase of production or on ANP was raised. The answer of course is that it is not an either or propositions: both should go hand in hand.

Science :

The Central Scientific Instruments Organisation reports that it has developed a number of medical instruments in its Medical Electronics Divisions, which after they are tested in hospitals are widely in use. These include X-ray image intensifier, simple breath analyser, electrical anaesthesia apparatus, patient monitoring system, several ultra sonics based instruments and echoen cephals scope (which is a brain instrument). The National Chemical Laboratory reports that it is strengthening its competence in process development and is creating competence in new fields such as polymer science and bio chemical engineering. In the field of solar energy the Defence Laboratory in Jodhpur, CBRI Roorkee, BHEL, Haridwar, IIT, Madras report using solar energy for heating buildings at high attitude, heating building and factories in winter and solar air conditioners. NPL, CBRI and TNAU are using solar energy for heating water and solar collectors. Amul is using solar energy for heating milk for milk powder Annamalai University for a paddy drier, and NTDC a commercial solar drier with 10 tonne capacity for grain. IIT, Kanpur is developing a solar unit for per boiling paddy. CSMCRI, Bhavnagar has erected solar machine at Awambia, a small non-electrified village of 1,400 people to supply good quality water, and IIT Madras has designed a solar energised desalination plant for 500 litres a day of potable water at Rameswaram. The College of Engineering, Guindy, CAZRI, Jodhpur and TISCO have developed solar baskets, solar water meters and solar cookers. IIT, Kanpur, NPL and Birla Institute of Technology have designed solar water pumps. IIT, Madras has developed and erected a 10 KW solar thermal plant. CEL has developed a solar powered radio. The government has earmarked Rs. 6.5 crores for solar energy, as it is clear that solar engineering can make a decisive contribution to rural development and supplement fast dwindling fossil fuel resources like wood, oil and gas. A synthesis radio telescope with seven antennas, which can pick up signals from even extra territorial civilisation is being built at Ootocamund by the Radio Astronomy Centre of the Tata Institute of Fundamental Research. The world's largest radio telescope to provide Indian scientists with the most modern facility in Radio Astronomy will be fully operated by the end of the year. The Central Food Technological Research Institute reports that it is working successfully on recycling garbage into food items. For instance, candles will come from fallow recovered from the 26 million animals which die annually, rayon saries from jute sticks pulps, aperitifs from ripe coconut milk and cashew apple, the latter also being turned into candy, canned fruit and chutney. The Department of Science and Technology is developing a multi institutional research project on the cultivation and exploitation of the exotic jojaba plant (growing in Mexico) for producing much needed lubricating oil.

Health:

The scheme of national awards for the best performance in the implementation of the family planning programme is to be renewed by the Union government as announced in September as one means to counter the set back suffered by the programme last year. (see Vol VIII p 407). There will be two prizes each for the best performance in voluntary sterilisation, IUD, Oral Pills and Services for the state. Family planning centres will get cash awards of Rs. 8,000 for the best overall performance, and under the group incentive scheme there will be 4 awards for Rs. 1.5 lakh each for a district in each of the four regions into which the country has been divided. Tamil Nadu belongs to region 4. Also from this year a certain percentage of Central Plan assistance to each state will be linked to its performance in family planning. The state government announced in September that a comprehensive health census will be launched in Tamil Nadu in October and completed in six months to provide the framework for the future planning of health care in the state and identify feasible health projects for inclusion in the budget next year. The survey would make an inventory of available health facilities in each locality and the preference of the people of the locality for various systems of medicine, and will identify diseases that afflicted members of families. Health inspectors and gram seviks are to be enumerators who will be oriented for the survey.

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V Employment

Judged by Employment Exchage statistics, which tell only part of the truths, unemployment in the country is worsening. The number of job-seekers registered in the employment exchanges on April 1978 was 11.4 million, which was *an increase of* 1.075 *millions in* 1 year since May 1977. This is only a partial profile. Our population was 580 million in 1974 and will be 705 million in 1986, the labour force 188 million in 1975 will be 253 million by 1986, which means that while population grows by 21 per cent labour force grows by 35 per cent. It will be recalled that the 16th round of NSS (1960-61) showed 1.62 per cent of the rural population to be unemployed, with those educated above primary and upto secondary level having the heaviest unemployment percentage at 53.70 illiterates at 20.19 and literate upto primary at 18.09 and graduates and above at 8.04 per cent. The real problem in the rural areas is the underemployed and there the 27th round (1972-73) reports that out of a rural labour force of 200 million, (a) chronic unemployment is 2 million weekly unemployment, along with, (b) 7.8 million person days of unemloyment, which aggregate to, (c) 15.8 million man years of unemloyment. The rates of chronic unemloyment and weekly unemployment in rural areas are thus 1 per cent and 3.9 per cent in 1972-73 which is higher than the 0.36 per cent and 3.4 per cent of the 16th round. In this connection, the NSS 27th round shows that the Tamil Nadu has the second highest percentage of rural unemployment among the states, at 10.2 per cent for *males,* 16.0 per cent for females and 12.3 per cent total, which is well above the all India levels of 6.4, 10.5 and 7.7 per cent respectively. The Sixth Plan strategy designed to create maximum job opportunities in the agricultural and the rural sector, which was *reviewed at a* Union Cabinet discussion in September and on which the Planning Commission has addressed a communication to all Central Ministries calls for a total restructuration of socio economic relations in the country side, starting with land reforms, as noted earlier, and a charge in the industrial mix, with priority for those with employment orientation. The Khadi and Village Industries Commission is one instrument. It provided 2 million jobs in 1976-77 and added 3 lakh artisans to this number of 1977-78. Its plan is to provide employment to 8 million persons, including 6 million artisans. Another employment generating area is road construction, which employs 6,000 workers for every Rs. 1 crore spent (compared to 3,000 workers in agriculture, 1,700 in industry and 1,000 in railways on a parallel investment). This estimate is made in a study of the Indian Roads and Transport Development Association, which also points out that 10 million jobs can be created immediately, rising by 1 million annually, consequent on the 10 per cent increase in annual revenue, if the government spends the Rs. 1,600 crores paid by road users instead of one third of that on construction and maintenance. In addition the 5 lakhs commercial vehicles provided jobs to 2.4 million people in 1976, which can be increased to 7.2 million people if an additional 10 lakh vehicles are put on the roads in the next 10 years. On the wages sides, the government assured the trade unions in September that wage negotiations in public sector undertakings will be undertaken at the undertaking level, with the Board of Public Enterprises acting as a coordinator to ensure a certain degree of uniformity. The Union ministries and trade unions are setting up machinery to draft guidelines for these negotiations. At the end of August, Parliament decided to refer the Industrial Relations Bill to a joint committee of Parliament as there were several differing views expressed. despite the prolonged consultations that preceded the bill with labour and management The law is good and will be passed after the various points of views are accommodated, but it can only lay down guidelines and act as a deterrant to irresponsible action. What is needed is a sense of responsibility and a desire to increase production and improve productivity both to expand workers wages and living standards generally. The improvement in the number of mandays worked and decline in those lost noted in the last issue see (p 528) during the first five months of 1978 did not keep up the progress during the sixth month. The first six months total of mandays lost was 8 million which was about the same as that for the first six months of 1977 at 8.12 million. In September the government issued an ordinance for the payment of 8.33 per cent minimum bonus for the accounting year 1977 (see last issue p 528), and has referred to a Cabinet sub-committee the question of paying Dearness Allowance to the top level employees of the government referred to in the last issue (p 528).

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VI Other Items

DIRECTOR'S SECTION:

Half-Day Seminar on Rural Transformation in Tamil Nadu:

The second of the special half-day seminars organised by the Institute as part of a programme to get a wide section of society involved in discussions on development issues was held on Saturday, October 14. It brought together about twenty five persons from various disciplines and fields including economists, scientists, journalists, social workers and officials in government and the State Planning Commission to discuss Dr. C. T. Kurien's recent research findings on the transformation of rural Tamil Nadu in the past twenty five years.

The research project, part of the work that Dr Kurien did as the UGC's National Fellow in 1975-77, went into aspects such as changes in agricultural, production patterns and output, land ownership and tenure patterns, prices, wages and consumption patterns etc., all based on published secondary data. Putting together all the material an integrated picture of rural development in the State was constructed viewing the processes of change from the perspective of big cultivators, small cultivators and non-cultivators, particularly agricultural labourers.

The abstract of Dr Kurien's paper, sent out to the participants in advance, showed that the period covered was one of substantial growth in Tamil Nadu judged by increases in the Net State *Domestic Product (a compound rate* of increase of 3.2 per cent per annum during the period from 1950–51 to 1973–74) as well as the changes in its composition with the share of agriculture declining sharply from 57 per cent to 42 per cent. It was also a period of modernisation in agriculture and the introduction and rapid spread of the High Yielding Varieties Programme. These changes led to an increase in the concentration of assets with the asset position of the top 5 per cent showing visible improvement while the share in assets of all other groups, particularly the lowest groups showing equally visible deterioration. Similarly, in terms of the ownership of land although there was a perceptible decline in the share of those who owned more than 50 acres and marginal improvement in the share of those who owned less than 2 acres, the major benefits of the change in ownership pattern accrued to those with ownership of between 15 and 50 acres. The wages of the different categories of agricultural labourers show more than a doubling in money terms, but real wages in 1974-75 were only between 65 and 75 per cent of what they were in 1951–52. Consumption patterns also showed an increase in the share of expenditure on food and decrease in the share on non-food items, especially clothing.

Government policy over the period has been two pronged: to bring about a substantial increase in output and simultaneously to achieve some degree of redistribution in the countryside. The latter policy has been implemented tardily, while the former has led to the absorption of the bulk of the subsidies by the large cultivators because of the lack of scale neutrality of potential to adopt new techniques of production and take advantage of government subsidies. Thus the rural transformation in Tamil Nadu has been characterised by growth of output benefitting and enriching a few while leaving vast sections of the rural society much as they were quarter of a century ago.

The discussion on the paper followed three broad critical trends, excluding minor questions of clarification.

The methodology of the study was questioned for its high dependence on secondary sources of information. Are official statistics realistic and accurate? However, it was clearly perceived by many participants that despite the problem of paucity of official data, which is a general problem for all empirical research on the Indian economy, the conclusions arrived at by the paper did more or less reflect the perceivable reality in common sense terms.

Second, some constructive criticisms were offered to make the picture more complete: urban cultural influence on the rural population as affecting their ways of life ought to be examined explicitly; the problem of tenancy and eviction of tenants is an important area for further investigation, especially when considering the changes in the scale and type of agriculture.

Third, was the trend in the discussion regarding the conclusions of the paper itself. Given the role of Government policy in the actual development of the last twenty five years, what kind of society would one aim for in the long term to the attainment of which Government policy could be aimed? In favour of which class would such policy have to be? Would the conditions for implementing such policy necessitate a clean break from the existing economic and social system? Replying to these questions, Dr. Kurien pointed out that whereas in the long term one can envisage a society that operates effectively in eradicating poverty by preventing the accumulation of capital in private hands, the scope of the paper itself was not to go into such questions; it was rather to study the nature of the change that has actually occurred and the effect this change has had on the differernt classes of rural society.

In closing it was noted that the paper presented by Dr. Kurien was pathbreaking and constituted an important addition to the literature on the nature of development not only in Tamil Nadu but possible in the country as a whole. It was also observed that the follow up of the study in the form of further studies at a more disaggregated level on the one hand, and extending in to other states on the other were both very important.

Dr Adiseshiah who chaired the Seminar mentioned that the Indian Council of Social Science Research had asked Dr Kurien to coordinate similar studies for other states in the country and that a workshop in mid December was being organised by the Institute as the first step in that direction.

ASSOCHAM:

The Associated Chambers of Commerce and Industry held its annual workshop in early September in New Delhi on the *Mid-term Review of the Economy*. The working paper for the workshop has been published as working paper No. 2 of the Institute. In the review, the minister of finance and the Planning Commission members came out with a strong note of optimism about the state and performance of the economy, while most members were concerned with state of recession faced in particular industries.

World Literacy Day and TNBCE:

September 9 is celebrated the world over as World Literacy Day. The State government and the Tamil Nadu Board of Continuing Education organised a public meeting in Meston Training College at which the State, National and International programmes, problems and imperatives of literacy were reviewed. The Tamil Nadu Board of Continuing Education had a meeting of its Executive Committee in September at which the request for admission of new members was reviewed, the problems facing the approval of the Union government of the projects under NAEP were examined, and arrangements made with regard to the biannual meeting of the Board on October 15.

NAEP :

In preparation of the formal launching of the National Adult Education Programme on Gandhi Jayanthi Day, the State Board of Adult Education which has been formed and the Tamil Nadu Board of Continuing Education organised in September a series of publicity programmes in the press, radio and TV. The Union government has devised an attractive symbol for the programme and has issued a number of posters and wall charts in the various regional languages.

India International Centre and UGC:

A meeting of the Board of Trustees of the India International Centre was held in September at which the staff positions in the Centre were reviewed and decisions made as to their restructuring. The journal and publication programme was also referred to the Editorial Board for reorganisation. The Board finalised preparations to call the special meeting of the General Assembly to deal with a resolution on the constitution of the centre put forward by two members. The University Grants Commission's Committee on regional language as medium of university education had a first meeting in September. After reviewing the state of regional languages media in the university, the committee felt that the root of the problem was at the school stage, and decided to invite the school authorities to meet with it at the next stage. Meanwhile the question of use of regional language in university education is linked to the employment opportunities it provides. This is also to be probed.

Productivity Education :

A workshop of Principals of Polytechics in the south addressed itself to the question of how productivity and management education can be introduced in the polytechnics syllabus. First it is rather surprising that productivity which is a key to all living, particularly for manufacturing is not in the syllabuses. It was decided to remove from the syllabus the outdated parts and replace them by these two new areas—productivity and management, which will be compulsory for all polytechnicians in the second year, with optional specialisation in the final year.

Anti-Apartheid:

Following the meeting of the National Committee to observe the 1978 Anti-Apartheid Year, reported in the last issue (p 530), there was a Tamil Nadu Committee of the Year formed with the Minister of Education as Chairman, and which met in early September. It drew up a programme for the state starting with a seminar in early October and continuing with forming of district committees, running essay and oratorical competitions in schools and colleges, development of TV and press material, publications etc. through the year.

MIDS governing organs:

In September there was meetings of the Building Committee and the Selection Committee at which the building plans of the Institute were established and the staff to be recruited recommended. The Executive Council also met and reviewed the recommendations of the two committees and decided on the programme for the coming year and the meeting of the Governing Council in November.

Rajya Sabha :

In September, there was the first meeting of the joint select committee of both houses to consider the Viswa Bharathi Amendment Bill. The committee agreed to invite the views of interested persons on the Bill, including the staff at Viswa Bharathi and decided on it's methods of work.

October Seminar :

The paper written for October Development Seminar, "Power Development and Problems" by Mr C Sanjeevi, together with a summary of the discussion on the paper at the seminar Chaired by Mr. S. Ramanathan on Thursday October 26 appears as the first article.

Second Article:

The second part of the article, which appeared in the last issue "International Educational Cooperation", appears as the second article.

POWER DEVELOPMENT AND PROBLEMS

By
C. SANJEEVI,
Madras.

The major responsibility of Power Development in India rests with the State Electricity Boards, constituted under the Indian Electricity Supply Act, 1948. The Boards, formed in 18 States, are among the largest public utilities in the country.

Central Electricity Authority is to co-ordinate the activities in the field of power development in relation to the control and utilization of national power resources. Financing of the projects is done in consultation with and approval of the Central Planning Commission.

In the wake of Centre's supplementing the State's efforts over the years, National Hydel Power Corporation (NHPC) and National Thermal Power Corporation (NTPC) have been set up recently. They will play a greater role from now onwards in implementing new major hydro schemes under Central Sector as well as Super Thermal Stations at Singrauli, Ramagundam, Korba, etc. with associated 400 KV transmission systems.

Development over decades

In retrospect one can be legitimately proud of the vast strides, the Nation has made particularly after Independence in power sector. A bird's eye view of the development that has taken place over the last 3 decades is given in ANNEXURE—I enclosed.

It may be seen there from that the installed capacity has increased from 1,900 MW in 1947 to 26,000 MW at present and is expected to reach a level of 44,000 MW by the end of VI Plan (1982–83). During the same period, the installed capacity in Tamil Nadu has also been increased from 139 MW to 2,424 MW at present, and is expected to touch a level of 3,800 MW. It is significant that the capacity additions for All India in VI Plan would be more than the capacity added upto IV Plan.

The investment on power sector has also been substantial rising from Rs. 260 crores in I Plan to Rs. 6,190 crores in V Plan. This will go upto Rs. 15,750 crores in VI Plan for All India while the outlay on power has been rising from Rs. 30 crores in I Plan to Rs. 326 crores in V Plan. Tamil Nadu Electricity Board's proposals for VI Plan are to the tune of Rs. 1,200 crores. The investments contemplated both for the country and for Tamil Nadu during VI Plan would be more than the total investments made in the previous plan periods. This would therefore be a big leap forward both in terms of financial outlays and physical targets.

Maximisation of Generation

Hydro generation is mainly dependant on behaviour of monsoon by way of rainfall, in-flows into reservoirs and storages realised, besides fitness of machines. Hydro Stations are intended to operate mainly as peaking stations and hence the low plant factor i.e., around 40%.

In contrast, Thermal Stations are expected to operate as base load stations with a better plant factor i.e. around 68%. Actually the Thermal Stations are operated at a lower plant factor. The need for maximisation of generation attracted the attention of the power industry in the wake by unprecedented monsoon failure and consequent power crisis experienced by the country in 1972-73.

A national target of 6,000 KWh/KW of installed thermal capacity was set subject to 25% improvement at least over the previous year. A committee was set up to examine the optimum overhauling period of boilers and recommend ways of improving standards of maintenance and reduce incidence of forced outages. The committee's recommendations are being implemented.

Problems in Power Generation

Several steps as indicated below have been taken to maximise generation from thermal stations in the country:

(i) A project renovation programme has been launched in 14 large Thermal Power Stations, having a total of 31 generating units, with an aggregate installed capacity of 3,500 MW. The aim is to identify the hurdles in obtaining better performance and to rectify the deficiencies. The power stations have been visited by high level multi-disciplinary teams, comprising representatives of the BHEL, Instrumentation Ltd., Kota, the State Electricity Boards, Consulting Engineers and the CEA, etc. These teams have identified major deficiencies in these stations and have given concrete suggestions for improving their functioning. Many of these deficiencies have already been rectified in some of the units and the units recommissioned. The performance of these units is now being closely monitored. The programme for major project renovation suffers from the obvious difficulty of obtaining long shut-downs in the units.

(ii) Adequate supply of both imported and indigenous spare parts required for the proper operation and maintenance of the Thermal Power Stations are being arranged. A Central Stocking Pool of imported spare parts for the Russian and American machines has been set up under BHEL and a loan of Rs. 4.5 crores has been granted by the Ministry of Energy for this purpose.

(iii) Assistance is also being taken from VGB, the West German Group of Experts in Thermal Power Stations for improvement in operation and maintenance of the thermal units. Two teams of VGB experts have visited some power stations in the country during 1977 and have made several recommendations for improving the performance of these power stations which are being implemented to the extent possible.

(iv) Teams of specialists and consulting engineers attached to the Ministry and from CEA were also deputed to help the States in improving the performance of their thermal stations. The experts have made both technical and administrative recommendations for improving the performance. These recommendations are being implemented by the concerned Boards.

(v) The State Electricity Boards have been advised to adopt modern maintenance techniques as well as procure special tools and tackles for expeditious completition of maintenance works. They have also been advised to introduce preventive maintenance to reduce the down time of the generating units on forced outage etc. As a result of these measures the time taken for annual over-hual of boilers has come down from an average of 69 days in 1975-76 to 37 days in 1977-78. Similarly, the time taken for annual overhaul of turbine and generator has come down from 119 days in 1975-76 to 70 days in 1977-78.

(vi) Availability of adequately trained operation and maintenance personnel is an essential prerequisite for proper operation and maintenance of thermal power stations. This has become all the more important with the introduction of sophisticated technology with installation of bigger and bigger size units. Four Thermal Power Stations Personnel Training Institutes set up under the C. E. A. at Delhi, Durgapur, Nagpur and Neyveli for training of operating personnel of thermal power stations are now being run on more scientific and modern lines to turn out better operators. Assistance is being taken from the Group of Experts from CEGB of the U.K. for improving the course contents and teaching methodology of these training institutes. Short term courses on maintenance planning and techniques, acceptance testing and commissioning of 200 MW units and performance monitoring, water chemistry, etc. are also being organised for serving engineers. Proposals are also under way to set up modern workshops at these institutes for training of maintenance engineers.

The Tamil Nadu Electricity Board has also started its own training centres in the State to implement the above and also avail the opportunities given in the Central Training Institute.

Transmission

Power from generation sources is evacuated through a net work of EHT transmission lines rated at 230 kV, 110 kV and 66 kV to the Load Centres (Sub-Stations) locate in the grid.

Integrated operation of power systems in the various regions has already been accepted as an essential requirement for optimum utilisation of resources and maximum operational efficiency. Significant progress has already been achieved in this direction particularly in the Southern Region with the formation of the Regional Grid in August 1972 as a fore-runner to the National Grid.

The effort in the next 5 years would be to reinforce the transmission system adequately, evolve 400 kV net work throughout the country, establishment of National load Despatch Centre and move towards evolution of a national grid. A regional load despatch centre has already been established at Bangalore in October 1976 for cotrolling and co-ordinating the regional grid operation. Load Despatch Centre for Tamil Nadu is located at Erode. Proposals are afoot to establish new Load Despatch Centres at Madras and Madurai.

Uttar Pradesh and Maharashtra have already gone ahead with erection of 400 kV system in their States. About 1200 km of 400 kV lines in U.P. and 1500 km in Maharashtra are under construction from Obra to Kanpur, Muradnagar to Rishikesh & Sultanpur to Lucknow (U.P.) and from Koradi to Bhusawal and Kalwa (Maharashtra). 375km length of 400 kV lines from Obra to Sultanpur has been completed in 1977-78. Tamil Nadu is also contemplating establishment of 400 kV lines and Sub-Stations linking Cuddapah (A.P), Kalpakkam, Neyveli, Salem, Udumalpet and Bangalore (Karnataka) to a length of 750 kms and with 400 kV Sub-Stations at these locations. With the large power stations at Kalpakkam, Super Thermal Station at Neyveli and with the prospects of getting bulk relief from Andhra Pradesh, 400 kV system in Tamil Nadu would become an operational necessity.

A total length of nearly 18,000 kms of 400 kV lines has been planned for the country in the next 5 years comprising of 3,800 kms for Northern Region, 4,100 km for Western Region, 1,800 for Eastern Region, 2,000 kms for Southern Region (including 600 kms for Neyveli) 4,500 kms under Central Sector through N.T.P.C. and 1,200 kms as regional lines.

The Transmission and Distribution programme estimated to cost Rs. 300 crore contemplates in Tamil Nadu erection of a total number of 130 EHT lines of 4,964 kms comprising of 16 Nos. of 370 kms of 66 kV, 96 Nos. of 2,185 kms of 110 KV, 20 Nos. of 1,668 kms of 230 kV and 6 Nos. of 741 kms of 400 kV lines. A total number of 138 EHT Sub-Stations including 29 extensions will also be established. This will consist of 21 Nos. 66 kV, 94 Nos. 110 kV, 18 Nos. 230 kV and 5 Nos. 400 kV.

Distribution Problems

As a supplier, the Electricity is required to limit supply voltages to 6% for

L.T. +6%/-9% for H.T. $\pm$ 12.5% for EHT. The supply voltages vary beyond these limits due to several constraints.

In Tamil Nadu the grid has a morning peak with high inductive load (due to agricultural pumpsets) followed by an evening peak (due to combined industrial and lighting loads). Night load is low. In order to improve voltage regulation, Tamil Nadu Electricity Board is installing On-load Tap Changer (OLTC) Transformers in EHT Sub-Stations in a phased programme, besides implementing improvement schemes i. e. strengthening of conductors, establishment of additional distributions/ Sub-Stations, Line tap sub-Stations, etc.

In order to achieve reduction in line losses, TNEB has already been initiating a number of measures in a phased programme. Briefly they are as follows :-

H. T. Capacitors	kV	No. of S.Ss.	Total Capacity	Cost (Rs. in lakhs
i. Erected	11	70	227	254
ii. Ordered	11	12	38	43
	22	14	42	47

Based on computer studies, action has been initiated to procure 2 Nos. 25 MVAR synchronous condensers under IDA credit and these are expected to be erected at Salem and Thiruvalam by end of 1978-79. The estimated cost is Rs. 1.5 crores. Further studies are being made to assess MVAR requirement. During the VI Plan period, 10 Nos. 25 MVAR are to be installed at 10 locations. Till now 37,687 Nos. L. T. shunt capacitors (1 to 2 KVAR) totalling 56.5 MVAR have been erected across the consumers installation. Another 52,000 Nos. (1 to 3 KVAR) L. T. shunt capacitors totalling 90.5 MVAR have been ordered and 21,500 Nos. have been supplied. In addition 17 Nos. REC SS schemes costing Rs. 434 lakhs and 8 Nos. system improvement schemes costing Rs. 594.6 lakhs are under execution to reduce the losses. Out of 21 Sub-Stations sanctioned under system improvement, 10 have already been commissioned.

The Line Loss in Tamil Nadu is about 18.5%. This is mainly due to the following reasons:

(1) Length of lines (Tamil Nadu has the longest lines) 3 lakhs km.

(2) Agricultural pumpsets (Tamil Nadu has the largest Nos.) 8.2 lakhs.

The status regarding line losses in respect of some of the States is compared below :-

State	Length of lines (lakhs km)	Pumpsets (in lakhs)	Percentage losses.
1. Tamil Nadu	2.75	7.43	18.53
2. Madhya Pradesh	1.18	1.48	18.80
3. Himachal Pradesh	0.16	0.013	19.62
4. Uttar Pradesh	1.98	2.61	22.03
5. Haryana	0.84	1.42	23.19
6. Andhra Pradesh	1.34	2.94	25.54
7. Rajasthan	0.76	0.94	25.79

According to C.E.A., the line-losses in the country is anticipated to be about 18.5% by 1983-84.

The steps taken earlier such as installation of capacitors,. synchronous condensers and additional Sub-Stations will reduce the losses to a large extent. Apart from the above, surprise inspections of services are being conducted in Tamil Nadu as a regular feature, as a check against commercial losses.

Out of a total 3.2 lakhs services, inspected in the last three years, cases of thefts numbered less than 3,500 accounting for 1.1%.

Working of Electricity Boards

There have been several suggestions about improving the performance of Electricity Board in order to secure better services for the consumers consistent with a viable and economic working of the Electricity Board. Some of the suggestions are listed below :-

1. Electricity Board should not incur any loss in its transactions.
2. Board should function as an autonomous agency on commercial basis.
3. Losses sustained by the Board on account of Rural Electrification should be made good.
4. Growth of Electricity Board should be with profits which can be ploughed back into developmental projects.
5. Tariffs should be rational and reflect cost of power to appropriate class of consumers.
6. Structural and statutory changes should be made for viability of Electricity Board.

Electricity Boards continue to be in the overall control of State Government and it has to implement the socio-economic objectives of massive Rural Electrification which is inherently uneconomical.

These suggestions have also come up in various forums like All India Chairmen's Conference, Power Ministers, conference and Ministry of Energy which have agreed in principle that there is an urgent need of restructuring Electricity Industry and to place Electricity Boards on financially viable footing.

A suggestion made in this connection is the implementation of the recommendations of Venkatraman's Committee which requires a 11% return on capital, base to be achieved. Most of the Boards including T.N.E.B. have not been able to achieve the same without subsidy from the State Government.

Rural Electrification

Rural Electrification will continue to receive a high priority both at the Central and State levels. The emphasis on electrification of villages and hamlets, Harijan Colonies and energisation of pumpsets continue to be maintained. The creation of Rural Electrification Corporation has helped to accelerate the phase of progress in this area in an organised manner. Number of villages electrified has increased predominantly from a mere 3,000 level to nearly 2.3 lakhs at present while the number of pumpsets energised has gone up from a mere 21,000 to 33.53 lakhs.

During VI Plan, electrification of rural areas will be intensified. The target is to electrify one lakh villages and energisation of 20 lakhs pumpsets. The investment will be in the order of 1,450 crores in 1978-83 period. The programme for Tamil Nadu is estimated to cost Rs. 150 crores.

Tamil Nadu has electrified more than 98% of villages and hamlets of the total 64,198 Nos. and more than 97% of Harijan colonies numbering 25,526 and energised 8.21 lakhs pumpsets.

Future Programme

We are in the midst of a resurgent VI Plan. 1978-79, originally the terminal year of V Plan has become the first year of VI Plan.

The installed capacity in the country is targetted to be augmented by an addition of 18,287 MW by implementing 93 schemes by 1982-83. Of this Western Region will get the major share of 5,855 MW by way of 23 schemes, followed by Northern Region with a capacity of 4,765 MW contributed by 27 schemes. Southern Region is expected to add 4,260 MW from 17 schemes while the eastern and north-eastern region would have 2,844 MW from 18 schemes and 563 MW from 8 schemes. The additions anticipated during VI Plan comprises of 4,565 MW from 43 hydro schemes 12,797 MW from 47 thermal schemes and 925 MW from 3 nuclear stations.

The region-wise dispersal is indicated in the table below:-

Region		Hydro	Thermal	Nuclear	TOTAL
			........(All in MW)........		
Northern	....	1,510	2,800	455	4,765
		(16)	(9)	(2)	(27)
Western	....	385	5,470	....	5,855
		(6)	(17)		(23)
Southern	....	2,110	1,680	470	4,260
		(10)	(6)	(1)	(17)
Eastern	....	244	2,600	....	2,844
		(7)	(11)		(18)
North-Eastern	....	316	247	....	563
		(4)	(4)	....	(8)
TOTAL	....	4,565	12,797	925	18,287
		(43)	(47)	(3)	(93)

Figures in brackets denote the number of Schemes.

Energywise All India consumption in 1982-83 has been estimated at 128.8 billion units requiring a generation of 167 billion units (compared to generation of a little under 100 billion units anticipated in 1977-78).

The 10th Annual Power Survey Committee set up by the Government of India have assessed long term power requirements of individual States, Regions and for the whole country. They are as follows:

	1983-84		1988-89		1993-94		1995-96	
	MW	mu	MW	mu	MW	mu	MW	mu
All India	33,299	185,064	53,867	299,564	85,068	473,588	101,202	563,715
Southern Region	7,939	44,302	12,524	70,000	19,392	108,700	22,883	128,400
Tamil Nadu	2,880	15,662	4,249	23,040	6,257	33,930	7,300	39,580

The assessment indicates that the requirements by 1995-96 would be about 3 times the requirements anticipated by 1983-84. The Planning Commission has estimated that the generation requirements in 1987-88 would be about 265 billion units (equivalent to 726 MU per day) which would call for an addition of 20,000 to 25,000 MW capacity in the 5 year period (1983-88). The dimension of such additions would therefore have to be much more in subsequent years.

On the face of it, the VI Plan targets appear formidable and challenging. Nevertheless all the best efforts have to be put in to translate these objectives into achievements as otherwise States will have to face distortions in meeting the requirements.

The only factor to be reckoned with in this context is the slippages in targets set for successive plans.

The short-falls between targets and achievements have been ranging from 15.4% in I Plan to 50% in IV Plan. The shortfall in V Plan is expected to be about 22%.

The efforts of all Electricity Boards, CEA and Ministry of Energy have to be geared up urgently for a more co-ordinated and cohesive method of functioning almost on a war-footing to execute the schemes with a time bound programme, and to ensure the slippages of the past do not occur. This can only assure us of better prospects and stable and satisfactory power position in the years to come.

Adequate resources have also to be generated by the Electricity Boards. Organisational and constructional capabilities have to be strengthened. Strict appraisal procedures and close monitoring of the projects have to be continued to achieve the above goal in time.

ANNEXURE - I

PHYSICAL AND FINANCIAL PERFORMANCE (Planwise)

Years	Installed capacity (MW)		Outlay on power (Rs. Cr.)		Total outlay (Rs. crores)		Per capita consumption (Units)		Energy generated per day (mu)	
	All India	SR/TN.	All India	Tamil Nadu	All India	Tamil Nadu	All India	Tamil Nadu	All India	Tamil Nadu
Pre Plan. (1947)	1,900	n.a./139	n.a.	11	n.a.	n.a.	18	12	13.51	0.85
I Plan (1951–56)	2,886	662/256	260	30	1,960	86	28	21	32.53	2.88
II Plan (1956–61)	4,653	1,159/571	485	79	6,750	188	38	60	55.13	6.06
III Plan (1961–66)	9,027	2,374/1,370	1,062	119	10,400	342	61	92	100.89	11.07
Annual Plan (1966–69)	12,957	3,445/1,470	1,182	104	6,757	312	78	116	141.48	14.41
IV Plan (1969–74)	16,664	4,513/2,254	2,448	214	15,902	559	97.5	127	199.44	19.04
V Plan (1974–78) Truncated by one year	26,000	6,103/2,424	6,190	326	51,165	1,214	130	150	252.55	25.89
VI Plan (1978–83) Anticipated.	44,626	10,363/3,819*	15,750	1,200	116,000	2,100	n.a.	n.a.	457.5**	n.a.

Including Kalpakkam 470 MW and Neyveli II mine cut .210 MW.

**Target

n.a.— not available.

S.R.: Southern Region

T.N.: Tamil Nadu.

Summary of Discussion

The discussion that followed the presentation of the paper centred around three aspects—the technical aspect, the economic aspect, and suggestions for the future course of action.

The technical questions were chiefly related to the twin aspects of pilferage and slippages. Whereas pilferage has indeed received a great deal of publicity, it was observed that its actual magnitude relative to the length of transmission lines in the state and also relative to the generated output has remained quite low. In general, although the incidence of pilferage—especially in the running of agricultural pumpsets—was quite high, each case would account for a minute amount of current drawn. The Electricity Board thus found that in practice the costs of policing the entire network would be far greater than the losses that would be prevented, and therefore preferred to minimise rather than altogether eradicate pilferage. They were not, of course, turning complacent about the issue.

As for slippage in power development, it appeared that a major reason for its existence was the irregularity in actual financial allocations, leading to projects getting delayed. Apart from this factor, delayed supplies of components and equipment, and the lack of coordination among the four agencies responsible for power development were also cited. Lack of information circuits was a fourth factor in causing slippages: as long as such information channels were absent between projects, there could be no sharing of mutual problems, especially those of a technical nature, nor could there be sharing of solutions, leading to unnecessary duplication of effort and consequently to unnecessary delays.

Slippage are also related to the pattern of decision making that has evolved over time. It appears that the annual DGTD Survey works out the requirements for each area on the basis of past growth trends. Such programmes do not take into account the expansion plans of industrial undertakings despite advance notification by these to the Board; the DGTD invariably assumes that the consumer's plan will be delayed, and so treats it somewhat casually. On the other hand, it is possible—and general feeling in the Board is to agree—that delay in electricity supply itself acts as a deterrent to the consumer's time schedule being stuck to. The issue, it appears, is yet to be resolved concretely.

Transmission losses, which refer to those losses that are technically inherent in the transmission of any form of energy, cannot, it has been estimated, be brought below 18 per cent of power generated in Indian conditions. Reducing such "losses" is possible only in the context of smaller, countries possessing smaller, and thus more concentrated network and less scattered distribution. Such losses, however, in several instances and in general, tend to stand significantly above this level.

Among the economic aspects of the problem, two main points entered the discussion. First, it was generally felt that pricing policy was based neither on technical factors nor realism but on political expediency camouflaging itself as *"meeting the interests of the common* man". Thus, agricultural consumers of *electricity could mount* an agitation and succeed in obtaining a high level of subsidy in the name of the small farmer, though the benefits would actually accrue to a much smaller and different group. Second, at the broader level of general economic development, it was felt that *since the Board's expansion programme* was essentially based on demand trends, *expansion of networks* and industrial transformation tend to go hand in hand, rather than one leading the other.

Several suggestions to the problems outlined above were offered. First, that there is today an urgency in setting up a national level coordinating agency which will also act as a clearing house for information. Such an agency could concievably bring out a regular journal that would help in rapid *spread and assimilation* of problem solving techniques.

Second, that subsidies made by the electricity system should not be allowed to add to their losses, if any, but must *be fully funded* by the State Government as part of the budgetary outlay, thus recognising an outright *subsidy for what* it is.

Third, that the development of capacity must aim to always be well above current demand so that slippages do not have the kind of impact they do at present.

Finally, it was noted, it is important to *involve more and more people in the* process of development even in this specific sector *in order to obtain a proper* feedback and to make implementation more effective.

In the absence of Mr Joshua, the seminar was chaired by Professer S Ramanathan. Mr Sanjeevi, who was unable to attend a part of the discussion, was represented by Mr Srinivasan of the Tamil Nadu Electricity Board.

The Chairman thanked all participants for the fruitful discussion.

From International Aid to International Cooperation Some Thoughts in Retrospect*

(PART II)

Fourth Phase—the Sixties:

The sixties saw the establishment of the First United Nations Development Decade which provided a framework of intentions and hopes of international economic cooperation and remained through that Decade of the sixties an expression of intentions rather than a programme of action which was realised. In the area of education, international cooperation was realised in educational planning and institutional building. UNESCO took the leadership in assisting countries with their educational plans and a new dimension was added through the International Bank for Reconstruction and Development and the Inter American Development Bank providing for the first time in the history of education in our world bank loans for educational development. This entry of the Banks into the area of education led to some detailed studies and research on the relation of Education to Economic Development and the break through that resulted was Bank's insistance that it was not only technical education which resulted in the industrial and agricultural growth of the countries but general education—primary schooling, second level education and adult education—that had a direct result to speeding and promoting self-sustaining economic growth. Along side, the United Nations Special Fund which was also born and became operational at the start of the sixties joined in building the educational institutions in the countries of Africa, Asia and Latin America and the Carribbean. International financial assistance was provided by the banks for the building of schools and teacher training institutes and by the Special Fund for the establishment and running of second level education and teachers schools and colleges, notably in Africa. In the process the countries acquired experience in planning their educational sectors with their National Development Plans.

Another rather remarkable international cooperative effort was the Experimental World Literacy Programme, launched by UNESCO in partnership with the United Nations Special Fund. It was remarkable because it was a new area for both UNESCO and (even more for) the special Fund. The Special Fund as a pre-investment agency was operating in development, areas which were neither completely alight nor completely in darkness but situated in the twilight zone.

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*Extract from a note by Dr Malcolm S Adiseshiah for the Twenty-fifth Anniversary Issue of the International Review of Education, Hamburg: Federal Republic of Germany.

Literacy did not meet this precondition. It was for the U N. Agency an area in darkness, in the sense that it was a vast uncharted and endless arena. UNESCO had just published a monograph showing that there were 750 million illiterate adults in the educationally undeveloped world. And the efforts of the countries to deal with the problems of illiteracy were littered with a series of unsuccessful and disheartening failures and non-starters. Responding to the pressure of the countries in Africa, Asia and Latin America, the Special Fund first and some bilateral programmes later provided international technical cooperation to some dozen countries for mounting programmes to combat illiteracy through what were called work-oriented or functional literacy projects—projects which lasted till near the end of the Decade.

Thus in the first half of the sixties both bilateral and multilateral initiatives made a sizeable contribution to international educational cooperation. But the decade during the second half also brought to light serious problems in this area of international educational cooperation, which stemmed not so much from the international effort nor from the educational sector which that effort served, but from the nature and character of Development, of which education in the countries of Africa, Asia and Latin America formed a part.

Development was defined by the First Development Decade as the attainment by each country of an annual growth of its Gross National Product of 4 per cent, and to attain this, the primary economic sector was required to grow at 2 per cent, the secondary manufacturing sector at 8 per cent, exports at 7 per cent and to help the less-developed countries attain these targets international cooperation was to assure the flow of 1 per cent of the combined Gross National Products of the industrially advanced countries (with 0.7 per cent in official government to government development assistance.) Educational Development—essentially of the unilateral expansionist nature as referred to earlier was built into this model of National Development. What happened during the decade was that these Development targets were not attained by the Developing Countries. International Cooperation (particularly the decisive official Development Assistance) never get anywhere near the 1 per cent or 0.7 per cent pledges (the latter is still stagnating at 0.133 per cent, ([2]) and what little growth took place in the countries resulted in benefits accruing to the well to do minority, social groups in the country, with the gap between the rich and the poor within the country widening. International cooperation was caught in this frame, with the double characteristic of promoting international and international inequalities. Education shared in these defeats. The unilinear expansion and policies were not really expansionist. While the enrolment in schools and the number of schools were being officially and statistically recorded and reported as being on the increase, as far as enrolment was concerned, this was on the opening day of the school year. When the average monthly attendance was taken into account, there was an alarming problem of dropouts, pushouts and leftouts, so that with all that had been invested and expended

(2) OECD: Development Cooperation-1977 Review, Paris 1977.

nationally and internationally in education, at the end of the Decade more children were out of school than in school, more adults were illiterate than were at the begining of the sixties.

Parallel to this maldevelopment which the first development Decade promoted was the content, technology mix and structures in vogue which also raised question. The economy was producing not basic consumption goods needed by the masses, but luxury goods and non-essentials in response to the market. The market in its turn was composed by the minority who had the resources and whose demand decided the content of production. The production machine in turn, running on the maximisation of profits principle, used capital intensive techniques and technologies of production, because in many cases the nature and content of the goods produced demanded it, but more generally, despite capital being scarce and labour being abundant, the price of capital was kept artificially and arbitrarily low both through various subsides and concession and through exchange rate manipulation by the government. And so the socio-economic structure with assets ownership in the hands of a small group ensured that the power structures and decision making net work were in the hands of the minority elite.

Parallelly the education system was in form and content not a native product but an imported model. Its form was a one way structure making the purpose of education one of passing examinations in order to move from a lower to a higher class. Its learning content was both outdated and irrelevant: outdated in the sense that its information and even knowledge base was usually several decades behind: irrelevant in the sense that it was not related to the local environment, that is the learning contents were urban and industry oriented and were transposed to the agro-rural area where people lived. (In India for instance of 260 million in the labour force, 4.5 million are working in manufacturing factories which are usually situated in or near cities). The teaching techniques used were those meant to serve the purpose of passing the examination and moving from one class or grade to another, not one of understanding, analysing, reading, communicating, innovating and improvising. As a result of all the factors mentioned, the educational system was serving the well-to-do minority in the country, with the mass of the people being outside of it. (Referring to India again, recent field studies show that 80 per cent of school and college completers come from the top 20 per cent of society). Hence the small educated elite in the countries of Africa, Asia, Latin America and the Carribbean who were the subjects and objects of international cooperation shared in the basic feature of the asset outing minority. Their incomes include a rental element which was not earned, but which accrued to them as a function of their monopolistic minority status. As noted earlier it was not international educational cooperation which accounts for these grave limitations of the educational content, techniques and structures that developed in the sixties. International cooperation was never an autonomous force: it reflected the ideaology and conditions of the time. And the time had come for Development generally and Education in particular to be pulled out of this vicious and accelerating circle of mass poverty, unemployment, ill-health, illiteracy and miseducation with which the sixties ended.

Fifth phase-the Seventies:

The Seventies which opened with the second Development Decade and its accompanying International Development Strategy added a new dimension to Development Though the First Decade had defined Development as growth plus change, national development plans and international cooperation had, as noted *earlier, concentrated on growth. In the* seventies the attainment of social justice was at first juxtaposed to growth, the Development objective being defined as growth and social justice, later moving to growth through social justice and ending up at the close of the Decade with social justice and the consequential growth rate. During the Decade, National Development Plans defined social justice with increasing precision as involving the production process making available the means of meeting the minimum needs of the poor majority-foodgrains, clothing, housing, drinking water, health care, education and nutrition. The basic cause for the mass poverty which the minimum needs programme aimed at meeting was identified as the inequitable distribution structures, so that a second part of the social justice objectives involved policies of distributive justice which cover (a) land reform, (b) control and transfer of corporate property, (c) public distribution of essential goods and credit and inputs needed by the small producer, (d) the public sector providing infrastructure and social service, (e) generation of employment, (f) development of backward areas and communities, (g) progressive fiscal action, (h) a national income policy and (i) organisation of the rural poor-tenants, marginal farmers, landless labourers. Another feature of the development plans is the promotion of endogenous self-reliant development which has a trade off in terms of some slowing of the growth rate and may be even in the volume of production in the short term, it involves less reliance on technological transfers and the ability to face upto the pressure of the technologies developed and well suited to capital abundant, labour short industrialised Euro-American economies which are welcomed into the less developed countries despite their plentiful labour resource endowment and capital shortage by their industrialists both in the private and public sector through constantly growing collaboration agreements or affiliate and subsidiary-relations with multi national corporations.

Parallelly a number of factors developed during the second half of the seventies which hampered national development and international cooperation. One was the rise in oil prices which seriously affected balance of payment position of the non-oil producing developing countries raising their balance of payments deficits to $ 40 billion in the mid seventies and averaging an annual $ 27 billion for the decade. The countries managed their economies, however, in such a manner as not to slow down their development programmes, but achieved this at the cost of maintaining external indebtedness. A second factor which affected the coun-tries was the high rates of inflation and unemployment which characterised during a greater part of the decade all economies. The impact of inflation in the industrially advanced countries was to raise the price of the import relative to that of the exports of the developing countries and so worsen terms of trade of the latter group of countries. Towards the end of the Decade, the high unemployment rates also led the industrialised countries to adopt protectionist policies, which reduced the volume of world trade and the already small share in it of the developing countries.

It is around these problems that international cooperation negotiations and arrangements have centred in the seventies—the $ 1 billion International Fund for Agricultural Development, and the World Fund Information Network, the IMF Special Fund set up from the proceeds of the Fund's gold sales, the Fund for financing buffer stocks of 9 commodities in order to help stabilise these prices and the debt rescheduling discussions. Bilateral and multilateral cooperation is being increasingly focussed on the anti-poverty minimum needs programme and on speeding the redistributive policies, in so far as there is a political will and a management commitment to it.

International cooperation in education has to turn around to assist the new educational priorities which the new development strategies are giving rise to. There is still the quantitative educational problem that the developing countries are facing. Only now it is part of their minimum or basic needs programme, with emphasis on creating learning opportunities and learning systems for the majority of the children—who are the children of the poor majority of the country—who have dropped out of school, or who have been pushed out of school or who have been left out of the school system. Various viable system of non-formal education are being created to democratise the system and international cooperation will have to focus on this demanding areas and assist in the convergence of the two systems and restructuring of the formal system, so that it is a system which ceases to cater, as it does at present so efficiently and fully, to the elite minority.

The other fact of the anti-poverty programme and its educational democratisation component is the process of education and self-reliance of the illiterate adults who, according to UNESCO, number over 860 millions today. This is the massive problem facing the countries of Africa, Asia and Latin America and the main lessons learnt from the Experimental World Literacy Programme of the sixties referred to earlier was that if there is a political commitment and if made part of the anti-poverty employment generation drive, including the organisation of the poor so that they become conscious of their status and take self-supporting action to fight for their rights, the literacy objective can be attained over the same time frame as the poverty and unemployment eradication programme. That atleast is the base for the programme in India, where nearly half the world's illiterates live, under which a carefully prepared and comprehensively orchestrated effort has begun to make 100 million illiterate adults educated and self-reliant within a time span of 5 to 6 years. Within this somewhat breath taking endeavour, the form of international cooperation have been identified—consultants for 2-4 weeks each from countries which have run successful literacy programme recently such as China, Tanzania, Mexico, Brazil, Cuba, Sri Lanka, opportunities for sharing experiences on problems and means of meeting and *overcoming them, and commodity assistance* in the form of cassettes paper, small offset printing machines and jeeps. In the adult literacy programme, the Experimental World Literacy Programme makes a reality of the whole world community's desire to promote increasingly technical cooperation between developing countries. It also requires that rules of the game for international educational cooperation be changed to make available commodity assistance without being tied in some kind of a mystical or arbitrary manner to a fixed proportions of other forms of cooperation.

On the qualitative content side of the learning system, many of the problems of lack of relevance and self-reliance are planned to be met by restructuring the content of education to the employment objectives which means linking learning to work. Work experience and socially useful productive work at the school level or its equivalent and application of class room learnings to the problems faced by the urban or rural community at the higher education level are the work linked learning systems that are now being developed. There is no antimanual work tradition in the countries. Whether it be in the fields, forms or factories, the unremitting manual toil that is put in by the illiterate or semi-illiterate adult men, women and even children, of school going age points to the system of education and its content and directions being the source of the anti-manual work outlook. Even this long held belief is now under *question*, as the educated youth turns to any form of work, provided it pays. Here the linking of learning with work at all stages of education also meets the relevant objective because the majority of the learning centres are situated in the agro-rural areas and are so linked to the agro-rural work opportunities available in the locality. International cooperation in education in this area of linking education to productive work again involves the decision of promoting technical cooperation among developing countries.

Other quantitative learning changes *involve the strengthening* of the cultural component of learning systems, education about population problems and potentials at the earlier levels and about family planning and family welfare at the adolescent and adult levels, education for international understanding, peace and spiritual values generally and international scientific cooperation at the university and post-university levels—in all of these international cooperation has an impressive and growingly important role.

There are unexplored dimensions of international cooperation in development generally and education specifically. For speeding and promoting International Development, the structures have been set up over the past 3 decades. It is the international political will and decisions that provide the resources to make the structures work effectively. The kind of decisions providing resources is to be found in the discussions under-way in the Law of the Seas negotiations and the disarmament conference con-fabulation which are meeting at a time when the world is spending over $ 1 billion a day on armaments. Naturally the decision providing resources relate to the developing countries making real their social justice objectives and pledges. On both the intranational and international fronts the time has come to turn the rhetoric of justice and cooperation into realised and realisable programmes of action. On the other hand, International Educational Corporation is not primarily a matter of resources. It is matter of a cooperative effort between countries that will make education a life long learning process, that will both create and deliver learning inputs and infrastructures to all its peoples and simultaneously enable them to use that learning for promoting the art of peaceful living.

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