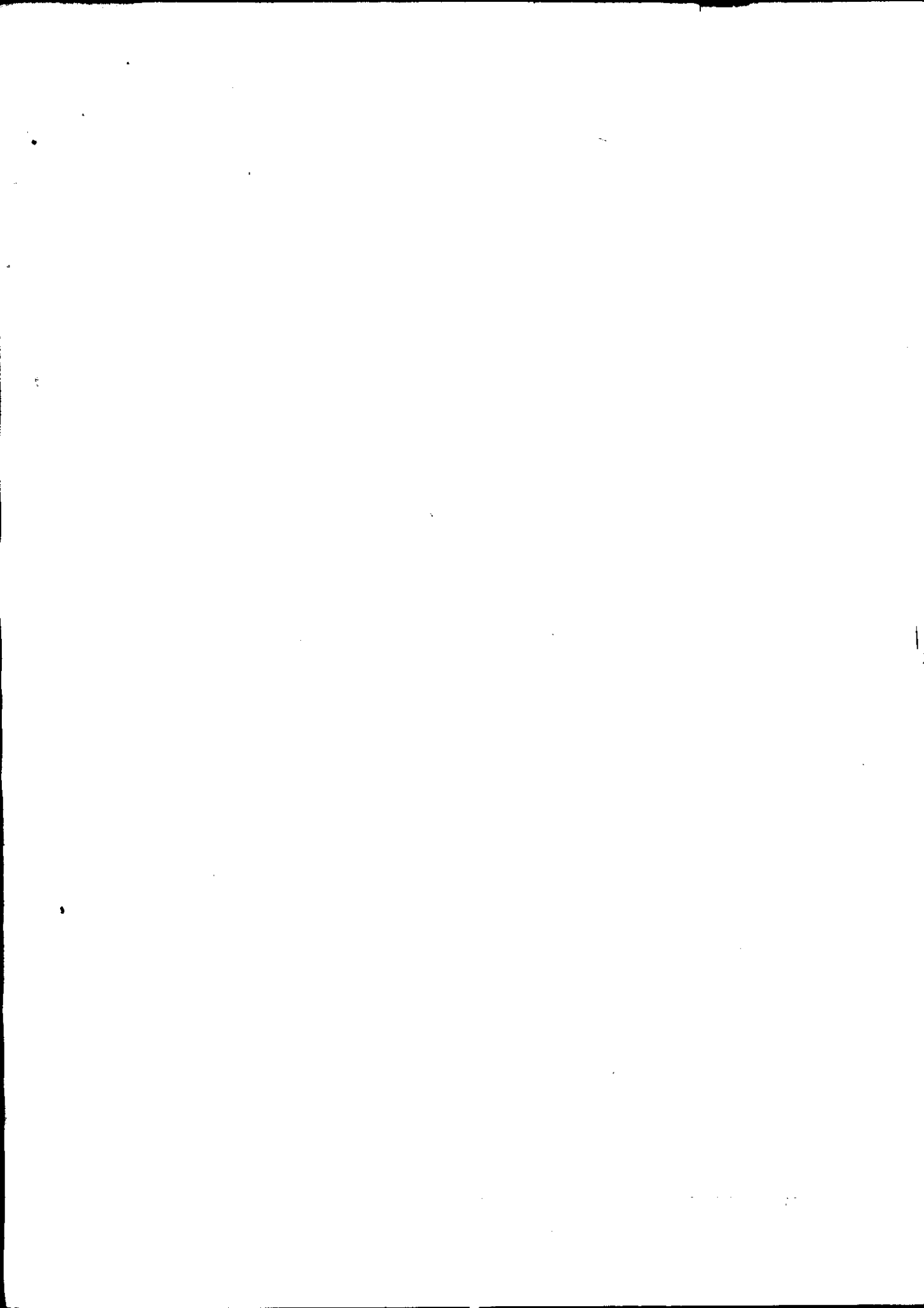


**WORKING PAPERS
FOR THE
DEVELOPMENT
PROGRAMME
1977-78**



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PREFACE

The Annual Plan document is a detailed explanatory description of the economic plan of the Government for the coming year, as incorporated in the budget, the annual development programme, the import policy, the credit budget and other important Government policies and programmes.

The practice hitherto has been that the outline or core of the annual plan is sanctioned by the National Economic Council in May. Within this outline or broad framework the budget, the annual development programme, and credit, commercial and investment policies are formulated. Since many of the component policies are worked out in detail and announced subsequently, there is an inevitable time lag between the approval of the Plan outline in May and the publication of the Annual Plan document. This poses certain problems of consistency mainly (but not invariably) of a minor character since estimates for the current year made in April-May, on which the outline of the Plan for next year is based, are sometimes different from the actuals available in August-September when the Plan document is usually published. The problem cannot be resolved satisfactorily. The solution adopted here is to preserve the consistency of the original framework approved in May but indicate major areas where subsequent data shows significant changes.

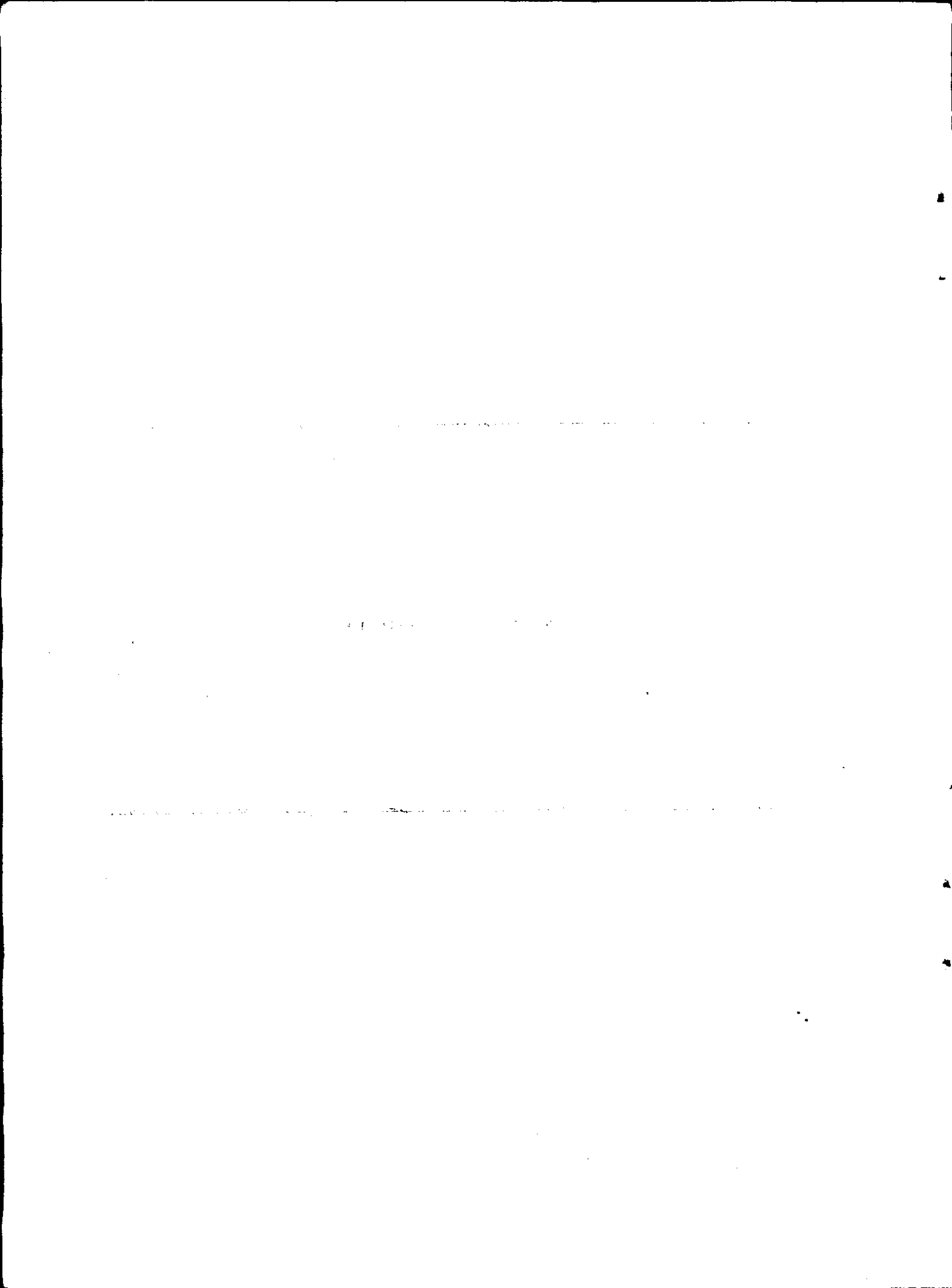
Another problem arises from the fact that developments often occur between the commencement of the financial year and the publication of the document, which affect the Plan. In particular, flood damages during July and August can cause major changes in Plan targets. Here again, it is not possible to effect a wholesale revision of the Annual Plan but only to indicate areas and direction where changes are likely to occur.

For the Annual Plan document for 1977-78, there have been some additional and exceptional problems. The outline of the Annual Plan was approved by the former Government. Since 5th July, 1977 a number of major decisions have been taken by the CMLA, which will have a significant impact on the economic performance of the year. These measures are briefly listed in a separate chapter.

The review of the annual plan is a continuous process, and modifications are made from time to time. The publication of the Annual Plan document describing the original plan does serve a useful purpose by providing (a) data on performance in different fields in the preceding year, 1976-77 (b) an explanation of the investment programme for 1977-78 and (c) linkages and details of annual targets for output, imports, exports etc., as originally approved for the year.

PART I

ECONOMIC FRAMEWORK



CHAPTER I

MACRO-ECONOMIC FRAMEWORK

INTRODUCTION

During the year 1976-77, economic activity deteriorated although some aspects were satisfactory. The principal factors contributing to the lean economic performance were a disastrous cotton crop, subdued world textile demand and disturbed conditions in the second half of the fiscal year. The impact of these factors was most keenly felt in the levels of output, trade deficit and government resources. Accordingly, GNP recorded a meagre 1.2 per cent growth and *per capita* income declined, exports stagnated at about the previous year's value and deficit financing rose to an unsafe level of about Rs. 5,500 million. On the other hand, the investment target was fulfilled and a high marginal savings rate was attained for the second year in succession.

2. The performance during 1976-77 served to cloud the prospects for 1977-78. Anticipating recovery in cotton and textile output, it was envisaged that growth would be restored and export expansion would begin in the second quarter of the fiscal year. Nevertheless, the nation's capacity to maintain the investment momentum was severely undermined. In particular, public sector investment faced the twin problems of foreign exchange and non inflationary rupee financing. The aid climate did not offer much hope of a substantial increase in concessional assistance and the depleted foreign exchange reserves precluded recourse to a draw down. Similarly, rupee resources were constrained by withdrawal of export duties and increase in non development expenditure related to pay increases and other pressures. Once again, the monetary overhang of the previous year had made large resort to deficit financing extremely imprudent.

3. Thus it was necessary to restrain investment outlays. The private sector development outlay was confined to the previous year's allocation and semi-public sector outlays were permitted to increase by only Rs. 500 million. In real terms, these allocations represent a significant decline particularly in view of the sharp increase in the cement prices. The constraint on allocation has necessarily resulted in slow down of new projects affecting the structure of sectoral allocations. It is hoped that the improvement in output and exports anticipated in 1977-78 and the completion of import substituting factories in subsequent years will permit the necessary increases in real investment beyond 1978-79.

4. Various aspects of economic performance during 1976-77 and the targets for 1977-78 are described in the following write up. It needs to be noted that the data presented pertains to the information available when the Annual Plan was formulated during May and June, 1977. Later data is often at variance with the estimates then available. Where the difference is large, reference has been made in the text to more recent data. It was not considered advisable to present the revised figures for two reasons. First, complete information on 1976-77 performance is still not available and the incorporation of piecemeal revisions will affect the consistency of the economic framework. Second, revisions for 1976-77 will call for some modifications of the 1977-78 targets and that too will have to await a more comprehensive revision of 1976-77 figures.

II. MACRO-ECONOMIC FRAMEWORK

5. The Annual Plan as approved in May, 1977 aimed at achieving a reasonable level of growth through increased utilization of the existing industrial capacity as well as the judicious use of land and critical inputs in the agricultural sector. A respectable growth in the agricultural and the large-scale manufacturing sectors is thus to be achieved, with a stabilized investment level. Although some Plan targets seem improvable now as described subsequently, the basic thrust of the Plan is likely to be attained.

6. The Annual Plan provided for a fixed investment of Rs. 2850 crore compared with (estimated) Rs. 2700 crore in 1976-77. The ratio of investment to GDP at market price would decline slightly from 18.5 per cent to 17.7 per cent. The absolute increase would be entirely in the private sector. The size of the ADP would be kept at the current year's level in money terms implying substantial physical reduction. Inclusion of new projects would be scrupulously avoided apart from highly exceptional cases.

7. As mentioned above, a major objective of the Plan for 1977-78 would be to concentrate on increased supply of current agricultural inputs, better capacity utilisation, improved management and similar other measures to reverse the decline in agricultural and industrial production. With the existing capacity, even a partial recovery assumed for the production of raw cotton and cotton textile shows that GDP growth of around 9.6% can be obtained in 1977-78. This recovery in production would also enable the country to improve the export performance and the balance of payments situation.

8. The GDP projections in keeping with the broad policy guidelines above and also consistent with the major production targets, work out as follows :

TABLE 1

GDP projections for 1977-78 at current factor cost

					(Rs. million)		
					1976-77	1977-78	Percentage change
1. Agriculture	..	..	..	..	44652	48680	10.96
Major crops	..	..	..	..	22750	26620	17.00
Minor crops & Livestock	..	..	..	..	21302	22260	4.50
2. Manufacturing	..	..	..	..	20744	23870	15.01
Large scale	..	..	..	..	15717	18692	18.93
Small scale	..	..	..	..	5027	5178	3.00
3. Trade & Transport	..	..	..	..	27749	31023	11.80
4. Others	..	..	..	..	39690	41278	4.00
Total				..	132235	145051	9.69

Major Production Targets

9. Targets for principal crops, for 1977-78 are given in Table 2 :

TABLE 2

Revised Estimates for 1976-77 and projections for 1977-78

					(Million tons)		
					1976-77 Estimates	1977-78 Target	Percentage Change
Wheat	..	..	..	..	9.00	9.50	5.5
Rice	..	..	..	..	2.59	2.83	9.3
Sugarcane	..	..	..	..	27.63	29.50	6.9
Cotton (million bales)	..	..	..	..	2.42	3.50	4.9

10. The target for fertilizer consumption in 1977-78 is 805,000 N/tons representing an increase of 15 per cent. The programming for import of fertilizer and available stocks in the country are sufficient to meet the target for fertilizer consumption. It is expected that normal weather conditions and availability of extra water will generate the projected demand for fertilizer. The ADP 1977-78 provides for increased investment in agriculture particularly on agricultural inputs.

11. An increase of 18.9 per cent in the output of large scale industry is projected during 1977-78. Major increases are being provided for in the production of cotton yarn, cotton cloth, paper and board and hydrogenated oil during 1977-78. The production targets for selected industries in large scale manufacturing sector during 1977-78 and growth over 1976-77 are given in Table 3.

TABLE 3

Output of Major Industrial Products, 1976-77 and Targets for 1977-78

	Unit	1976-77 Revised Estimates	1977-78 Targets	Percentage Change
Cotton yarn	.. .. million lbs.	630	850	34.9
Cotton cloth	.. .. million yds.	540	660	22.2
Hydrogenated Oil	.. .. 000 tons.	325	350	7.7
Sugar	.. .. 000 tons.	711	750	5.5
Paper and Board	.. .. 000 tons.	66	90	36.4
Cement	.. .. 000 tons.	3048	3100	3.3
Fertilizer (Urea)	.. .. 000 tons.	333	351	5.4

12. The output of cotton yarn is projected to increase from 630 million lbs. in 1976-77 to 850 million lbs. in 1977-78, depicting a growth rate of over 34 per cent. The projected target for 1977-78 is well within the capacity available in the country. The target obviously presents some difficulties. New cotton crop would not arrive before the second quarter of the fiscal year. Revival of world demand is not likely to affect demand for Pakistan yarn automatically. Special effort would be needed to increase exports.

13. The production of paper and board is projected to increase by about 36 per cent in 1977-78. The utilization of domestic production capacity is expected to improve as the imported stocks decline and fresh imports are discouraged by increase in import duty. The production of hydrogenated oil is projected to increase by 7.7 per cent from 325 thousand tons in 1976-77 to 350 thousand tons in 1977-78, in line with the demand.

14. The targets for increased industrial output must be viewed in the context of the larger industrial capacity, which is not being fully utilized either due to lack of demand or shortage of non-importable raw materials. Except for fertilizer and cement almost all the other industries are running well below capacity. A few instances are cited below:

	Output in 1976-77 as percentage of capacity
Yarn	74%
Mill-made cloth	67%
Soda ash	83%
Caustic soda	83%
Engineering goods	8% to 75%
Paper and board	58%

15. The production of sugar per ton of daily crushing capacity has declined from 14.32 tons in 1965-70 to 12.5 tons in 1970-76. It would appear that growth of sugar cane production, within the mill zones, has lagged behind the expansion of industrial capacity.

Investment

16. During 1977-78, it is proposed to increase total gross investment in the economy by over 7 per cent over last year's level. Overall fixed investment outlay is projected at Rs. 2850 crore. Public sector development expenditure is projected at Rs. 1700 crore and the investment in government enterprises kept outside the budgetary resources is placed at Rs. 400 crore. On the whole public sector development outlay is likely to increase by 2.3 per cent. Private investment is, however, expected to increase by 15.4%.

Financing

17. The gross investment outlay (including changes in stocks) of Rs. 2850 crore for 1977-78 is proposed to be financed to the extent of 61 per cent from domestic savings. The anticipated level of savings implies a marginal rate of savings of about 25 per cent. A major portion of these savings would be required to finance public sector programme. The level of public saving is being increased both through additional taxation measures and strict check in the growth of un-development expenditure. These are projected at around Rs. 3850 million as against the revised estimates of Rs. 3000 million during 1976-77. Private investment of Rs. 750 crore is estimated to be financed to the extent of 15.0 per cent from foreign resources and 85.0 per cent by domestic resources.

18. The position of investment and savings is summarised in Table 4 below :

TABLE 4

Anticipated Investment/Savings Framework of Annual Plan 1977-78 (Current Prices)

(Rs. million)

	1976-77 Estimates	1977-78 Projected
1. Total investment	28,000	30,000
(a) Public/Semi Public Sector	20,500	21,000
(b) Private Sector	6,500	7,500
(c) Changes in Stocks	1,000	1,500
2. National Savings	14,200	18,250
3. Net External inflow	13,800	11,750
4. GNP market prices as percentage of GDP at market prices.	148,140	164,470
(a) Investment	18.5	17.7
(b) National Savings	9.6	11.1

19. The National Expenditure Account, projected for 1977-78 is given in table 5 below :

TABLE 5

National Expenditure Account (Current prices)

(Rs. million)

	1976-77 Provisional	1977-78 Projection
GDP at factor cost	132,240	145,050
Indirect taxes less subsidies	13,400	17,640
GDP at market price	145,640	160,690
Import of goods and services	30,390	32,470
Total resources	176,030	193,160
Private consumption	118,960	127,820
Government consumption	15,000	17,500
Fixed Investment	27,000	28,500
Changes in stocks	1,000	1,500
Exports of goods and services	14,070	17,840
	176,030	193,160

Impact of Recent Developments

20. Since the approval of the Plan-frame in May, 1977, a number of unanticipated but significant developments have taken place in the major sectors of the economy. The original expectations contained in the Plan are no longer expected to materialize. The GDP is now projected to grow at 6.6% against the 9.6% growth rate envisaged earlier. This decrease in the GDP growth rate is shared by all the sectors in the economy. The agriculture sector is likely to show an increase of only 7.3% in output which is well short of the originally projected 10.2%: the main causative factor is the major crops category where the production targets in case of wheat, cotton and sugarcane have had to be lowered to 9.3 million tons, 3.4 million bales and 28 million tons respectively from the original targets of 9.5 million tons, 3.5 million bales and 29.5 million tons. The generally slackened pace of the economy is also reflected in the manufacturing sector: the projected overall growth of 15.5% in the manufacturing sector and of 19.6% in large scale industry is unlikely to be realised. The revised estimates in this case are 8.3% and 10.0% respectively.

21. The pattern of fixed investment originally envisaged now appears substantially changed. The revision is partly a result of the developments during 1976-77 and partly owing to the new emphasis on the role of the private sector. The planned investment for 1976-77 in the public/semi public sector of Rs. 2,020 crore is now expected to have been in the region of Rs. 1,850 crore. In contrast the private investment for 1976-77, planned at Rs. 650 crore, is likely to be at least Rs. 750 crore and may even exceed this figure. Consequently public/semi public sector investment, planned at Rs. 2,100 crore for 1977-78 may have to be brought into alignment with the 1976-77 performance. On the other hand, revision in the other direction is needed in the 1977-78 target of private investment of Rs. 750 crore which is likely to have been already met or exceeded during 1976-77. This latter factor, combined with the recent measures conducive to attracting private investment, give strong reason to expect a level of private investment during 1977-78 which may well exceed the original targets.

22. The changing resource picture also argues for a reassessment of the public/semi public sector investment level. The best estimates for 1976-77 show that on the one hand the net inflow of external resources is to be considerably lower than Rs. 1,380 crore assumed earlier, while in contrast the budgetary support for this period is likely to be higher by around Rs. 250-300 crore. These changes in the shares of external and internal resources as well as in the components of internal resources have their obvious ramifications regarding the domestic savings performance as well as the financing pattern which are likely to emerge during 1977-78.

III. INVESTMENT PROGRAMME

23. The annual plan for 1976-77 provided for a development/investment expenditure of Rs. 27,000 million. Of this, Rs. 17,000 million were to be financed by the public sector through budgetary mechanism, Rs. 3,500 million by public corporations outside the budgetary resources and Rs. 6,500 million as private investment. On current indications, these outlays are likely to be met on the whole, at the planned level.

24. In the annual plan for 1977-78, a gross fixed investment of Rs. 28,500 million is provided compared to Rs. 27,000 million in 1976-77. It is thus proposed to increase gross investment in the economy by 7.5 per cent over the last year's level. Public sector development expenditure is projected at Rs. 17,000 million. The investment in Government enterprises to be financed outside the budgetary resources is placed at Rs. 4,000 million. On the whole, public sector development outlay is to increase by 2.3 per cent. Private investment is however projected to increase by 15.4 per cent. The details of public and private investment are discussed in the following paragraphs.

Public Sector Development/Investment Programme 1977-78

25. The annual plan for 1977-78 envisages a development/investment outlay of Rs. 21,000 million in the public sector of which Rs. 17,000 million would be financed from budgetary resources. Rupees 4,000 million would be financed by public sector agencies/corporations from outside budget. The ADP of 1977-78 provides for a gross allocation of Rs. 18,584.5 million—Rs. 14,455.5 million for the Federal Government and Rs. 4,089.0 million for the Provincial Governments. Assuming an operational shortfall of Rs. 1,584.5 million, the net allocation comes to Rs. 17,000 million (just equal to the net ADP level of 1976-77) which would comprise of Rs. 13,350 million and Rs. 3,650 million for the Federal and Provincial Programmes, respectively.

Major Objectives of ADP 1977-78

26. In view of a severe resource constraint the programme for 1977-78 seeks to consolidate and expedite the progress of on-going schemes while taking up only a few schemes of national importance. In formulating the programme, the following major considerations were kept in view:—

- (a) Priority has been assigned to on-going projects and other key programmes related to output in the short run.
- (b) Resources would be concentrated on immediately productive programmes to protect production goals. Every effort has to be made to increase efficiency in implementation and utilization of existing capacity.
- (c) Projects of national importance for which foreign assistance has already been committed are to be executed on a priority basis.
- (d) No new projects have to be undertaken during 1977-78 unless these are inescapable.
- (e) Investment in agriculture (particularly on agricultural inputs) has been increased.
- (f) An effort has been made to meet the unavoidable requirements of some basic industries like Karachi Steel Mills etc.
- (g) The allocation to social sectors has been kept at the level of 1976-77, except for primary education and rural health programmes.

Sectoral Programmes

27. ADP 1977-78 has been formulated in line with the Government policy for increasing agricultural and industrial production in the short run. It also seeks to provide funds for projects which are basic to our long range development. While providing for necessary agricultural inputs for immediate increase in the agricultural production, allocation of funds for controlling water-logging and salinity and for improving water management have been made. On the whole, the share of agriculture sector has been increased from 7.6 per cent in 1976-77 to 9.1 per cent in 1977-78 in view of a substantial increase in key inputs like fertilizer, improved seeds, plant protection, etc.

28. In the power sector, substantial allocations have been made for generation, transmission and distribution as well as village electrification. On the whole, the share of power sector has been increased from 13.8 per cent to 17.1 per cent. The major projects under generation are Guddu Thermal Power Station, Mangla Hydro-Electric (7 and 8 units), Tarbela Hydro-Electric (1 to 8 units), Warsik Hydro-Electric (5 & 6 units) and Gas Turbine at Kotri. The major projects under transmission are 500 KV Tarbela-Lyallpur and 500 KV Lyallpur-Multan-Guddu-Karachi. The power distribution by WAPDA is designed to supply to 85,000 new general consumers, 5,800 industrial consumers and 5800 tubewells. About 867 villages would also be electrified. The power sector programme also provides adequate allocation for Pakistan Atomic Energy Commission scheme for development of nuclear energy. The PAEC has been allocated Rs. 550 million of which Rs. 400 million is earmarked for nuclear reprocessing plant. An allocation of Rs. 621 million has been made for KESC from outside ADP resources.

29. In the industrial field, while making large allocations for basic steel industry, the programme seeks to provide for agro-based industries as well as for industries which serve immediate needs for the common man. Under the Federal programme, an allocation of Rs. 2,000 million has been made for Karachi Steel Mill supplemented by Rs. 500 million by bank borrowing. A sum of Rs. 144 million has been allocated to PIDC for textile mills. National Fertilizer Corporation has been allocated Rs. 782 million from ADP and Rs. 100 million from bank borrowing. Adequate provisions have been made for heavy foundry and forge project, Kohat Cement Plant and Thatta Cement Plant. Pak-Iran Cement Project and expansion of Jawaidan and Mustehkam cement Plants. Sufficient provisions have been made in the Provincial programmes for financing the industrial projects pertaining to sugar and textile. These resources are also being supplemented by bank credits.

30. For rapid development of existing known oil resources and to reduce oil imports, adequate provisions have been made. The Oil and Gas Development Corporation has been allocated Rs. 450 million which will cater for 3 development wells at Dhodhak, 2 development wells at Tut, besides 3 exploratory wells during 1977-78. In addition, a provision of Rs. 528 million has been made for Pak-Arab Refinery to be financed from the resources outside ADP.

31. In Transport and Communications sector, the main sub-sectors which have claimed higher allocations are railways, port Qasim and T&T. An amount of Rs. 956 million has been allocated to railways for bridges and civil engineering works, new constructions, marshalling yards and rolling stocks and rehabilitation of tracks. The allocation of roads and bridges in the Federal programmes is Rs. 570 million including Rs. 43 million for Indus Super Highway, Rs. 130 million for 5 major bridges on Indus and Dadu, Ghazi Ghat, Attock, D.G. Khan and a bridge on Kabul at Nowshera. Rs. 50 million have been allocated for Port Qasim and Rs. 260 million for Karachi Port Trust. T & T Department has been allocated an amount of Rs. 430 million for installing 5,000 new telephones and accelerating work on micro-waves and Nation Wide Dialing System. An amount of Rs. 448 million has been allocated outside ADP for PIAC, KPT and Road Transport Corporations. Under the Provincial programmes, adequate provisions have been made for the construction of roads and bridges.

32. In the Physical Planning and Housing Sector, increase has been made in the allocation for HBFC, Urban and Rural water supply and Low Cost Housing. In the Mass Media sector, adequate provision has been made for Pakistan Television Corporation and Pakistan Broadcasting Corporation. In the Education sector, the allocations have been increased mainly for primary education. The allocation for health sector has been reduced in overall terms but within the reduced allocations, rural health programme has been given higher allocation. The population planning programme has been kept at the last year's level.

Private Investment

33. Keeping in view the performance during the previous years and overall investment target for the year, the private investment for 1976-77 was proposed at Rs. 6,500 million which showed an increase of over 13 per cent over the estimated investment during 1975-76. Preliminary statistics for the year 1976-77 indicate that the target on the whole is likely to be achieved. However, the sectoral investment during the year shows divergent trends. Some sectors particularly transport and communications have done considerably better than was realized at the time of formulation of the Plan. The increase mostly reflects the larger off-take of transport vehicles by the private sector. Similarly, investment in the housing sector has also been higher than the original Plan projections. On the other hand, the investment in the large scale sector of the manufacturing industry shows a decline over the previous year's level. This perhaps reflects the increased uncertainty which was a distinct feature of the latter half of the year under review.

34. Investment in private sector is projected at Rs. 7,500 million during 1977-78 as against the revised estimated of Rs. 6,500 million during 1976-77. The major part of increase in investment is likely to be shared by the agriculture, large scale industries and the housing sectors. In making projections for 1977-78, following have been the guiding principles :—

- (a) Agricultural investment will grow to the extent of foreseeable demand for tractors, implements and tubewells for which supply arrangements have been made.
- (b) The large scale industry where investment considerably went down is to take a more significant role and make a modest recovery, given the evident support in policies.
- (c) Transport and Communications sector may not be able to sustain the unusual growth of 1976-77 which was partly because of meeting the backlog of demand from the preceding years.
- (d) Housing is a rapidly developing sector and may even develop at a much faster rate than in the past.

35. Private investment, by its very nature, cannot be justifiably planned with the same measure of confidence and predictability as the public sector investment. This is because private investment is much more sensitive to the political and economic developments in the country. The effect of this sensitivity is accentuated by the fact that private investment projects have often much shorter gestation period. Thus the decision to undertake or postpone investment in the private sector may often take place in quick response to changes in political and economic policies without any consideration of past and future commitments as is invariably the case with Public sector investment. The planned targets for this sector are at best indicative. This consideration needs to be kept in view when interpreting the planned private investment.

IV. RESOURCES AND FINANCING OF PUBLIC SECTOR DEVELOPMENT PROGRAMME

36. The Public Sector Development Programme for 1976-77 envisaged a net expenditure of Rs. 20,500 million. Out of this outlay, a sum of Rs. 17,000 million pertained to the development expenditure to be implemented *via* the normal budget. The balance of the allocation related to public sector undertakings' programme to be financed outside budgetary resources. The ADP to be implemented *via* the budget was expected to be financed by Rs. 12,714 million of foreign assistance and Rs. 4,286 million of domestic resources (including an uncovered gap of Rs. 1,692 million).

Public Sector Budgetary Outlays, 1976-77

37. Since the budget was approved, a number of changes occurred in the estimates of resources. There was a sharp deterioration of Rs. 620 million in the revenue from export duties due mainly to the failure of cotton crop and a reduction of Rs. 220 million in the profit from rice due to fall in international prices. The pay and allowances of civil servants and armed forces were revised with effect from the 1st May, 1977. New pension rules were introduced in January, 1977. There were some unavoidable increases in the non-development expenditure and a decline in the earnings of Railways and WAPDA due to floods. The OPEC crude oil prices increased with effect from January, 1977. The annual impact of this increase amounting to about Rs. 200 million was nearly offset by an increase in the rates of surcharge on Motor Gasoline, HOBC and HSD. Efforts were, however, made to offset the decline in revenue by a number of measures and with the help of favourable development in the food situation. The requirement of wheat subsidy declined due to larger domestic procurement. The declaration of concealed income brought in about Rs. 400 million. The nationalization of cotton ginning also contributed a substantial increase in revenue. Other important measures not affecting the budgetary position for 1976-77 but actually taken during the course of that year pertain to direct taxation. The system of land revenue was totally abolished in January, 1977 and replaced by a tax on agricultural incomes. The rates of income tax for the next fiscal year were reviewed. The income tax rate for the highest slab of income was reduced from 60% to 50%. The rate of super-tax on companies was also reduced by 10%. These measures were designed to stimulate investment activity in the corporate sector and to provide incentive for entrepreneurs, and were combined with measures directed towards more effective collection of taxes.

38. Overall, the revised estimates of resource availability, excluding deficit financing, for financing the public sector development expenditure through budgetary resources are placed at Rs. 14,772 million as compared to the original budget provision of Rs. 15,308 million. Although the estimates of non-inflationary domestic resources are higher than the original budget provision and the ADP has been kept at the original level of Rs. 17,000 million, a substantial decline of Rs. 821 million in the revised estimates of external resources resulted in recourse to deficit financing higher than that stipulated in the original budget. In fact, the deficit is much higher than Rs. 2,228 million shown in the revised estimates for 1976-77 as some of the anticipated external resources did not materialise in time.

Public Sector Undertakings

39. The original net size of the semi-public sector programme was kept at Rs. 3,500 million. However, keeping in view the likely shortfall, the gross size of this programme was kept at Rs. 3,950 million. At this level, the programme was expected to be financed by Rs. 1,663 million of foreign resources and Rs. 2,287 million of domestic resources. The current indications are that the overall net investment is likely to remain at the original level. Its pattern of financing has, however, undergone a slight change. The availability of external resources is now estimated at Rs. 1,750 million and the balance of an equivalent amount is estimated to be met from domestic resources.

Financing of Public sector programme for 1977-78

40. The public sector programme approved for 1977-78 amounts to Rs. 21,000 million. The total allocation for the programme to be implemented *via* the normal budget has been kept at the previous year's level of Rs. 17,000 million as a result of the restraint in the size of the total investment programme. The net investment envisaged for public sector corporations outside the ADP amounts to Rs. 4,000 million.

Financing of Public sector budgetary outlays

41. The public sector outlay of Rs. 17,000 million to be implemented *via* normal budget procedure is proposed to be financed from domestic resources to the extent of Rs. 5,016 (including an uncovered gap of Rs. 1,591 million to be met by borrowing from banking system) and the balance of Rs. 11,984 million from inflow of foreign assistance. The domestic resources of Rs. 5,016 million also include a sum of Rs. 1,542 million to be raised by the Federal Government through new fiscal measures.

42. The need for a substantial effort at resource mobilization through new fiscal measures was evident both for the covering of revenue deficit emerging in the budget at 1976-77 rates, as well as for financing the development programme. Apart from this, the new fiscal measures for 1977-78 reflect the policy objective of convenience of tax payers, provision of relief in the field of direct taxation and incentives to encourage investment. The amount of Rs. 1,542 million includes Rs. 405 million to be raised through tax measures and Rs. 1,137 million through a rationalised pricing policy of public sector corporations and commercial undertakings.

Revision of Interest Rates

43. During the financial year 1976-77, the State Bank increased the bank rates by 1 per cent and made appropriate adjustments in deposit and advance rates. To stimulate savings, the rates of return on various Small Savings Schemes have been raised. The limit of maximum investment in saving accounts and Khas Deposit Certificates has been totally removed. The maximum limits of holding Defence Savings Certificates and National Deposit Certificates have been doubled.

New Measures taken by the Provinces

44. The Provincial Governments have also taken new measures as a result of which additional revenue yield amounting to Rs. 157.9 million—Punjab (Rs. 75.3 million), Sind (Rs. 62.9 million) and NWFP (Rs. 19.7 million)—is estimated to accrue during the year 1977-78.

Post-Budget Changes

45. Some changes have occurred in the estimates of budgetary resources since the approval of Plan framework in May, 1977. The revenue yield on account of export duty on cotton and profit on domestic cotton trade budgeted at Rs. 69 crore is eliminated because of a decline in the international price of cotton and denationalisation of cotton trade. On the other hand, cotton availability to domestic textile mills is being subsidised at Rs. 45 per maund which will involve an expenditure of about Rs. 52 crore. Some additional revenue yields are expected from the import duty recently imposed on tea and increase in the cigarette prices.

46. Domestic procurement of wheat has been less than originally targetted. This would necessitate additional wheat imports involving a subsidy of Rs. 27 crore. Further, consequent upon 5 per cent increase in the price of crude oil by Saudi Arabia and UAE, an additional amount of Rs. 19 crore would be payable to oil refineries. To meet some of these expenditures, a cut of 5 per cent has been imposed on defence expenditure which would result in a saving of about Rs. 40 crore.

47. The external resources which were originally anticipated at Rs. 1,198 crore are now estimated at only Rs. 975 crore exclusive of any balance of payments loan which may hereafter be raised.

48. The changes mentioned above indicate a shortfall in the resources likely to be available for financing the public sector development programme to be implemented *via* the normal budget. Suitable measures will have to be taken during the course of the year to either augment the resources or reduce the level of development expenditure.

Public Sector Undertakings

49. The investment programme of public sector undertakings amounting to Rs. 4,000 million is expected to be financed through Rs. 1,552.7 million of foreign resources and Rs. 2,447.3 million of rupee resources. The rupee resources include Rs. 142.8 million as own resources of the corporations, Rs. 160.4 million on account of NDFC loans and Rs. 2,144.1 million to be met through bank credit.

Financing of Private Investment

50. The private investment of Rs. 6,500 million during 1976-77 was proposed to be financed by 12.5 per cent from foreign resources and 87.5 per cent from domestic resources. The latest available estimates indicate that though the overall private investment was in line with the plan target, its financing relied more on the domestic resources than originally envisaged. The shortfall in foreign resources was primarily due to lower than anticipated disbursements of foreign loans to the private sector mainly for industries.

51. The projected private investment of Rs. 7,500 million during 1977-78 is proposed to be financed to the extent of Rs. 1,125 million through foreign resources (15.0 per cent) and the balance through domestic resources (85.0 per cent). The foreign aid utilization would be primarily in the industrial sector where a much higher investment is envisaged during 1977-78. About 60 per cent of domestic resources are likely to be generated through own savings for financing the investment programmes of agriculture, transport and communications and housing. The balance of the programme is likely to be financed by lending through commercial banks and investment through institutional non-bank sources.

V. MONETARY POLICY AND CREDIT PLAN

52. Monetary and Credit Policy for 1976-77 was devised with the major objective of containing inflationary pressures. Initially monetary expansion of Rs. 630 crore was planned on the basis of domestic credit expansion of Rs. 700 crore both in the public and the private sectors and an estimated draw-down in foreign exchange reserves of Rs. 70 crore. Subsequently, in view of the larger requirements both for budgetary support and private sector as well as public sector enterprises, the NCCC in July, 1976 approved credit expansion of Rs. 800 crore and monetary expansion of Rs. 700 crore. The NCCC in December, 1976 raised the ceiling of credit expansion further by Rs. 15 crore for private sector (proper) to be met from either lower utilization of credit by public sector agencies for investment or additional draw-down of foreign exchange reserves, leaving the monetary expansion at the previous level *i.e.* Rs. 700 crore.

53. The available data indicate that increase in monetary assets far exceeded the target fixed by the NCCC. The increase was shared both by the Government and private sectors. However, it was more pronounced in the Government sector in regard particularly to budgetary support.

54. In order to check the undue credit expansion several measures were taken during the course of the year. The changes and modifications made in this regard are listed below :—

- (i) Advances against paddy/rice (both for coarse and superior varieties) were made permissible only to Rice Milling Corporation and Rice Export Corporation without any restrictions of minimum margin requirements or time limit for which advances can remain outstanding.
- (ii) With effect from October 8, 1976, the scheduled banks were allowed to grant advances against cotton seeds to Cotton Trading Corporation of Pakistan without any minimum requirements. Advances against cotton seeds to Oil Mills and Oil Extraction Units (designated as Pakistan Edible Oil Corporation), however, continued to be subjected to a minimum margin requirement of 30%.
- (iii) On December 9, 1976, the banks were directed to exclude (in addition to items already excluded) the imports of books, magazines, journals and periodicals from the minimum margin requirements for opening letters of credit.
- (iv) On December 23, 1976, the banks were directed that for margin requirements the shares in a new company may be treated at par with the shares quoted on the stock exchange in anticipation of their being so quoted.
- (v) No banking company shall give loans and advances to an individual (including family firm, association) beyond (a) 20% of the paid-up capital and general reserve of the banking company incorporated in Pakistan; and (b) 20% of the capital maintained in Pakistan or Rs. 75 lacs, whichever is higher, by a banking company incorporated outside Pakistan.
- (vi) On January 18, 1977, it was decided to relax the requirement of 35% margin requirement on advances against man-made fibre to cotton textile mills only, subject to the condition that the quantity of man-made fibre covered by the total advances to any one textile mill during September, 1976 to August, 1977 does not exceed 15% of the total cotton requirement of the mill for the year.

- (vii) With effect from January 21, 1977, it was decided that refinance for exports against irrevocable letter of credit under the Refinance Scheme for exports will be allowed to the extent of the value and for the period of validity of the relative letter of credit irrespective of the ceiling indicated in para (vi) above.
- (viii) From February 3, 1977, the refinance facility in excess of maximum lending limit per party is available at post-shipment stage, provided that the advances given by the banks are either against exports bills or that export bills have been purchased or discounted by them.
- (ix) From March 8, 1977, post-shipment refinance under the above Scheme will also be provided in all those cases where sale/shipment has been made on firm basis.
- (x) In June, 1977, bank rate was raised from 9 to 10 per cent. Simultaneously, the State Bank raised the maximum interest rate on various category of deposits by about one per cent.

55. During 1977-78, monetary expansion is being projected at Rs. 7,400 million an increase of around 13 per cent as against the projected GNP increase of more than 9.6 per cent. Allowing for draw-down of foreign exchange reserve of about Rs. 500 million, domestic credit expansion is being projected at Rs. 7,900 million.

56. Within the overall limits mentioned above, utilization of credit in the Government sector is being kept at Rs. 2,500 million. Rupees 2,000 million for budgetary support and Rs. 500 million for cash credit accommodation for state trading operations of the Government to finance the procurement and distribution of wheat, rice, sugar, fertilizer, vegetable ghee, seeds and edible oil. The balance of Rs. 4,900 million is being earmarked for working capital and investment requirements of public and private sectors, industrial and commercial enterprises and credit requirements for private sector in agriculture, housing and transport etc. The amount being earmarked for private sector is around Rs. 3,200 million whereas the public sector enterprises are being allocated Rs. 1,700 million.

VI. BALANCE OF PAYMENTS

57. Severe balance of payments strains were experienced in 1976-77 and are expected to persist during 1977-78. While final figures on 1976-77 performance are still not available, it is evident that export earnings were in the neighbourhood of 1975-76 level and considerably below target. On the other hand, earnings exceeded targets and imports fell short of target so that foreign resource needs were smaller than anticipated. The supply of foreign aid was, however, far below needs forcing a run down of foreign exchange reserves. During 1977-78, both exports and imports are expected to increase substantially. The gross aid requirement will be somewhat lower than in 1976-77 but much larger than the actual flow last year. Anticipated disbursements against committed aid leave a large gap to be filled by quick disbursing of fresh aid commitments.

Review of 1976-77

58. Merchandise exports remained roughly at the level of 1975-76 and about 20 per cent short of the Annual Plan target of \$ 1400 million. The Annual Plan targets had assumed a recovery of cotton output and world textile demand but developments were to the contrary. The dismal cotton crop of 2.4 million bales was barely sufficient to meet the needs of a stagnant textile industry. Restricted to a small amount of desivarieties, cotton exports fetched about \$ 30 million compared with 1975-76 exports of \$ 99 million, a 1976-77 target of \$ 180 million and, on the basis of the unanticipated high price in the world market, an earning potential of \$ 400 million. The textile industry, especially yarn, was squeezed by the combined pressures of a continuing slack in world demand, the scarcity of cotton in the country and the erosion of the competitive edge of Pakistani yarn manufacturers. Yarn exports fell to 144 million lbs. in 1976-77 compared with a level of 244 million lbs. in 1975-76. Somewhat less dramatically, cloth exports also declined from 547 million yards to 448 million yards. Thus, in volume terms, exports of cotton, yarn and cloth were only 14, 60 and 82 per cent of the 1975-76 levels and significantly worse off compared with the targets. In each case the high world prices eased the impact on export values which for cloth were \$ 15 million above and for yarn only \$ 26 million less than the 1975-76 levels.

59. Exports of cotton, yarn and cloth were \$ 278 million less than the Plan target. Since total export earnings were also short by a more or less identical margin, earnings from other items were, in the aggregate, close to target. The situation in respect of rice, Pakistan's major export, was the reverse of the cotton group. Prices fell sharply in 1976-77, much more so than anticipated in the case of basmati. In view of the pile-up of stocks, a reasonably good crop and the general

(1) A peak of 400 million lbs. was attained in 1972-73.

pressure on the balance of payments an aggressive marketing drive was made resulting in exports of roughly 900,000 tons. These record exports were substantially larger than the target of 830,000 tons as well as the previous year's performance of 770,000 tons. Moreover, the increase was concentrated on the more valuable basmati rice the exports of which exceeded 400,000 tons, surpassing the target of 280,000 tons and accounting for over 45 per cent of total rice exports. As a result of larger sales and the increased share of the higher value basmati, rice export earnings were larger than the target but still below previous year's performance.

60. Finally, other export earnings increased by nearly 18 per cent. Even so, there was a 5 per cent shortfall from target. Payment for merchandise imports (f.o.b.) during 1976-77 is estimated at \$ 2587 million compared with the \$ 2700 million target. On the basis of the different Statistics Division classification information regarding which is partially available, physical arrivals (as distinct from payments) of imports were valued at \$ 2325 million compared with the \$ 2100 million in 1975-76. Salient features were a decline in wheat imports to \$ 67 million compared with \$ 180 million in 1975-76 and a \$ 166 million target. The low imports reflected substantially lower quantities and a fall in price. On the other hand, edible oil imports substantially exceeded the 1975-76 level and even more dramatically the 1976-77 target. The shortage of the cotton seed oil necessitated larger imports but the 62 per cent increase in unit value was the main cause.

61. One element of import levels was the sharp increase in private sector licensing mainly related to tea (higher prices), synthetic yarn and fibre (cotton shortage), iron and steel items and pharmaceutical imports. Private sector licences worth \$ 1249 million were issued compared with a level of \$ 863 million in 1975-76 and a target of \$ 850 million. Imports against licences issued had not fully materialized in 1976-77 so that the pressure will spill over into this year.

62. The increase in imports occurred despite restraining measures taken in the budget. Tariffs were raised selectively and a surcharge of 10 per cent was imposed on all goods subject to import duty, except machinery, POL, tea, tractors and second-hand garments. However, liberalization of imports was continued. The free list items were enlarged from 389 in 1975-76 to 407 in 1976-77 and tied list items reduced from 29 to 18.

63. During the year 1976-77 a deficit of \$ 95 million was projected on current account invisibles. The revised estimates show a surplus of \$ 140 million thus indicating an improvement of \$ 239 million over the target and of \$ 110 million over the 1975-76 level. The improvement of this magnitude is due to higher receipt of \$ 208 million and lower payments of \$ 27 million. On receipt side home remittances which climbed by 70 per cent to \$ 575 million accounted for an increase of \$ 195 million out of the total of \$ 208 million; while on the payment side the decline is mainly distributed over freight and insurance which is linked with shortfall in imports and technical assistance which is linked with that in project assistance.

64. Thus, the shortfall in export earnings was over-compensated by larger invisible surplus and smaller import payments and, as a result, the current account deficit was \$ 1327 million compared with the targetted figure of \$ 1395 million. Nevertheless, the deficit was \$ 380 million or 40 per cent higher than that in 1975-76. On the other hand, aid inflows were somewhat lower; and, in particular, non-project assistance was \$ 200 million below the 1975-76 inflows partly on account of lower food aid requirements and partly lower flows of OPEC balance of payments support type assistance. Even though other non-aid capital inflows bridged a part of the gap, Pakistan's foreign exchange reserves were depleted by around \$ 200 million. Thus, a significant portion of the \$ 427 million reserve build-up over the previous four years was drawn-down.

Projections for 1977-78

65. Balance of payments strains will continue to be encountered during 1977-78, despite an anticipated surge in exports. Merchandise exports are projected to increase by 30 per cent to \$ 1480 million. Invisible earnings paced by home remittances are also expected to advance substantially leading to a further improvement in the current invisible balance. The gains on the receipt side will, however, be more or less fully off-set by increase in merchandise imports and capital payments totalling around \$ 350 million. Thus, the current account deficit is expected to be only \$ 93 million less and the gross inflow requirements \$ 37 million below the 1976-77 level. A part of the increase in imports is tied to aided projects and is, therefore, self-financing. But other increases, partially related to higher tea and edible oil prices and partially to higher level of economic activity, are also substantial.

66. The projected increase in merchandize exports mainly derive from raw cotton, textiles and POL (products) which account for 87 per cent of the incremental earnings. The exports of cotton, cotton yarn and cloth have been projected at almost the level achieved in 1975-76 and is based upon achievement of a 3.5 million bale cotton crop together with a moderate improvement in world textile demand. In view of the expected increase in cotton output and recovery in textile demand, earnings from cotton group are estimated to increase by about 80 per cent. Secondly, following expansion of the refinery at Karachi by about 1 million tons, the exports of POL (products) have been estimated at 1.1 million tons and the earnings at \$ 86 million compared with a figure of \$ 23 million in 1976-77.

67. Earnings from the exports of rice are estimated to be lower in 1977-78 than 1976-77. As the prices of rice are expected to rise a bit, the decline in earnings will be due to a decline from the exceptionally high levels of 1976-77 as well as a change in the composition of varieties. The exports of Basmati rice are estimated to decline to normal levels while the exports of Coarse rice are to increase.

68. All other items which include fish and fish preparations, carpets and rugs, leather, sports goods, other textiles, tobacco, tents and canvas are estimated to increase by about 14 per cent compared with 18 per cent in 1976-77.

69. Merchandize imports are projected to increase by about 11 per cent in 1977-78. The increase is mainly in the import of crude petroleum, fertilizers and capital goods. As a sum, the provision for these imports are planned to rise by \$ 300 million only. The other items will have to be restrained. A major reduction is provided for public sector imports. The provision for fertilizer is designed to fully meet the rapidly expanding domestic demand which will start being met by indigenous output when the under implementation fertilizer factories come into output stream from the end of fiscal year 1977-78. The import of crude petroleum emanates from the completion of the National Refinery Limited Expansion Project. The increase in the import of capital goods is linked with the expected increase in project aid and higher investment requirement in 1977-78.

70. The current invisible receipts increased by about 38 per cent during 1976-77. The main item contributing to this increase was home remittances which increased by 69 per cent. The current invisible receipts have been projected to increase by about 15 per cent during 1977-78, of which the home remittances alone will contribute about 61 per cent. The remaining 39 per cent of the increase is spread over all other items. The current invisible payments have also been projected to increase by 15 per cent. Bulk of the increase is due to payments for technical assistance which is linked with project aid and freight and insurance which is linked with the imports.

71. The pressure on the balance of payments is likely to be quite severe despite the outlook that the trade deficit will decline from \$ 1467 million to \$ 1393 million and current account deficit from \$ 1327 million to \$ 1234 million. The current account deficit together with the payment of \$ 363 million on capital account places the gross inflow requirements at \$ 1597 million in 1977-78 compared with \$ 1616 million in 1976-77.

72. Requirements of gross inflow did not fully materialize in 1976-77 forming a draw-down of reserves. The estimated inflow during 1976-77 was \$ 1269 million including \$ 150 million in balance of payments support which is not available in the pipeline. Thus, Pakistan will have to negotiate substantial balance of payments support type assistance preferably at concessional terms; but, to some extent and as a last resort, at commercial terms as well.

Recent Developments

73. The balance of payments for 1976-77 has deviated from the Budget figures in some important respects. The current account deficit is now estimated at \$ 1105 million compared with the Budget estimates of \$ 1,327 million. Most of this improvement reflects shortfalls in merchandize imports and certain consequential reduction in service payments. Notwithstanding the lower deficit, the balance of payments strains were considerable as foreign resources inflows were roughly \$ 400 million less than envisaged in the Budget. Apart from the non-availability of an under-negotiated \$ 300 million bank loan, there was significant shortfall in project aid flows which was mainly responsible for the reduction in imports. As a consequence of the foreign inflow shortfall, the country's reserves were run down by almost \$ 200 million.

74. The achievements in 1977-78 are also likely to deviate from the targets. The main changes foreseen are a shortfall in merchandise exports linked with the precipitate fall in international cotton prices. This shortfall would be made good by higher home remittances which continue to show a strength beyond expectation. The balance of payments deficit will not therefore be materially altered. However, the foreign aid flows identified in the Budget had left a shortfall of about \$ 400 million which was expected to be raised through special efforts. If the resources do not materialise, it may be necessary to adopt measures to reduce the trade deficit.

VII. PRICES

75. Pakistan experienced moderately high inflation during 1976-77 although in certain instances price increases touched extremes. From June 1976 to June 1977, the wholesale price index rose by 8.1 per cent, the consumer price index by 9 per cent and the sensitive index for twenty eight essential commodities by 10.8 per cent. Considering the underlying pressures, the rate of inflation was moderate. On the supply side, output did not increase even as much as the rate of population growth. On the demand side, deficit financing, or the more general monetary expansion, was substantial. Under the circumstances, a 9 per cent inflation rate would be considered low. It would have been even lower but for extraordinary price increases for onions (115%), red chillies (175%), tea (31%) and milk (17%) which were related to special supply problems rather than general excess demand.

76. Two factors would probably explain much of this phenomenon. First, there is a time lag between monetary expansion and price increases. Thus the inflationary impact of such financing will spill over into 1977-78 especially because of its concentration in the last quarter or so of fiscal year 1976-77. Second, despite the short supply of onions, chillies, milk and tea, the structural supply features were conducive to stable prices of consumer items. Domestic production and international prices of wheat, domestic production of sugarcane, the supply of rice and the general level of world prices were such that pressures on the Government to raise prices controlled by it were not as severe as in earlier years. In one specific instance of consumer goods where the pressure was felt, *i.e.* vegetable ghee, the Government decided not to raise the price.

77. The outlook for 1977-78 is for a continuance of price pressures at least in the initial months. As already mentioned, the monetary over-hang from 1976-77 will generate demand pull pressures. Similarly, the budgetary increases in cement and public utility prices will add to costs of production and living. On the other hand, international prices of consumer goods are unlikely to rise much. The key to domestic price stability in the latter half is likely to hinge on the level and structure of output. As the investment priorities of the Annual Plan 1977-78 are production oriented, the supply situation is likely to ease at its termination.

VIII. CONSUMPTION PLAN AND BASIC NEEDS

78. The purpose of the Consumption Plan is to ensure a balance between demand and supply of essential items of consumption at reasonable prices.

Review of 1976-77

79. During 1976-77 the food-grains situation in the country improved by 1.2% *per capita* as compared with 1975-76. Moreover, the country shifted towards becoming a net exporter of grains to the tune of 0.4 million tons. In Pakistan, *per capita* availability of cereals wheat plus rice in 1975-76 improved.

Outlook for 1977-78 Consumption

80. For the Annual Plan 1977-78 *Per capita* aggregate consumption of essential items is projected to increase by 5 per cent. Since an increase of 0.4% was achieved in 1976-77 over 1975-76, during the two years 1976-78, the average increase in *per capita* will be about 2.7% per annum which is less than the average of 3.5 per cent per annum projected for the medium term perspective. Substantial improvement in 1977-78 will take place in the availability of wheat by 4.6%, refined sugar by 2%, vegetable ghee by 4.8%, meat by 4.7% and cloth by 13.8% as given in the Table.

TABLE

Per Capita Availability of key Commodities in 1977-78

S. No.	Commodities	Unit	1975-76	1976-77	1977-78	% change in 1976-77 over 1975-76	% change in 1977-78 over 1976-77
1.	Wheat	Kgs/ annum	110.95	113.46	118.67	2.26	4.59
2.	Rice .. ..	..	24.75	24.98	25.25	0.93	1.08
3.	Pulses .. ..	..	7.44	7.85	7.90	5.51	0.64
4.	Sugar (Refined) .. ..	..	8.54	9.87	10.08	15.57	2.13
5.	Sugar (Raw) .. ..	..	20.07	21.60	21.41	7.62	(-)-0.88
6.	Vegetable Ghee including edible Oil .. ..	..	4.96	5.64	5.92	13.71	4.97
7.	Milk .. ..	..	63.72	62.79	63.88	(-)-1.46	1.74
8.	Meat .. ..	..	8.95	9.06	9.49	1.23	4.75
9.	Vegetables .. ..	..	30.43	31.07	32.23	2.10	3.73
10.	Tea .. ..	..	0.74	0.70	0.73	(-)-5.41	4.29
11.	Cloth (Cotton plus syn- thetic)	Meter/ annum	15.70	13.87	15.79	(-)-11.65	13.84
Growth Rate ..						(+)-0.43	(+)-5.04

81. In the Annual Plan 1977-78, efforts will be made to reduce protein calorie malnutrition by obtaining higher levels of production of cereals (wheat and rice). To meet the ever rising demand of meat and milk, which also provide the bulk of essential animal proteins, production of livestock will be increased. Emphasis will also be placed on augmenting poultry, eggs and fish production.

82. Support price policies will continue to be employed in regard to major pulses so as to encourage production. Purchase operations for oilseeds and pulses will be continued. Farmers will be provided with production incentives to grow new oilseed crops such as soyabean and sunflower, especially in the barani tracts so as to gradually improve domestic supplies of oil to reduce the heavy dependence on imports. More area will be brought under groundnut cultivation. Cold storage facilities for potatoes will be provided, poultry prices will be stabilized. Research and experiments will be conducted for solar dehydration of fruits and vegetables to reduce the heavy loss due to transportation problem.

83. Imports of wheat will be nominal and would be mainly required for building stocks for any eventual shortage. Substantial imports of edible oils (230 thousand tons) and tea (55 thousand tons) will be made to meet the requirements of the home market. However, to meet the foreign exchange requirements rice will be exported, the exports being estimated at 850 thousand tons.

84. New Roti Plants will be coming up for supplying nutritious roti at economical rates in important cities, namely Bahawalpur, Multan, Faisal Abad and Hyderabad. In the field of clothing, awami suits and readymade garments would be made available through Utility Stores and Fair Price Shops for the less privileged groups of the society.

CHAPTER 2

RECENT ECONOMIC MEASURES

The political and economic situation in the country was gravely affected by the growing tensions and strife which followed the elections in March, 1977. Martial Law was imposed in the country on July 5, 1977 mainly with the objective of providing an interregnum of political activity. The difficult economic situation required certain urgent measures. A package of financial, agricultural and industrial measures was initiated to revive the production process and arrest the deterioration in overall economic indicators.

Financial and Commercial Measures

2. To restore the fiscal balance of the economy, strict economy in expenditure particularly in non-development expenditure was enforced. A general cut of 5 per cent is to be applied to all non-development public expenditure. On the revenue side, the collection machinery has been toned up to recover arrears and to fully realise the tax as well as non-tax receipts. This will help produce a more balanced resource picture for the Annual Plan.

3. An incentives package has been announced to revive the private initiative in investment, particularly in the industrial sector. To increase investment opportunities for foreign capital and non-repatriable capital, procedures are being streamlined. At the same time, the Government has also announced the policy demarcating public and private sector for the purpose of private investment. It has been decided, *inter alia*, to reduce interest rates on loans for fixed investment to 12.5 per cent and speedily remove fiscal anomalies working against domestic industries. The re-investment of retained earnings will receive a fillip as (i) tax on the issue of bonus shares has been abolished and (ii) the tax credit for balancing and modernization of machinery is now up by 5 per cent *i.e.* from 10 per cent to 15 per cent of the cost of machinery.

4. No less important are the measures designed to promote exports. Some of the specific measures taken in this regard are :—

- (i) Concessional credit facilities for exporters have been liberalized in such a manner that credit on concessional terms becomes available automatically to each exporting firm upto 25 per cent of its previous year's exports.
- (ii) To remove the adverse effects of taxes imposed by Provincial Governments and local authorities, the octroi duty on woollen yarn used by carpet industry has been abolished. The NWFP Government has been asked to withdraw the levy on flue cured tobacco and cess on molasses.
- (iii) Seventeen additional items have been placed under the cover of standard rebate from excise duty.
- (iv) The present export credit guarantee scheme has been placed on a permanent footing to allow it to undertake the export credit guarantee arrangements extending over a number of years.
- (v) Action is being expedited on the setting up of free industrial areas at Port Qasim and at a suitable inland location near the Lahore Dry Port for the processing of goods for the purpose of export.
- (vi) The ban on export of exercise books and paper products including wall paper is being removed.
- (vii) The country's good-will and long run export prospects have suffered due to exports of sub-standard and non-uniform goods. Special attention will be paid to devise measures leading to improvement and standardisation of the quality of Pakistan's exports. In particular, the quality and package of rice will be improved.

Agricultural Sector

5. Agricultural production will be boosted up by fixing short term targets and initiating action for their realization. Initially, targets have been fixed for agricultural inputs and services

for the period July—October, 1977. Other measures which have been taken for this purpose are :—

- (i) For the approaching *rabi* season, the use of good quality wheat seed will be encouraged as a premium of upto Rs. 8 per maund over the procurement price has been allowed compared to the existing premium of Rs. 2—4 per maund.
- (ii) Sugarcane availability will be ensured through strict zoning.
- (iii) To ensure adequate availability of credit for achievement of production targets, banks have been instructed to step up lending operations. The National Bank proto-type supervised credit in kind scheme for small farmers will be expanded in size as well coverage.
- (iv) In case of cotton, despite falling world prices, the grower will receive the price assured to him earlier. While the price of good quality seed cotton remains unchanged, price discounts of 2.5% have been allowed on inferior qualities so as to protect the interests of the efficient growers. Any disputes that may arise will be dealt with by an arbitration machinery provided for the purpose. For the new crop, supply of good quality seed will be ensured not only through Government channels but also through ginning factories, private firms and retentions at farm level.
- (v) The earlier decision of making a marked shift towards ground operations for the purpose of plant protection has been modified so that a combination of the ground and aerial spray will continue to be employed. This was necessitated by the difficulties entailed in dispensing with aerial sprays immediately.

Industrial Sector

(a) Production Targets

6. Industrial production is to be stepped up through short term target fixation and by adopting suitable measures for their fulfilment. Thus targets have been fixed for 13 industries for the period July—October, 1977 and a machinery initiated for overseeing implementation.

(b) Textiles.

7. Adequate attention has been paid to the special problems of the textile industry. The major problem of the shortage of raw cotton will be taken care of by the arrival of the new crop which is expected to be much better than last year. To ensure the profitability and international competitiveness of the average mill, the domestic sale price of cotton has been reduced to Rs. 325 per maund which will involve substantial loss to the Government on the basis of the present price of *phutti* for the grower.

8. Amongst the sick mills in the textile sector, those which can regain efficient operations through financial succor and improved management will be adequately aid'd. The mills affected by severe rains in Karachi have been declared calamity-stricken and will be entitled to a special credit line to rehabilitate. A long term re-organisation of the textile industry is also under examination.

(c) Nationalization Policy

9. The Martial Law Government is moving towards a well-defined concept of mixed economy with clear delineation of the respective roles of private and public sectors and the possible fields of their co-existence.

10. It has been decided to denationalise the agrarian industries—rice husking, flour and cotton-ginning mills. Due to small scale of operations, enormity of numbers and wide geographical dispersal, these mills have proved unfit for public sector management. The decision to denationalise will boost up private initiative and promote the efficient running of the agrarian mills.

11. The Government has also announced the policy demarcating public and private sectors for the purpose of industrial investment. All industrial sectors excepting those relating to public utilities have been opened to private investment. The main features of the new policy are :—

- (i) The fields of heavy and basic chemicals and the manufacturing of cement and vegetable ghee have been grown open completely to the private investors while other heavy industry fields have been opened to the private sector partially.

- (ii) Private investment in basic manufacture of petro-chemicals would be allowed only in collaboration with the public sector. Down-stream industries of petro-chemical sector would be opened to private investment.
- (iii) Only those fields of heavy industry have been reserved for the public sector which require huge investment and sophisticated technology. The private sector will however, have a share in such industries by way of sub-contracting and sub-assemblies of components and parts that go into the making of textile, sugar and cement plant machinery, automotive vehicles, tractors, bodies for trucks and buses etc.
- (iv) In the iron and steel industries, except for rolling of M.S. sheets and plates, all other manufacturing in the field will be opened to the private sector. Similarly, barring the manufacture of basic metals and allies thereof all down-stream metal products industries are open to private enterprise.

12. A comprehensive list indicating the demarcation between public and private sectors industries covered under the Economic Order No. 1 of 1972 and the Hydrogenated Vegetable Oil Industries (Control & Development) Act, 1973 is given in the Annexure.

(d) *Tax incentives for the Private Sector*

13. The Government have given tax rebates or concessions in excise duties and import duties to 11 industries or items. The industries which will benefit from the new measures include :-

- (i) PVC.
- (ii) Shock Absorbers.
- (iii) Sulphur Black.
- (iv) Textile spindles.
- (v) Paper.
- (vi) Blended yarn fabrics.
- (vii) Nuts, bolts & wire nails.
- (viii) Acrylic fibre.
- (ix) Pressure spiral-welded steel pipes.
- (x) Boilers.
- (xi) Bicycle chains.

14. The concessions which have been granted and anomalies which are removed in order to make the industries utilize more of the domestically installed capacity include :—

- (i) The advalorem duty on import of PVC resin, has been removed and a specific duty of Rs. 7.50 per kilogram on imported PVC resin has been fixed.
- (ii) The present 20 per cent Sales Tax on manufacturing stage on shock absorbers has been removed. For the first year, the tax paid in excess of 50 per cent of the CIF value of the imported components for this industry will be refunded by the Government.
- (iii) The existing 22 per cent excise duty on locally made sulphur black has been abolished.
- (iv) In order to protect the local industry and substitute imports, the import duty on spindles has been raised from 70 per cent as at present to 85 per cent ad valorem.
- (v) In order to encourage greater production of paper for writing and printing as well as school books and school exercise books, paper locally manufactured in the range of 55 to 70 grammage, has been exempted from the excise duty and Sales Tax.
- (vi) It has been decided that in future only the capacity tax will be levied on fabrics made from blended yarn, just as the cotton textiles.
- (vii) In order to protect the local industry, from foreign competition, the import duty on nuts and bolts has been raised from 80 per cent to 97.5 per cent. At the same time, the import duty on wire rods has been reduced from the present 97.5 per cent to 80 per cent.

- (viii) The import duty on acrylic fibre which is used for carpet manufacturing and in knitting wool, was 97.5 per cent ad valorem. It has now been reduced to Rs. 6.62 per kilogram.
- (ix) Protection was required by the local high pressure spiral welded steel pipe industry which manufactures pipes for natural gas transmission. The local industry has been brought at par with the imported pipes, in so far as the incidence of taxes is concerned. On the finished local product the 20 per cent sales tax has been abolished.
- (x) Pakistan has two units for manufacturing boilers. The exemption of import duty of 30 per cent which existed at present, has been removed in the case of boilers of upto 12 ton steam evaporation per hour. Duty on the imported components used in locally made boilers will be refunded to the local manufacturers.
- (xi) A 35 per cent protective import duty on bicycle chain has been levied so that one local unit which was shut could resume production.

(e) Public Sector Industrial Units

15. However, the BIM industries whose scale is big enough for public sector operations have not been working too well either. The Government has decided to set up a Commission of Inquiry to investigate the affairs of the BIM. The terms of reference of this Commission are to review and analyse :—

- (i) Separately for each unit the current production trends in relation to installed production capacity; and to aggregate this data at corporation level and aggregate the corporation performance at national level through the use of proper aggregating procedures.
- (ii) Causes for any production shortfall and under-utilization of capacity.
- (iii) Measures to improve the physical performance of each plant; if technological or market limitations preclude profitable and economic utilization of capacity, measures to re-structure the units.
- (iv) For each unit and in the aggregate, the financial performance, both recent trends and current status, including returns on investment and equity (separately for trading operations where undertaken), liquidity and debit-equity ratios.
- (v) The financial structure, procedures and policies at the company level for sector corporations and for BIM as a whole, including arrangements for inter-industry flow of investment funds.
- (vi) The investment policy including the project portfolio, scheduling of projects and modes of financing.
- (vii) The pricing policy regarding products of various enterprises.
- (viii) Operational procedures such as production planning, inventory management and quality control.
- (ix) General and specific trends of labour and management relationship, productivity and efficiency.
- (x) The overall organizational set up of the State enterprises.

Labour & Employment

16. It is proposed to stress labour welfare and the efficient utilization of manpower. Manpower planning will be attempted in earnest and programmes developed to impart training and skills required for the national economy and by Pakistanis seeking jobs abroad. In the sphere of labour welfare, a labour conference will be shortly convened to consider such aspects as a national wage policy, the security of jobs and the productivity of labour. The conference is expected to lead to concrete steps that will promote the twin needs of equity and efficiency.

Education

17. A three-day National Education Conference was held during October 3—5, 1977. The Conference was called to review the existing problems in the field of education and to make recommendations to guide the future course of development of education in the country. Major aspects which received special attention of the Conference included aims of education, medium of instruction, use of mosques for primary education, participation of private enterprise in establishing new educational institutions, mode of examinations, curriculum development, text-book production, women education, students' and teachers' attitudes, non-formal education, adult literacy and the Federal role in education. The recommendations of the Conference are under consideration of the Government.

CHAPTER 3

CONSUMPTION—NUTRITION PLAN AND BASIC NEEDS

CONSUMPTION PLAN

The purpose of the Consumption Plan is to ensure a reasonable balance between demand and supply of essential items of consumption at stable prices. Increase in income and population have been considered as determinants of consumption demand and broad policies and programmes to meet the increasing demands have been identified.

REVIEW OF 1976-77

2. The foodgrains situation improved marginally in 1976-77. Total foodgrains availability increased by 1.1 per cent from 153.41 kgs. *per capita* in 1975-76 to 155.03 kgs. in 1976-77 and the country shifted towards becoming a net exporter of grains. This performance was due primarily to the increase in the volume of rice exports which jumped from 0.78 million tons in 1975-76 to 0.94 million tons in 1976-77.

3. During 1976-77, the average *per capita* availability of essential items included in the Consumption Plan decreased by 1.25 per cent (mainly due to cloth) as against the Annual Plan target of increase by 2.9 per cent. However *per capita* consumption of wheat increased by 2.3 per cent over 1975-76 mainly because wheat production in 1975-76 (available for consumption in 1976-77) increased by 13.27 per cent which even permitted a major reduction in imports to 0.5 million tons from 1.3 million tons in the previous year. Moreover, carry over of wheat stocks increased from 222,000 tons in 1975-76 to 510,000 tons in 1976-77, representing an increase of 129.7 per cent. Apart from reducing the burden of costly imports which had jumped to over 180 million dollars in 1975-76, and fell drastically to 67 million dollars in 1976-77. The decline in imports enabled the reduction of subsidy on the movement of wheat from the producing areas to the consumer centres. *Per capita* consumption of rice also improved in 1976-77, by 1.0 per cent and a record level of exports amounting to 944,000 tons were achieved in 1976-77 as against 782,000 tons in 1975-76. *Per capita* consumption of cloth declined sharply, by almost 20 per cent during 1976-77 as compared to the previous year; this was due primarily to the extremely low production of cotton during the year. The decline in consumption was, however, made up partially by an almost 15 per cent higher *per capita* availability of synthetic fabrics which has gone up from 2.29 sq. meters in 1975-76 to 2.64 sq. meters in 1976-77.

4. A major break through has been achieved in the production and availability of sugar and vanaspati ghee. *per capita* availability of refined sugar jumped from 8.54 kgs. in 1975-76 to 9.74 kgs. in 1976-77, increasing availability by 14.1 per cent. Similarly, *per capita* availability of vanaspati ghee has gone up to 4.47 kgs. in 1976-77 from the previous year's level of 3.89 kgs. These improvements are the result of a series of economic measures in agriculture adopted by Government over the past few years, including the setting of incentive prices and the provision of improved seeds, fertilizers and protection measures.

5. The production figures for major items of consumption during 1975-76 and 1976-77 are given in Table I.

TABLE I

Production of Major Consumption Items

(000 metric tons)

Items	1975-76	1976-77	%change
Wheat*	7673	8691	13.27
Rice	2617	2738	4.62
Pulses (Gram)*	551	601	9.07
Sugarcane	25545	29379	15.01
Sugar	623	736	18.14
Vanaspati Ghee	277	328	18.41
Cotton Seeds	1028	870	(-)15.42
Cotton Cloth (million sq. meters)	1703	1448	(-)14.97

*A one year lag has been assumed between production and consumption of wheat and gram.

6. Prices of essential consumer goods like wheat atta, sugar and vegetable ghee were maintained under strict control during 1976-77. Wheat atta and refined sugar continued to be sold through ration depots and there was no change in their fixed prices from the previous year level. Similarly, vegetable ghee prices also remained at the same level as in 1975-76. However, the wholesale price index in June, 1977 over June, 1976 increased by 7.89 per cent and consumer price index by 8.98 per cent. The sensitive price indicator showed an upsurge of 10.75 per cent. The prices of essential commodities which remained under pressure during 1976-77 are given in Table -II.

TABLE II

The Prices of Essential Commodities Which Remained Under Pressure During 1976-77.

S. No.	Item	Per cent increase in June 1977 over June 1976
1.	Wheat	10.00
2.	Rice Basmati (Broken)	23.11
3.	Pulses (Gram)	29.94
4.	Mutton	10.75
5.	Beef	5.91
6.	Long Cloth	17.52
7.	Milk	17.17
8.	Onion	113.48
9.	Potatoes	2.61
10.	Tea	31.04

7. Prices of onion remained under pressure mainly due to seasonal factors ; prices of cotton cloth showed an upward trend primarily due to rise in the price of inputs. There was a general pressure on prices of pulses and meat since supplies were inadequate and fell short of the requirements. The Government has fixed support prices for pulses to expand production.

8. The trend in the prices of essential commodities, showed an increase of less than one per cent per month on average during 1976-77 ; this trend continued upto April, 1977 but in the last two months of the fiscal year 1976-77 the price index has shown a decline.

CONSUMPTION PLAN 1977-78

9. The Annual Plan for 1977-78 aims at a significant increase in the availability of food and other essential items of consumption. It is expected that Pakistan will be importing about 1.0 million tons of wheat in 1977-78 fifty-five per cent of which will be used for building reserves.

10. The Consumption Plan for 1977-78 projects an increase of 6.51 per cent in *per capita* availability of key commodities included in the Plan (Table-II(i)). Since a decrease of 1.25 per cent was recorded in 1976-77 over 1975-76, during the two years 1976—78 the average increase in *per capita* availability will be about 2.63 per cent per annum which is a little less than the average of 3.5 per cent per annum projected for the Medium Term Perspective. The *per capita* availability of the commodities covered in the Consumption Plan during 1976-77 alongwith projections for 1977-78 are given in the following paragraphs :—

Wheat

11. The local production of wheat, 8.691 million tons in 1975-76, available for consumption in 1976-77 was 13 per cent higher than the production in 1974-75 consumed in 1975-76. To reduce wheat imports, with a view to eliminate them entirely only 0.54 million tons were imported in 1976-77. Stocks were built up from 0.51 million tons in 1975-76 to 0.54 million tons in 1976-77 while per capita consumption increased by 2.3 per cent. For 1977-78, it is estimated that per capita availability will increase by about 7.6 per cent over 1976-77, permitting almost the same level of carryover of stocks from 0.54 million tons in 1976-77 to 0.55 million tons in 1977-78.

TABLE III

Per Capita Availabilities

S. No.	Commodities	Unit	1975-76 Actual	1976-77 Estimated	1977-78 Targets	%change in 1976-77 over 1975-76	% change in 1977-78 over 1976-77
1.	Wheat	Kgs/annum	110.95	113.46	122.06	2.26	7.58
2.	Rice	"	24.74	24.98	25.20	0.97	0.88
3.	Pulses	"	7.59	7.87	7.91	3.69	0.51
4.	Sugar (Refined)	"	8.54	9.74	9.79	14.05	0.51
5.	Sugar (Raw)	"	20.06	22.14	21.54	10.37	(-)0.90
6.	Veg. Ghee including edible oil	"	4.96	5.64	5.93	13.71	5.14
7.	Milk	"	63.71	62.78	63.87	(-)1.46	1.74
8.	Meat	"	8.95	9.06	9.48	1.23	4.64
9.	Vegetables	"	30.35	29.62	30.16	(-)2.40	1.82
10.	Tea	"	0.74	0.70	0.78	(-)5.40	11.43
11.	Cloth (Cotton plus synthetic)	sq. meters per annum.	18.41	14.81	17.38	(-)19.55	17.35
	Growth rate					(-)1.25	(+)6.51

12. Government procurement rose by 92 per cent in 1976-77 from 1.237 million tons in 1975-76 to 2.377 million tons in 1976-77, which will come down to 1.50 million tons in 1977-78, i.e., 29% lower than last year. On the other hand, Government off-take which was 2.322 million tons in 1975-76 went up by 21 per cent to 2.806 million tons in 1976-77. Almost the same quantity of off-take, that is, 2.845 million tons is projected for 1977-78. A major share of off-take in 1977-78 will be made up through imported wheat.

13. The rates of rationing of wheat atta were not uniform in the four provinces of the country. The following rates of monthly allowance of wheat/atta were in force in urban/rural areas in the provinces before 1st December, 1976.

TABLE IV

Name of the Province				Ration per head per month in Kilograms	
				Urban	Rural
Punjab	..	..	..	3.75—7.50	No quota fixed. Only <i>ad-hoc</i> arrangements.
Sind	..	..	..	4.67—6.50	1.87—4.67
N.W.F.P.	..	..	..	3.30—7.50	0.93—3.75
Baluchistan	..	..	..	4.67—6.50	No quota fixed. Only <i>ad-hoc</i> arrangements.

In order to meet the demand of the consumers, a uniform scale of 7.0 Kgs. per head per month was fixed for all *urban* areas w.e.f. 1st December, 1976. Children below 12 years are allowed to get half of this quantity.

Rice

14. The target of rice production was met since its production in 1976-77 has been estimated at about 2.7 million tons as against the annual Plan target of 2.69 million tons. Exports of rice increased from 0.78 million tons in 1975-76 to 0.94 million tons in 1976-77. The *per capita* availability increased by one per cent from 24.74 Kgs. in 1975-76 to 24.98 Kgs. in 1976-77. However, the total carry-over of rice stocks have shown a decreasing trend from 0.76 million tons in 1975-76 to 0.68 million tons in 1976-77 with a further reduction to 0.47 million tons in the beginning of 1977-78. It is estimated that during 1977-78, the *per capita* availability will increase to 25.20 Kgs. which will bring about an improvement of 0.88 per cent in availability over the previous year.

Pulses

15. The *per capita* availability of pulses improved in 1976-77 and was 3.9 per cent higher than in 1975-76. Government has introduced support prices which will favourably affect production decisions in 1977-78. Gram (black whole) was fixed at Rs. 45 and masoor (whole) at Rs. 70/-per maund for 1976-77. The *per capita* availability is expected to increase further from 7.87 Kgs. in 1976-77 to 7.91 Kgs. in 1977-78. The target of minimum requirement of pulses for nutrition has been set at 10.0 Kgs. *per capita* by 1982-83 in the Medium Term Perspective and the increase envisaged in 1977-78 is within that perspective.

Sugar

16. Sugarcane production increased from 25.5 million tons in 1975-76 to 29.4 million tons in 1976-77 and refined sugar production increased sharply beyond the 1976-77 target of 0.66 million tons to 0.73 million tons. This increased the *per capita* availability by 14.1 per cent from 8.54 Kgs. in 1975-76 to 9.74 Kgs. in 1976-77. The availability of raw sugar also went up from 20.05 Kgs. to 22.14 Kgs. during this period. Sugar continued to be sold through the ration depots. The *per capita* quota, however, did not increase. It is planned that in 1977-78 the *per capita* availability of refined sugar will be 9.79 Kgs. which implies an increase of 0.5 per cent over 1976-77. Availability of raw sugar will decline by about one per cent. Nevertheless availability will be higher than the previous 3 years, excluding 1976-77. Government propose to continue under the policy of restricting consumption to domestic availability and avoiding imports.

Vegetable Ghee

17. Vegetable ghee is a sensitive item in the total food package. Due to a major production shortfall, the output of cotton oilseeds declined by 15 per cent in 1976-77 compared with the previous year which, in turn, resulted in oil from cotton seeds also declining from 0.12 million tons in 1975-76 to 0.10 million tons in 1976-77. As a consequence, Government had to import 0.29 million tons of edible oil in 1976-77 at a time when prices in the international market were high. The *per capita* availability of vegetable ghee increased from 3.89 kgs. in 1975-76 to 4.47 kgs. in 1976-77 and of refined oil from 1.07 kgs. to 1.17 kgs.

18. The demand for vegetable ghee in the rural and urban areas is increasing rapidly. Owing to the reduced availability of desi ghee and butter, and the high prices obtaining in open market, the availability of vegetable ghee will continue to be restricted in 1977-78. The total requirement of edible oil has been worked out at 0.56 million tons. It is estimated that about 59 per cent will be met from domestic sources and the balance will be imported. In 1977-78, the Plan provides for a large increase in cotton crop production and it is estimated that cotton seed oil production will increase from 0.1 million tons to about 0.15 million tons. Less reliance will be placed on imports of edible oil which are planned to be reduced from 0.29 million tons in 1976-77 to 0.23 million tons in 1977-78 i.e. a reduction of more than 20 per cent. If the target of cotton production is not realized additional imports will have to be made.

19. *Per capita* availability of vegetable ghee in 1977-78 will increase to 4.71 kgs. and of refined oil including direct consumption to 1.22 kgs. or by almost 5.37 per cent and 4.3 per cent respectively, over the previous year.

Milk

20. Milk is an essential item in daily diet. Reliable data regarding consumption of milk in processed form (ghee, butter sweets etc) is not available; also existing data needs to be refined. According to the Livestock Census of 1976, local production of milk was estimated at 8.0 million tons, which meant *per capita* consumption of 109.14 kgs. According to Statistics Division's

Household and Income Expenditure Survey 1971-72, about 55% of milk is consumed as milk (fresh and boiled). Thus giving 4.41 million tons of milk to be consumed in 1976-77. *Per capita* annual consumption of fresh milk declined by 1.46% in 1976-77 from 63.71 kgs. in 1975-76 to 62.78 kgs. in 1976-77. Milk production however, could not keep pace with the increasing requirement. The Government is taking various steps to increase milk production and it is projected that *per capita* fresh milk consumption will go up by 1.74% to 63.87 kgs. in 1977-78.

21. To supplement the supply of milk, the Government has allowed free import of powder milk. These imports which were only 406 tons in 1974-75 and rose sharply to 20,300 tons in 1975-76 and were at the same level in 1976-77 (equivalent to 203,000 tons as fresh milk*). It is expected that this level of import will increase to 22900 tons in 1977-78.

Meat

22. As wages and incomes rise, there is a general tendency to consume more meat, which is rich in animal protein. Meat prices, remained under pressure during 1976-77 and rose by 8 per cent during the year as supplies fell short of demand. However, *per capita* availability of meat rose by 1.2 per cent from 8.95 kgs. per annum in 1975-76 to 9.06 kgs. per annum in 1976-77. It is estimated that *per capita* availability will increase by 4.6 per cent to 9.48 kgs. in 1977-78, but that prices will continue to be high.

Vegetables

23. The *per capita* availability of vegetables, including potatoes and onions, decreased from 30.35 kgs. per annum in 1975-76 to 29.62 kgs. in 1976-77. In order to stabilize the prices of these commodities, Government has placed limits on their exports. During 1975-76 4,000 tons of onions and potatoes were exported but in 1976-77 the volume of exports increased to 16,000 tons. It is estimated that about 20,000 tons will be exported in 1977-78. The *per capita* availability has been projected to increase by 1.8 per cent in 1977-78 from 29.62 kgs. in 1976-77 to 30.16 kgs. per annum.

Tea

24. During 1976-77, the price of tea in international markets has almost doubled. However, the Government maintained its liberal import policy since it is the most popular beverage in the country. There is now an import duty on all loose tea. Government intend to keep prices at existing level despite fluctuations in world prices of tea. To curtail consumption of high quality tea, which is consumed primarily by the rich, an import duty of 50 per cent on all types of foreign packaged tea has been imposed. The *per capita* availability of tea has declined by 5.4% in 1976-77 from 0.74 kgs. in 1975-76 to 0.70 kgs. in 1976-77 due to reduced imports of tea. It is projected that about 0.78 kgs. of tea will be consumed *per capita* in 1977-78, representing an increase of 11.4% over 1976-77.

Cloth

25. There was a very sharp fall in the *per capita* availability of cloth (cotton and synthetic) from 18.41 sq. meters in 1975-76 to 14.81 sq. meters in 1976-77. Cotton production declined sharply. Against the target of 4 million bales, only 2.4 million bales were produced in 1976-77 mainly because the crop was destroyed by floods and pest attack. The use of synthetic fabrics is, however, on the increase; *per capita* availability of synthetics increased from 2.29 sq. meters in 1975-76 to 2.64 sq. meters in 1976-77.

26. The Government has taken concrete measures to increase cotton production during 1977-78 which is expected to improve cloth availability in the country. These measures include:--

- (i) An increase in the support price of cotton by Rs. 13 from Rs. 125 to Rs. 138 per maund
- (ii) Increased plant protection coverage; and the distribution of improved seeds throughout the cotton growing areas.

27. The target for cotton production for 1977-78 is 3.5 million bales, an increase of 45 per cent over the estimates of 1976-77. The target for 1977-78 of cotton yarn has been set at 386 million kgs and that of cloth at 552 million sq. meters showing an increase of 37 per cent and 34 per cent respectively, in yarn and cloth over the estimates of 1976-77. The increase in cotton production, combined with rise in production and higher imports of art silk fabrics is expected to increase the availability of cloth by 17%; from 14.81 sq. metres *per capita* per annum in 1976-77 to 17.3 sq. meters in 1977-78.

*In Islamabad Milk Plant, One Ton of Powder milk is Converted in to ten tons of fresh milk.

Programmes and Policies

28. In the Annual Plan, policies will be pursued with the primary objective of increasing the protein-calorie intake through short and long term measures for increase in the production of livestock, livestock products and pulses so as to ensure that these items are available at reasonable prices. Current prices of meat and milk are high; households in the lower income brackets find it difficult to afford these items in their diet. Therefore, while livestock farms will be expanded and supplies of meat and milk increased through feedlot fattening of cows and buffaloes, attention will also be given to augmenting the production of poultry, eggs and fish. Support prices of major pulses will be maintained and reviewed, if necessary, to provide incentive to farmers to increase their production, particularly in the *barani* areas. This will be supplemented by special programmes for supply of improved seeds and credit facilities. Similarly, production incentives will be provided to farmers to grow new oilseed crops such as soyabean and sunflower and to bring more area under groundnut, especially in the *barani* tracts so as to gradually improve domestic supplies of oilseeds and edible oils and thereby reduce the heavy dependence on imports.
29. Measures such as support price and purchase operations for oilseeds and pulses will be continued.
30. Research and experiments will be conducted for solar dehydration of fruits and vegetables. If successful, wastage of fruits and vegetables will be reduced and will result in higher levels of intake, not only through higher availability but through a more even distribution by shipment to areas of low production. The development of high extraction cane-crushing machine using local technology is also proposed for use in areas outside the sugar mill zones which will augment village level *gur* production.
31. Imports of wheat will be continued and rationing maintained; the availability plays a critical role in meeting proteins calories required. For edible oils imports will be maintained though at a lower level than in 1976-77. Tea import will however be larger to meet the requirements of an expanding population.
32. Rice exports will be maintained at the 1976-77 level but the production will be adequate to ensure larger availability of supplies in the country and also somewhat higher levels of intake in 1977-78 over 1976-77.
33. Onion and potatoes which are consumed by the low income groups will be exported but subject to quantitative restrictions so that there is no further pressure on the price level obtaining in 1976-77.
34. Recent studies on the marketing of agricultural products in Punjab, NWFP, and Baluchistan reveal high marketing margins between the prices received by farmers and those paid by consumers. Market committees would extend their regulations to livestock, vegetables and other commodities. To reduce the non-functional marketing margins, cooperative marketing would be initiated for some perishable commodities; to regulate the marketing of primary commodities, the possibility of establishment of commodity boards will be explored.
35. To supplement the existing facilities of ration *atta* from the depots, *roti* plants have started supplying *roti* to people at Karachi, Lahore, Islamabad, Peshawar & Quetta while similar plants at Bahawalpur, Multan, Faisalabad and Hyderabad will start sale of *roti* in 1977-78.
36. Government's scheme for the production of awami suits including shirts, bush-shirts, shawar, trousers and frocks is gaining momentum. In-expensive readymade garments are being made available through Utility Stores and Fair Price Shops. The sale of low cost wearing apparel will be accelerated in 1977-78.
37. These policies and programmes will require concerted efforts in their implementation and are vital for meeting basic requirements. Programmes to meet nutritional needs are elucidated in a separate chapter. These programmes, along with policies of employment and income generation, a equitable wages, improvement in health services and primary education, etc., will improve the standard of living of those groups of society which are presently denied these essential pre-requisites.

NUTRITION—1977-78

Review of 1976-77

Programme-wise progress achieved in the field of nutrition is given below :

FIELD STUDIES AND SURVEYS

In order to estimate the extent of nutrition deficiencies among the population, Micro-Nutrient Survey has been conducted during the period under review. This study was aimed at assessing the present nutrition situation and the determination of the nutrition status of the population according to age and sex classifications.

Micro-Nutrient Survey of Pakistan.—The survey was started in October 1976 and the field work was completed by January 1977. The major objective of the survey was the assessment of the nutrition status of the people of Pakistan by clinical, biochemical, anthropometric and dietary intake measures. Analysis of the data obtained through this survey is planned in two phases—the preliminary analysis and the detailed analysis. Work on the detailed analysis is in progress whereas results of the preliminary analysis have been published in an interim report. The following findings have emerged from this report :

- (i) Analysis of data for children upto the age of 5 years have indicated that growth failure is so severe among 7% of vulnerable children that immediate action is required ; in an additional 9.5% of the cases there is moderately severe PCM requiring active intervention ; and still another 43% suffer from mild malnutrition requiring attention.
- (ii) Picture of serum Vitamin A status as obtained from the survey reveals that 12.63% of urban and 13.0% of rural population has low or deficient serum vitamin A level.
- (iii) The prevalence of goitre was found to be 3.15% of the population surveyed.
- (iv) The haemoglobin level indicates 59.3% of the population are adequate, 24.5% marginal and 16.2% deficient.

Some of the details of findings appear at Annexure XIII

National Nutrition Survey.—The Ministry of Health is planning to undertake a fresh assessment of the nutritional status of the country's population on wider scale through a new survey. Sample design of this survey has already been prepared. It is planned to cover 5,000 households consisting of approximately 40,000 people. Necessary funds were provided in the ADP 1976-77 but so far no physical progress has been made.

II. FORTIFICATION AND OTHER SPECIAL PROGRAMMES

As a part of the operational probes for potential interventions the following food fortification programmes were pursued during the year 1976-77.

- (i) *Fortification of tea with vitamin A.*—On an experimental basis, 14,000 lbs of tea fortified with vitamin A was distributed in the Neelum Valley of Azad Kashmir in the year 1974. The level of fortificant used was 250 I.U. of vitamin A per gram of tea leaves. An acceptability study was conducted afterwards which revealed that the fortified tea was acceptable to the people of that area. As an extension to this experiment, a total quantity of 1,020,000 lbs of tea was fortified with vitamin A for distribution in the whole of Azad Kashmir for a period of six months starting 1-10-1976. Nevertheless, the experiment was poorly designed and did not have a base line data, as such it could not achieve its objectives. The experiment has, however, shown the administrative functioning of such a programme at a regional level.
- (ii) *Fortification of atta with vitamins and minerals.*—Fortification of atta with vitamins and minerals has been under active consideration for sometime. The proposal envisages addition of nutrients including iron, niacin, thiamin and riboflavin to the extent that the people would meet their requirements through the normal dietary patterns. The project has been developed for implementation through the Ministry of Food and Agrarian Management. The acceptability trial for the fortified atta and its shelf life has already been made through an experiment conducted with the cooperation of the PCSIR Labs., Lahore. The experiment has indicated that there is no change in colour, taste and odour of the fortified atta and hence the atta fortified with vitamins and minerals is acceptable for human consumption.

- (iii) *Iodization of salt.*—Previous surveys had shown a high incidence of goitre in the mountainous belt of the Northern Areas of the country. A salt iodization plant installed at Skardu sometime back, was, therefore, made operative. For quite sometime, the plant did not function. The plant has now been functioning since March 1977 and 268 maunds of salt has been iodized and distributed in the Shigar Valley.

A scheme has also been developed for installation of a large machine in the NWFP for the supply of iodized salt to Chitral and Swat areas. Total cost of the project is Rs. 1.34 millions to be borne jointly by the Government of Pakistan, the US AID and UNICEF. So far the project has made no physical progress.

- (iv) *Food Aid Programme.*—The World Food Programme (WFP) under their project No. 2237 is donating 11,727 metric tons of wheat, 7,321 metric tons of Dried Skimmed Milk (DSM) and 2,336 metric tons of butter oil. The foods have already arrived and are being processed for distribution free of cost to the people throughout the country. The supply is being conducted through the MCH Centres. The Programme is designed to cover about 740,000 beneficiaries under this programme.
- (v) *Weaning Food Programme.*—As a component of the above mentioned WFP Project, a pilot programme for the supply of cheap weaning food was developed. The low-cost protein-rich food called PROTOLAC with protein content of 20% has been formulated. This mixture is based on locally available food ingredients and has got the composition of 44% wheat flour, 44% chick peas, 10% DSM, and 2% vitamins and minerals. The project is designed to utilize the spare capacity of existing food processing factories for the manufacture of 3,000 tons of PROTOLAC per annum. It is proposed to make use of 5,800 metric tons of WFP supplies. The ration of about 100 grams of weaning food to about 85 000 infants will add 360 calories and 20 grams of protein per child. The project is in the final stages of planning.

Financial

A total allocation of Rs. 1.6 million was made for the Nutrition Planning and Research Scheme during the year 1976-77. The utilization during 1976-77 was Rs. 1.55 million which is 97% of the allocations. Out of the allocations of 0.2 million for the pilot scale intervention programmes and research studies Rs. 0.17 million were utilized during the financial year 1976-77. The allocations utilized were approximately Rs. 54,000, Rs. 109,000 and Rs. 8,000 respectively on Tea Fortification, Micro-Nutrient Survey and Salt Iodization Programmes.

An allocation of Rs. 11 million was made during the year 1976-77 for the nutrition programmes of the Health Division which includes National Nutrition Survey and the World Food Programme. Out of these allocations, Rs. 1 million were provided for the National Nutrition Survey which were not utilized during the year 1976-77. However, Rs. 5.8 million were utilized for internal handling of WFP commodities out of the provisions for WFP Project.

Annual Plan for 1977-78

Nutrition Plan Chapter appeared in the Annual Plan for the years 1975-76 and 1976-77. Most of the nutrition problems were discussed there and need not be repeated here. But to improve the nutrition situation a lot remains to be done. The data base needs to be strengthened further and analytical techniques for nutrition planning and programming have to be devised to suit local circumstances. Given the multi-sectoral nature of nutrition, the bridges linking the various concerned agencies must be buttressed and the role of nutrition in national development needs to be delineated. A capability for doing applied research, policy formulation and programme development in nutrition is being created at the federal level, but the capacity for implementing nutrition interventions is still limited. In the current annual plan attempt is being made to include training and other such programmes which should conform to these objectives.

Food Balance Sheet which shows the availability of food and nutrients for the year 1977-78 is given as Annexure XIV

An amount of Rs. 2 million has been allocated for the Nutrition Planning and Research Scheme during the year 1977-78. Out of these allocations, a provision of Rs. 2 lacs have been made for imparting training in the field of nutrition both at the federal and provincial levels in addition to the allocation of Rs. 2 lacs for the pilot work on nutrition projects. Financial provisions also exist for few additional posts to be created in the Nutrition Cell so as to strengthen its capacity for handling the expanded activities of the Cell. An allocation of Rs. 1 million has again been made for the conduct of the National Nutrition Survey by the Health Division in addition to Rs. 10 millions provided for the WFP Project for the year 1977-78.

The Annual Plan is in line with the aims and objectives of a longer term strategy which may be briefly noted :—

- (i) to improve the nutritional status of the population particularly that of the low income and vulnerable groups ;
- (ii) to improve the level of essential vitamins and minerals by increasing the food intake and by improving the quality of food ;
- (iii) to reduce the extent of protein-energy malnutrition ;
- (iv) to provide nutrition education on a mass scale ;
- (v) to develop a data base to facilitate realistic planning in nutrition ;
- (vi) to develop nutrition planning capability at national, provincial and local levels.

Physical Targets

The following programmes are included in the ADP 1977-78 :

1. Field Studies and Surveys :

- (a) *Hospital-based Study*.—In continuation of the population based Micro-Nutrient Survey of Pakistan a hospital based study has been planned in order to do an indepth investigation of specific deficiencies. The hospital based study would supplement the results of the Micro-Nutrient Survey since the severity and distribution of the deficiencies among population groups are not well defined. The study would imply both the clinical and biochemical methods of testing and plan to cover nutrients such as vitamin A, iron, riboflavin etc.
- (b) Complete analysis of the Micro-Nutrient Survey data is planned to be accomplished during 1977-78 and a final report on the findings will be published.
- (c) Operational probes for potential interventions will be undertaken whenever felt necessary.

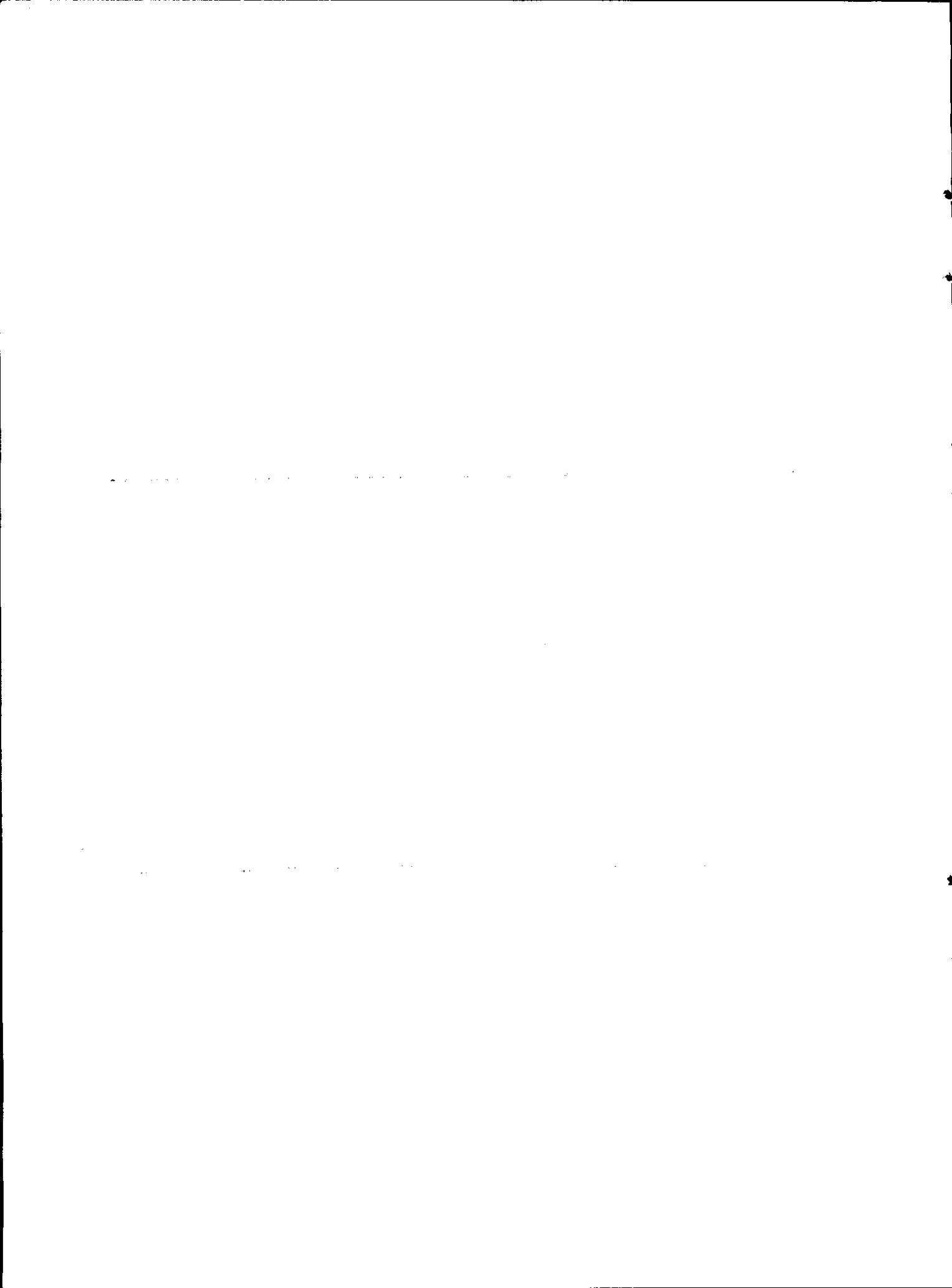
2. Food Fortification and Technology undertakings :

Assistance will be provided in the launching of different fortification programmes planned for the year 1977-78. Efforts will be made to help the implementing agencies in developing the evaluation and monitoring plans. The following undertakings are planned for the year 1977-78.

- (a) *Fortification of Atta*.—The implementation of atta fortification project will start during the financial year 1977-78 in 10 flour mills.
- (b) *Salt Iodization*.—The proposed programme includes :
 - (i) Project proposal of a bigger sized plant for salt iodization, to supply iodized salt to the Azad Kashmir, Northern Areas and part of the Punjab will be finalised. Efforts will also be made to utilize capacity of the Skardu plant under this project.
 - (ii) The Chitral Project already approved at the provincial level will be made operative by the Government of NWFP during the year.
- (c) *Weaning Food*.—Manufacturing of inexpensive baby food is expected to be made operational utilizing 5,800 metric tons of wheat supplied through the World Food Programme. A ration of 100 grams per day will be distributed through MCH Centres to 85,000 infants providing each recipient with a daily dietary supplement of 360 calories and 20 grams of protein. The results of the project will be closely monitored to determine whether an expansion would be warranted.
- (d) *Economic Studies and Research*.—To supplement the findings of the Micro-Nutrient Survey and to fill the gaps of information on nutrition in Pakistan, if any, research programme of limited scale will be undertaken, in addition to the research which is an integral part of the ongoing intervention programmes and nutrition economic analysis. This will include studies such as the development of a set of local growth norms and the determination of causes of iron malabsorption etc.
- (e) *Training*.—The programme includes :
 - (i) Both within and out of Pakistan training of the officers of Nutrition Cell which includes one short term study tour and two degree programmes in the field of nutrition. Training of some of the selected staff of the implementing agencies is also included in this programme during the year 1977-78.
 - (ii) A workshop on "Nutrition Planning in Pakistan" will be held in July 1977 in which both the inland and foreign participation of experts in the field of nutrition is expected. Another will be held in December 1977/January 1978.

PART II
PRODUCTION PROGRAMMES AND PHYSICAL INFRA-STRUCTURE

(31—32)



CHAPTER 4
AGRICULTURE

The production of major crops during 1976-77 (except for cotton) increased significantly over 1975-76. The weight for cotton in the total agricultural production being substantial (12%) and the decline in output being large (17%), the overall agricultural production did not show any appreciable increase. The index for all agricultural crops increased from 198 to 201 by about 2 per cent. The index for food crops jumped from 207 to 222, while for fibre crop it dropped from 176 to 149. The index for the other crops registered an increase from 193 to 211. Increase in wheat and sugarcane production was significant. Wheat output rose from 8.55 million tons to about 9.0 million tons and sugarcane production increased from 25.1 million tons to 28.9 million tons. Average fertilizer consumption went-up by about 8.5% from about 29.3 nutrient pounds per cropped acre to about 31.8 nutrient pounds per cropped acre. Water availability at farm gate in the *Rabi* season rose from 38.05 MAF in 1975-76 to 41.04 MAF in 1976-77 (by about 8%). The plant protection measures were extended to cover 11.7 million spray acres during 1976-77 against 8.6 million spray acres covered during 1975-76. Improved seed distribution during 1976-77 is estimated at 2.3 million maunds against 1.72 million maunds in 1975-76.

2. Programmes and policies will be followed during 1977-78 to accelerate the growth in the agriculture sector. The maximization of cotton production programmes launched in Punjab and Sind and increase in the guaranteed prices for various varieties of cotton are expected to bring about a recovery in cotton production from the damage sustained in 1976-77. Furthermore, price support programme extended to certain selected oilseed and pulse crops would help increase their production. Allocation for the agriculture sector for 1977-78 has been increased by about 27% over the previous year's level. The major increases are for fertilizer (80%), animal husbandry (74%), improved seeds (31%) and mechanization (15%).

3. Details of the agricultural development programmes are in the following paragraphs :

Financial

4. A sum of Rs. 1,697.339 million has been provided for the Sector in the ADP, 1977-78, against Rs. 1,336.554 million allocated during 1976-77, showing an increase of about 27 per cent. It is estimated that a sum of Rs. 1,346.717 million would be utilized during 1976-77, which would mean a utilization of 101%. The higher financial utilization is reported for fertilizer, plant protection and foodgrain storages sub-sectors. The break-down of the proposed allocation, by executing agencies, *vis-a-vis* the allocation for 1976-77 is as shown below :

Executing Agency	ADP 1976-77		Allocation for 1977-78	Percentage increase in ADP allocation over 1976-77 ADP
	ADP	Revised estimate		
	—million rupees—			—%—
Federal	770.626	895.525	1,034.261	34.2
Baluchistan	34.343	31.527	36.780	7.1
N.W.F.P.	73.872	47.542	77.910	5.5
Sind	90.053	56.083	106.455	18.2
Punjab	367.660	316.040	441.933	20.2
Total	1,336.554	1,346.717	1,697.339	27.0

5. The sub-sector-wise details of allocation for 1977-78, by executing agencies, may be seen in Appendices I—VII.

Physical Achievements and Targets

6. *Crop Production*.—The actual production of major crops during 1975-76, likely achievements during 1976-77 and targets for 1977-78 are shown in Table I below :

TABLE I
Production of Major Crops 1975-76, 1976-77 and Targets for 1977-78

Crop	1975-76 (Actuals)	1976-77			1977-78 (Target)
		Target	Estimated Achievement	Percentage Achievement	
		—thousand tons—		%	thousand tons
Total Foodgrains	12,628	13,300	13,666	98.9	14,077
Wheat	8,554	9,000	9,010	100.0	9,500
Rice	2,576	2,650	2,694	101.7	2,832
Maize	790	840	752	89.5	935
Other Foodgrains	708	810	708	87.4	810
Sugarcane	25,143	25,700	28,916	112.5	29,500
Cotton (Lint)	596 (2,890)	700 (4,000)*	428 (2,446)*	61.2	612 (3,500)*
Oilseeds	1,346	1,752	1,200	68.5	1,610
Cotton-seed	1,012	1,400	856	61.2	1,225
Rape and Mustard	263	260	263	101.2	288
Groundnut	61	72	63	87.5	75
Sesamum	10	10	11	110.0	12
Others	N.A.	10	7	70.0	10
Pulses	770		777		825
Gram	592		600		630
Mash	29		25		30
Moong	31		29		35
Masoor	28		28		30
Other pulses including matteri	90		95		100

*Figures in parentheses indicate production of cotton lint in thousand bales. The latest estimates indicate a crop of around 3,200 thousand bales during 1977-78 against the target of 3,500 thousand bales.

7. It may be seen from the data given in Table-I that the production of all major crops except cotton and maize is estimated to be higher during 1976-77 as compared to 1975-76. The production targets are estimated to have been met in the case of wheat and rice and exceeded in the case of sugarcane. For other crops there were significant shortfalls, despite normal canal water supplies and about 15 per cent increase in fertilizer off-take. The main reasons for the shortfall include floods of August-September, 1976; early, un-timely and heavy summer rains; heavy pest attack; and scanty winter rains. Cotton was specially affected and the production is estimated at only 2,446 thousand bales (the level of 1965-66). It may be stated that the acreage sown to cotton was about 4.95 million acres, but the area actually harvested is estimated at 4.6 million acres. This means that nearly 0.40 million acres (i.e. 8% of the total acreage) were lost on account of floods and heavy summer rains. The targets for major crops for 1977-78 assume modest increases over the 1976-77 level ranging between 2 and 5% except for cotton. A substantial recovery (43%) is projected in cotton production though not fully to the level attained in the 1971-73 period. Recovery of cotton production to 3.5 million bales is based partly on the programme outlined below and partly on the expectation that weather would be less unfavourable than it was in 1976-77.

8. The input programmes proposed for 1977-78 to achieve the production targets are described below:—

9. *Fertilizer*.—The fertilizer off-take target for 1977-78 has been fixed at 805 thousand nutrient tons against the estimated off-take of 631 thousand nutrient tons in 1976-77. The province-wise break-down of the estimated off-take during 1976-77 and the target for 1977-78 is given in Table 2.

TABLE 2
Fertilizer Off-take During 1976-77 and Targets for 1977-78

Province	Estimated Off-take 1976-77	Off-take Target 1977-78
—000 nutrient tons—		
Punjab	414	539
Sind	161	181
N.W.F.P.	54	73
Baluchistan	2	12
Total	631	805*

*The target was for an increase of 15 per cent over the estimated off-take of 700,000 N. tons in 1976-77 with the reduced figure for actual off-take in 1976-77, the target for 1977-78 has finally been approved at 750,000 N tons.

10. The fertilizer application per cropped acre is expected to increase from about 32 nutrient lbs. in 1976-77 to about 40 nutrient lbs. in 1977-78. This growth projection in fertilizer use is based mainly on favourable fertilizer/crop price relationship, streamlined and expanded distribution system, increased availability of water, extension of high yielding varieties to new areas and the efforts under way to extend improved technology to the *barani* areas.

11. The estimated crop-wise use of fertilizer for the years 1975-76 to 1977-78 is shown in Table 3.

TABLE 3
Estimated Crop-wise Usage of Fertilizer During 1975-76 through 1977-78

Crop	1975-76	1976-77 (estimated)	1977-78 (Target)
—000 nutrient tons—			
Wheat	264	303	386
Rice	66	76	97
Maize	39	44	56
Cotton	88	101	129
Sugarcane	60	69	89
Other	33	38	48
Total	550	631	805

Note. —The crop-wise break-down has been based on the estimates shown in the report "Fertilizer Consumption and Market Development in West Pakistan" by ESSO Pakistan Fertilizer Company Limited (undated). Some adjustment has been made on the basis of more recent information.

12. The estimated availability and import requirements of fertilizer for 1977-78 to meet the above target are given in Table 4.

TABLE 4

Estimated Availability and Import Requirements of Fertilizer for 1977-78

	N	P	K	Total
	—000 nutrient tons—			
Expected stocks on 1st July, 1977	143	92	4	239
Estimated local production	314	18	—	332
Estimated Total availability	457	110	4	571
Off-take target	622	175	8	805
Estimated imports	165	65	4	234

13. To achieve the targeted off-take of 805 thousand nutrient tons during 1977-78, following steps need to be taken or continued :

- (i) Maintenance of abundant supplies of fertilizer ;
- (ii) Further improvement in fertilizer distribution machinery through expansion of rural outlets ;
- (iii) Maintaining of fertilizer/crop price relationships at incentive levels ;
- (iv) Provision of abundant credit for purchase of production inputs, particularly for small and medium size farmers ;
- (v) Subsidizing of fertilizer prices ;
- (vi) Popularizing use of phosphatic fertilizer through all possible means to further improve the N : P ratio ; and
- (vii) Popularizing fertilizer in the *barani* areas.

14. No change is envisaged in sale price of fertilizer during 1977-78 ; the 1976-77 prices are being continued. A sum of Rs. 664.60 million has been provided for subsidy on fertilizer distribution during 1977-78, against the allocation of Rs. 369.81 million in 1976-77.

Distribution of Improved Seed

15. Data on seed distribution programme for the years 1976-77 and 1977-78 are shown in Table-5.

TABLE 5

Province-wise Seed Distribution Programme for 1976-77 and 1977-78

1	1976-77		1977-78	
	Quantity procured from the 1975-76 crop	Quantity distributed	Estimated quantity Procured from 1976-77 crop	Distribution target
	2	3	4	5
	—000 maunds—			
Punjab				
Cotton	404	260	1,013	1,000
Paddy	87	31	69	69
Maize	31	31	40	40
Wheat	1,241	1,180	760	845
Gram	4	4	25	25
Others	24	24	30	30
Sub-total	1,791	1,530	1,937	2,009

1	2	3	4	5
Sind				
Cotton	523	428	523	450
Paddy	6	4	10	8
Wheat	246	224	67	200
Sub-total ..	775	656	600	658
N.W.F.P.				
Maize	7	5	5	17
Wheat	70	70	26	100
Others	5	5	4	14
Sub-total ..	82	80	35	131
Baluchistan				
Wheat	45	39	20	40
Others	2	2	2	3
Sub-total ..	47	41	22	43
Total ..	2,695	2,307	2,594	2,841

16. The Province-wise seed distribution programme is discussed below :—

Punjab :

- (i) It may be observed from Table 5 that against 1,530 thousand maunds of seed of all crops distributed in 1976-77, the target for 1977-78 has been placed at 2,009 thousand maunds, showing an increase of about 31 per cent. In 1977-78, the main quantitative increase is envisaged for cotton seed with a target of 1,000 thousand maunds, against 260 thousand maunds distributed in 1976-77. Out of 404 thousand maunds of cotton seed procured from the 1975-76 crop, the quantity distributed was 260 thousand maunds in 1976-77. In 1977-78, the procurement and distribution targets have been placed respectively at 1,013 thousand maunds and 1,000 thousand maunds. The target for wheat seed distribution in 1977-78 has been placed at 845 thousand maunds, against the 1976-77 figure of 1,180 thousand maunds, showing a decrease of about 28 per cent.

Sind :

- (ii) No increase is envisaged in the seed distribution target for 1977-78 over the 1976-77 level as the seed distribution target of all the major crops has been placed at 658 thousand maunds against 656 thousand maunds distributed in 1976-77.

N.W.F.P. :

- (iii) Against 80 thousand maunds of seed distributed in 1976-77, the target for 1977-78 has been placed at 131 thousand maunds, showing an increase of 64 per cent. The wheat seed distribution is to be increased from 70 thousand maunds in 1976-77 to 100 thousand maunds in 1977-78.

Baluchistan :

- (iv) The target for wheat seed distribution has been placed at 40 thousand maunds for 1977-78 at the 1976-77 level.

17. The overall seed distribution target for all the major crops in 1977-78 has been placed at 2,841 thousand maunds, against 2,307 thousand maunds of seed distributed in 1976-77. Thus, the seed distribution target is about 23 per cent higher than the 1976-77 level. There is a need to increase the efficiency of the public sector organizations for procurement and distribution of improved seeds.

18. The rates of subsidy and premium (on purchase of improved seed from the registered growers) for various crops in the four Provinces are shown in Table 6.

TABLE 6

Rates of Subsidy and Premium on Purchase of Improved Seeds

Crop	Punjab		Sind		N.W.F.P.		Baluchistan		
	Subsidy	Premium	Subsidy	Premium	Subsidy	Premium	Subsidy	Premium	
—Rupees per maund—									
Cotton	10.00	5.00—7.00	—	5.00	—	—	—	—	—
Paddy	6.50	2.00	—	—	—	—	—	—	—
Maize	6.50	2.00	—	—	14.50	2.00	—	—	—
Wheat	8.50	2.00—4.00	—*	3.00	15.00	8.00	3.75	3.00	—
Gram	6.50	2.00	—	—	—	—	—	—	—
Others	6.50	2.00	—	—	14.50	—	—	—	—

*An amount of Rs. 3.66 per md. on the last year unsold wheat seed.

19. The Provincial Governments have made provisions in their Annual Development Programmes for subsidies on procurement and distribution of improved seeds. The provision made for the purpose is Rs. 18.60 million by the Punjab, Rs. 0.50 million each by the Sind and Baluchistan and Rs. 2.00 million by the N.W.F.P. The provisions on subsidy made by the Punjab, NWFP and Baluchistan appear adequate for seed distribution targets of 1977-78. The provision made by the Sind Government for the purpose appears inadequate.

20. The area under the high yielding wheat varieties was 9.20 million acres (64 per cent of the total wheat area) in 1974-75 which increased to 9.92 million acres in 1975-76 (66 per cent of the total wheat area). It is estimated that the area increased to 10.70 million acres in 1976-77 (69 per cent of the total wheat area) would increase to 11.50 million acres in 1977-78 (74 per cent of the total wheat acreage). Similarly, the area under high yielding rice varieties is estimated to have increased from 1.60 million acres (39 per cent of the total) in 1974-75 to 1.64 million acres (39 per cent of the total) in 1975-76 and further to 1.70 million acres in 1976-77 (40 per cent of the total). The area is expected to increase to 1.75 million acres in 1977-78 (40 per cent of the total).

21. The Federal and the Provincial Governments of Punjab, Sind and Baluchistan have made provisions in their Annual Development Programmes 1977-78 for implementation of the Seed Industry Projects. Facilities for seed testing and certification will be established at the Federal level in 1977-78. Nucleus and foundations seeds of all the major crops would be produced by the Provincial Governments in 1977-78 for further multiplication into certified seeds in 1978-79 and onward.

Plant Protection

22. The target of coverage by curative measures fixed for 1977-78, both through aerial and ground operations, is 14.69 million spray acres (9.89 million spray acres by ground operations and 4.80 million spray acres by aerial operations), against the estimated coverage of 11.68 million

spray acres during 1976-77 (6.21 million spray acres by ground operations and 5.47 million spray acres by aerial operations). The Province-wise details of the targeted coverage during 1977-78 are given below :

Province	Aerial Operations	Ground Operations	Total
—million spray acres—			
Punjab	2.00	7.04	9.04
Sind	1.47	2.16	3.63
N.W.F.P.	0.98	0.48	1.46
Baluchistan	0.35	0.21	0.56
Total ..	4.80	9.89	14.69

23. The crop-wise break-down of the estimated area covered with plant protection measures during 1976-77 and target for 1977-78 is shown in Table 7.

TABLE 7

Crop-wise Coverage of Area by Aerial and Ground Operations during 1976-77 and 1977-78

Crop	1976-77 (Estimated)			1977-78 (Target)		
	Aerial Operation	Ground Operation	Total	Aerial Operation	Ground Operation	Total
— 000 spray acres —						
Cotton	2,157	2,817	4,974	1,400	6,073	7,473
Paddy	2,517	662	3,179	2,050	819	2,869
Sugarcane	691	636	1,603	700	731	1,431
Maize		276		135	351		486
Oilseeds	—	13	13	250	23	273
Orchards	49	98	147	165	123	288
Tobacco	43	80	123	100	82	182
Vegetable	—	229	229	—	262	262
Others	10	1,401	1,411	—	1,423	1,423
Total ..	5,467	6,212	11,679	4,800	9,887	14,687

24. The Province-wise and crop-wise estimated areas covered by ground and aerial operations during 1976-77 and the targets for 1977-78 may be seen in Appendices VIII—XI. In order to achieve the above target, the following measures need to be taken :

- (i) Streamlining of the pesticides distribution system ;
- (ii) Supply of spraying equipment on subsidized basis ;
- (iii) Better training of the Plant Protection staff and improved supervision ;
- (iv) Encouraging association of private sector in the plant protection operations ;
- (v) Strengthening of pest identification and warning system ; and
- (vi) Better coordination of the aerial and ground operations.

25. A sum of Rs. 302.867 million has been provided in the Annual Development Programme, 1977-78 for the Plant Protection sub-sector. The agency-wise break-down of the allocation is as follows :

Agency	ADP Provision 1976-77	Provision for 1977-78
—million rupees—		
Federal	184.500	98.316
Punjab	112.120	148.551
Sind	16.500	33.000
N.W.F.P.	11.643	17.000
Baluchistan	2.025	6.000
Total ..	326.788	302.867

26. It needs to be pointed out that the allocation of Rs. 98.316 million for the aerial plant protection programme during 1977-78 is lower than the preceding year because the coverage target through aerial operations has been reduced. More emphasis is to be given to control of pests and diseases through expansion of ground operations by diverting funds previously provided for the aerial operations. Special campaigns are being launched for control of the cotton pests and diseases in Punjab and Sind.

Agricultural Mechanization

27. The position with regard to procurement of heavy earth moving machinery *i.e.* bulldozers for 1976-77 and 1977-78 is summarized below :—

Agency	(No. of bulldozers)		
	1976-77		1977-78
	Target	Achievement	Target
Baluchistan	—	—	10
N.W.F.P.	40*	—	(a)
Sind	20	—	70
Punjab	10	—	20
Sub-total (Provinces) ..	70	—	100
F.A.T.A.	15	12	15
Total ..	85	12	151

* In addition, thirty bulldozers were to be procured under non-developmental budget but the procurement could not be made.

(a) About 220 bulldozers are proposed to be procured under non-developmental budget through the Italian Suppliers Credit. The delivery is expected to be completed by 31-12-1977

28. The physical targets for land development by use of heavy earth-moving machinery are indicated below :

Agency	(thousand acres)		
	1976-77		1977-78
	Target	Achievement	Target
Baluchistan	50	33	37
N.W.F.P.	19	15	50
Sind	50	45	59
Punjab	160	102	90
Sub-total (Provinces) ..	279	195	236
F.A.T.A. ..	6	3	5
Total ..	285	198	241

29. The shortfall in physical performance during 1976-77 was largely on account of shortfall in procurement of new bulldozers by various agencies. The Government decided in September 1976 to charge Rs. 55 per hour from the small farmers and Rs. 70 per hour from owners with more than subsistence holdings.

30. In case of Baluchistan, 10 bulldozers and two ten wheeler transporters will be purchased. The N.W.F.P. Government proposes to complete construction of a workshop at Kohat and to improve facilities at the existing tractor operators schools at D.I. Khan and Peshawar. Such new schools will be set up at Haripur and Batkhela. It is proposed to train about 160-170 tractor operators annually at these schools. The Sind Government proposes to purchase about 70 light bulldozers under the U.K. Government Credit. In case of Punjab, construction work on workshops at Lahore, Mianwali, Jhelum and Campbellpur will be completed while work on district workshops at Vehari and Kasur will be initiated. Additional facilities will be provided at the existing workshops. Replacement of existing vehicles, transportation machinery, tractor trolleys etc. will be made. Under the project entitled "Provision of tractor pools at Tehsil Headquarters" about 100 tractors were purchased by the Punjab Government during 1976-77 and 30 tractors and other machinery and implements will be purchased during 1977-78. The objective is to increase farm power availability and to popularise the use of implements and machines not hitherto used by the farmers. Such machinery will include rice transplanters, power tillers, rice-cum-wheat threshers, mould board ploughs, disc harrows, rotavators, ridgers, scrapers, groundnut diggers, land planes, etc. Under the project entitled "Training of young farmers in operating tractors, implements, plant protection equipment, and running of tubewells", training centres will be set up at Bahawalpur, Multan, Sahiwal, Larkana, Talagang, Lyallpur and Lahore. Further work on the establishment of an Agricultural Mechanisation Research Institute will be continued. A project entitled "Karkhana Aalate Zarae" will be implemented at Bahawalpur.

31. The permit system for sale of tractors to farmers, which was abolished in April 1976, has improved the sale operations and the target for procurement and supply of 15,000 tractors during 1976-77 was fully achieved. The target for 1977-78 for procurement and sale of tractors to farmers will be 15,000. About 2,000 power tillers have been imported from China and rice transplanters are being imported for popularising their use among the farmers.

Soil Conservation

32. No soil conservation programme is proposed to be implemented in Azad Kashmir, Northern Areas and Tribal Areas.

33. In case of Baluchistan, soil conservation activities will be continued in the Chagai District and in Maur-Jigh Hill Ranges of Kachhi District. An on-going project for sand dune stabilization along the R.C.D. Highway near Wingoi (Lasbela District) will be continued while a new project for sand dune stabilisation will be implemented along the coastal areas of Baluchistan. No project on soil conservation is proposed to be implemented in N.W.F.P. and Sind Provinces. In case of Punjab, new vehicles are proposed to be procured for replacement purpose and work on construction of buildings for offices, stores and laboratories will be continued. A new project entitled "Soil and water conservation for increased agricultural production in *Barani* Areas of Punjab" will be implemented in the Rawalpindi Division and parts of Sialkot, Sargodha, Mianwali and D. G. Khan Districts. It is proposed to carry out soil conservation activities on about 48 thousand acres. These operations will be carried out at 50 per cent subsidy. It is also proposed to reclaim nearly 39 thousand acres of eroded land.

Support Price Policy

34. The support price policy programme has been kept under review from time to time to provide necessary incentives for increased production. The existing prices are as follows :

- (i) *Wheat*.¹ The support/procurement price of Rs. 37 per maund announced for the 1974-75 crop, remained operative for 1975-76 and 1976-77 crops.
- (ii) *Paddy*.—The paddy prices were announced for the first time for the 1976-77 crop. The per maund paddy price at mill gate was Rs. 52.00 for *Basmati*, Rs. 30.00 for Irri 6, Rs. 20.50 for Irri-8, Rs. 25.00 for *Permal*, Rs. 33.50 for *Sugdasi*, Rs. 18.50 for red rice and Rs. 21.50 each for *Kangani*, *Begmi* and *Sathi*.
- (iii) *Sugarcane*.—The per maund minimum guaranteed prices announced for 1975-76 crop (Rs. 5.50 for NWFP, Rs. 5.75 for Punjab and Rs. 5.90 for Sind) remained operative in 1976-77. and 1977-78.
- (iv) *Cotton*.—The per maund prices of seed cotton for 1977-78 crop were raised to Rs. 138 for AC-134, N.T., BS-I; Rs. 149 for B-557,149F; Rs. 160 for Surmast, Qallandri, Deltapine, MS 39, MS 40; and Rs. 132 for Desi varieties against the price of Rs. 125 per maund for upland varieties and Rs. 120 per maund for desi varieties for the 1976-77 cotton crop.
- (v) *Maize, Potato, Onion and Pulses*.—These crops were included in the price support programme in 1976-77. The per maund prices fixed were Rs. 32 for maize, Rs. 25 for potato Rs. 18 for onion, Rs. 45 for gram (black, whole) and Rs. 70 for *masoor* (whole) for 1976-77 crops.
- (vi) *Oilseeds*.—For the first time, the support price of Rs. 80 per maund for soyabean, Rs. 90 per maund for sunflower and Rs. 75 per maund for safflower for the 1977-78 crops were announced.

Agricultural Marketing

35. The Pakistan Agricultural Storage and Services Corporation (PASSCO) was to procure 200 thousand tons of wheat from the 1976-77 crop for supply to N.W.F.P. Government, of which 160 thousand tons were procured by June 30, 1977. The Corporation also purchased 3,200 tons of *moong* and *mash*, 3,000 tons of gram, 1,750 tons of *masoor* and 13,512 bags of potatoes during 1976-77.

36. Also, the PASSCO constructed major portion of storage capacity of 1.40 lakh tons during 1976-77 and the remaining portion will be completed during 1977-78. For this, a sum of Rs. 50 million was sanctioned by the A.D.B.P. and Rs. 6 million were provided by the National Bank of Pakistan during 1976-77.

37. The Corporation undertook also construction of *Dal* (pulse) factories at various places in Punjab during 1976-77. Two such factories are near completion at Lahore and Sargodha. Work on Multan factory could not be started because the contractor abandoned the work. The construction of a cold storage at Lahore is expected to be completed before the next potato season (January, 1978).

¹ The Government have recently further revised upward the price of rice. Based on the quality the per maund price of basmati rice would range between Rs.95 to 105 while for other varieties the price would range between 38 to Rs. 54 per maund. The paddy prices announced for 1976-77 crop remained operative for 1977-78 crop also.

38. The strength of the tractor fleet of the Corporation increased from 78 in 1975-76 to 128 in 1976-77. The total income from machinery pool has increased from Rs. 18 lakh in 1975-76 to Rs. 30.0 lakh during 1976-77.

39. The Corporation proposes to further expand their procurement programme during 1977-78, which will include wheat (500 thousand tons), pulses (18 thousand tons), potatoes (2,000 tons) and onions (2,000 tons). It is proposed to increase the strength of tractor fleet from 128 in 1976-77 to 178 in 1977-78.

40. A citrus grading plant has been established by the Federal Agricultural Marketing and Grading Department at Peshawar and about, 4,000 tons of graded citrus will be exported during the year. Work on Federal Government scheme "Development of Agricultural Marketing in Pakistan" will be initiated during the year.

Agricultural Credit and Cooperatives

41. *Agricultural Credit.*—The farmers, especially the small farmers, need credit for purchase of such important inputs as fertilizers, seeds, pesticides etc. The volume of institutional credit available to the farmers is less than their requirements. Measures taken by the Government through banking reforms, introduction of 'Pass Book System', and increased allocation to credit plans have improved the situation appreciably.

42. A target of Rs. 2035 million has been fixed for institutional agricultural credit during 1977-78 against Rs. 1,505.76 million disbursed during 1976-77. The details regarding disbursement of loan to farmer through various institutional credit agencies during 1976-77 and targets for 1977-78 are shown below :

Year	Institutional Credit Agencies				
	ADBP	Agri. Crops	Taccavi	Commercial Banks	Total
	—Million Rupees—				
1976-77 (Estimated disbursement)	635.55	70.23*	10.00	790.00	1,505.78
1977-78 (Target)	735.00	200.00	10.00	1090.00	2,035.00

* Includes only for Punjab up to January 31, 1977 and Baluchistan upto June 30, 1977.

43. Out of Rs. 635.55 million disbursed by the ADBP during 1976-77, the short, medium and long term loans were of the order of Rs. 178.82 million, Rs. 43.91 million and Rs. 412.82 million, respectively. The number of bank branches/sub-branches was raised from 170 to 174. Two new regional offices were opened to bring total to 17. During the last few years, the bank had opened branches at tehsil level on the request of Provincial Governments. The policy is to strengthen the existing branches rather than to open new ones, except for a few branches in IRDP *markaz* during 1977-78.

44. *Cooperatives.*—To revitalize and to re-organise cooperative banking structure, a Federal Bank for cooperatives was established in 1976. The Bank is to be the principal loaning agency for the cooperative banks in the country and will guide them in the improvement in the flow of credit to small farmers through the cooperative societies. The Bank started functioning on 14th December, 1976 and sanctioned Rs. 46.8 million as production loans to 11,838 members of 1,566 agricultural credit societies. The target for disbursement of production loans for 1977-78 has been fixed at Rs. 150.0 million.

45. *Baluchistan.*—A cooperative farming pilot project at Aghbarg with 58 members and an area of 500 acres was registered during 1976-77. Efforts were made to install tubewells, but without success. One tubewell already installed was purchased for the project. Efforts to install tubewell at another Cooperative Farming Project, Umar Dhore failed due to non-availability of underground water. An alternate site was selected and the boring work will continue during 1977-78. If successful the Society will be registered. Against the target of establishing 3 cooperative farms, two farms were set up at Deh Hambi (District Nasirabad) and Pasinzai (Distt: Zhob) which were registered during 1976-77. A sum of Rs. 5.83 lakh was drawn by the Deh Hambi Society for purchase of fertilizer and other inputs etc. The Cooperative Farming Society at Kad Koocha is expected to be registered during 1977-78. Consolidation and development work on these farms will continue during 1977-78.

46. *N.W.F.P.*—Organisation for four cooperative farms—one each in D. I. Khan, Bannu, Peshawar and Mardan districts—under the National Scheme of Cooperative Farming was completed during 1976-77. Consolidation and development of the four farms will be undertaken during 1977-78. Under the scheme "Dissemination of Cooperative Education and Publicity", two residential flats for instructors of the cooperative college were built during 1976-77. One inspector training class and two classes for managerial staff of cooperative societies were held during the year, and one sub-Inspector training class remained in session. Four divisional level cooperative seminars were also held. One training class each for Inspectors/Assistant Registrars, Sub-Inspectors and 3 classes for managerial staff of cooperative societies will be held during 1977-78. In addition, 4 Divisional level seminars will be organized during the year. Under the scheme, "Cooperative Soil Conservation Project in Peshoongri Area", laying down of drainage pipes and construction of culverts were undertaken during 1976-77. Export of mechanically graded citrus fruits on cooperative basis will be undertaken during 1977-78. In addition, marketing of handicraft goods on cooperative basis will be done under the scheme "Installation of Processing and Handicrafts Units".

47. *Punjab.*—Five cooperative farms have already been established under the national scheme of cooperative farming. Agricultural machinery such as tractors, wheat threshers, and other implements will be supplied to these units on subsidized rates during 1977-78. Construction of two workshops/godowns will be undertaken under the scheme "Reconstruction of Rural Credit and Agri. Marketing". Under the Sheep Shearing Scheme, 1,440 sheep will be supplied to the members and 8,000 maunds of wool will be purchased and marketed. The West Pakistan Cooperative Consumers' Society Ltd. will open 4 new shops in Lahore. Installation of tubewells will be undertaken by the cooperative societies in the Pasrur area to facilitate production of sugarcane for Pasrur mill.

Government Foodgrain Storages

48. The storage capacity available with the public sector (June 1976), storages under construction and storage target for 1977-78 are shown in Table 8.

TABLE 8

Government Foodgrain Storages

	Existing capacity (June, 1976)	Under construction (expected completion on or before 30-6-77)	Total capacity on 30-6-77	Target (1977-78)	Total capacity by the end of 1977-78
1	2	3	4	5	6
-----thousand tons-----					
Provincial					
Punjab	720	253	973	400	1,373
Sind	260	135	395	70	465
NWFP	107	35	142	25	167
Baluchistan	57	22	79	25	104
Sub-total (Provincial)	1,144	445	1,589	520	2,109

	1	2	3	4	5	6
Federal						
Food Wing (Food Directorate) ..		25	—	25	—	25
A. K. & N. A. — ..		—	20	20	—	20
Defence Division		—	50	50	—	50
Rice Export Corporation ..		656	—	656	—	656
Sub-total (Federal)		681	70	751	—	751
Total (All Pakistan)		1,825	515	2,340	520*	2,860

*In view of financial constraint, Government have recently decided to construct storage capacity of 236 thousand tons only in 1977-78. Out of which PASSCO would construct 160 thousand tons (150,000 tons in Punjab and 10,000 tons in NWFP), while the remaining capacity of 76 thousand tons would be constructed by the Pak PWD (40 thousand tons in Sind, 15 thousand tons in NWFP and 21 thousand tons in Baluchistan). Total capacity, thus likely to be available by the end of 1977-78 would be 2,576 thousand tons (1,825 thousand tons with the Provincial Government and 751 thousand tons with the Federal Government).

49. It may be mentioned that out of the total storage capacity of 515 thousand tons under construction (target for 1976-77), about 256 thousand ton capacity was completed by the end of January, 1978, of which 71 thousand ton capacity was constructed by the Pak. PWD, 85 thousand tons by the Provincial PWDs and 100 thousand tons by PASSCO against their respective targets of 200 thousand tons, 118 thousand tons and 140 thousand tons. The remaining capacity of 259 thousand tons is likely to be completed by the end of March, 1978. On completion of these storages, the total capacity available with the Government will be 2.34 million tons.

50. To complete the storages under construction and to achieve the construction target for 1977-78, the difficulties and problems being faced by the construction agencies need to be identified and overcome. The progress of implementation of the programme needs strict supervision.

Research on Crop Production

51. During the year 1976-77, efforts were concentrated on developing high yielding, salt tolerant, fertilizer responsive and disease resistant varieties of major crops. Following new high yielding varieties were evolved and released/approved or selected for general cultivation during the year.

Punjab—Rice, Pak. 177; Wheat, Punjab 76, LU 26 and S.A. 75, Sorghum, Pak. SSI; Millet, 18-BY. (all released).

Sind—Rice, IR 156 (selected); Cotton, Kotdiji 68/9 (approved); Barley, Ogalitso (to be released soon); Caster, D.S. 30 (under final trial); Safflower, P.I. 306 and 82 (under final trial).

N.W.F.P.—Cotton, BSI; Sugarcane, C.O. 44/101. (both released).

52. Of legume fodders imported from Australia, the variety 'SIRATRO' gave high yield under rainfed conditions. Steps will be taken to extend its cultivation on a large area during 1977-78. Four Potato varieties AJAX, Red Bad, USA Clone 6987-65. and La-Chipper gave 30 to 40 per cent higher yield than the varieties new being cultivated. An early maturing banana variety 'Whilliam hybrid', which is capable of giving 50 per cent higher yields has been introduced. The Agricultural Research Council has launched a programme for Integrated Pest Management on cotton, paddy, sugarcane and maize. This programme will be extended during 1977-78. Under IRRI/ARC Agricultural Machinery Project, an axial thresher has been developed. The Council arranged for advanced training of 16 scientists abroad during 1976-77. Forty-five scientists will be trained in various disciplines during 1977-78.

53. The Agricultural Research Council will accelerate their cooperative research programmes on (a) Wheat, Barley and triticale (b) Maize, sorghum and Millets (c) Rice (d) Fodder and Forage Crops and (e) oilseeds. A similar cooperative research programme of pulse crops will be taken up. Work on the introduction/promotion of tea, coffee, Jute and other special crops in various ecological zones will continue. Work will be undertaken on construction of Pakistan Agricultural Research Centre, which will focus research on the farming production system of *barani* areas. Research on evaluation of high yielding, early maturing, and disease resistant varieties of wheat, rice, maize, oilseeds, pulses and some other minor crops will continue. Special attention will be paid to work on cotton so as to evolve pest and disease resistant varieties and to accommodate the recent changes in weather conditions. Work will continue to evolve high yielding and frost resistant varieties of sugarcane.

54. A sum of Rs. 61.581 million has been provided for this sub-sector in the ADP 1977-78 against Rs. 54.192 million allocated for 1976-77.

Agricultural Education

55. Work on the establishment of an Agricultural Training Institute in Azad Kashmir will be continued. The institute will finally have facilities for training of twenty students. At present, Azad Kashmir has quotas for training of 10 Field Assistants and 5 graduate students each at Agricultural University, Lyallpur and Agricultural College, Peshawar. Agricultural training and educational programme will be continued in Diamir in the Northern Areas. Scholarships will continue to be awarded to students from Tribal Areas for studies in agriculture.

56. No provision has been made for extension of facilities in agricultural education in Baluchistan. Scholarships will be awarded to students of Malahand Division of NWFP for studies at Agricultural College, Peshawar. Facilities at the Agriculture Training Institute, Peshawar will be further improved and expanded under the IDA-aided Third Education Project. Facilities at the Agricultural Training Institute, Sakrand, Sind will be improved. Work on upgradation of the Agricultural College, Tandojam to Agricultural University will continue. Scholarships will be awarded to students at Agricultural Training Institute, Rahimyar Khan, Punjab. Educational facilities at the existing Agricultural Training Institutes at Rahimyar Khan and Sargodha will be further improved and expanded under the Third Education Project. Library facilities at the Agriculture University, Lyallpur, will be improved where work on establishment of Facilities of Science and Rural Home Economics will be continued.

Agricultural Extension

57. A sum of Rs. 24.47 million has been provided for agricultural extension programme during 1977-78 against Rs. 25.76 million allocated during 1976-77. The agency-wise details are as follows :

Agency	Allocation	
	1976-77	1977-78
Federal	8.000	10.000
Baluchistan	—	—
N.W.F.P.	0.905	1.100
Sind	—	0.500
Punjab	16.854	12.868
	25.759	24.468

58. Programme of maximization of cotton production launched by the Federal Government during 1976-77, will be further expanded to cover larger cotton acreage during 1977-78 and to raise acre-yield of seed cotton by 2.0 mds, over 90,000 acres in Punjab and by 2.5 mds. over 20,000 acres in Sind.

59. Fifteen extension centres were established to strengthen agricultural extension organisation in Azad Kashmir during 1976-77 and 16 additional extension centres will be set-up during 1977-78. The on-going programmes of production of vegetables and potato cultivation in Azad Kashmir will be continued during 1977-78.

60. In NWFP, it is programmed to hold 35 shows and *melas* during 1977-78. Thirty such shows and *melas* were held during 1976-77. Under the *Barani* Agriculture Development Project, it is envisaged to lay out 2,000 demonstration plots and 150 trial plots during 1977-78, against 124 trials plots and 20 research plots laid out during 1976-77 while under the normal activities of the Agriculture Department 4,500 demonstration plots would be laid out during 1977-78 against 4,000 such plots laid out in 1976-77.

61. In addition to strengthening and making the extension service more mobile, programme for development of *barani* agriculture would be continued during the year and a new programme for farmers training would be initiated in the Punjab province. It is envisaged to lay out 18,823 demonstration plots during 1977-78 against 13,445 such plots laid out during 1976-77. In addition 105 shows and *melas* would be held during 1977-78 against 85 *melas* held during 1976-77.

62. The Provincial Governments of the Punjab and Sind have provided a sum of Rs. 0.1 million and Rs. 0.5 million, respectively for formulation of FAO/IBRD Extension and Agriculture Development Projects.

63. Provincial Governments have planned to strengthen the agricultural extension services as indicated below :

(Numbers)

Province	Staff employed during 1976-77			Staff strength proposed for 1977-78		
	EADAS	Agri. Asstts.	Field Asstts.	EADAS	Agri. Asstts.	Field Asstts.
Baluchistan	14	70	339	16	83	389
N.W.F.P.	16	156	612	18	172	622
Sind	12	235	745	13	235	745
Punjab	65	373	2,689	65	385	2,879
Total	107	834	4,385	112	875	4,635

Integrated Rural Development Programme

64. Considerable progress has been made under this programme since it was initiated in 1972, although the pace at which the programme has moved is rather slow. The focus of the programme is the *Markaz* (centre) from where physical facilities such as provision of agricultural inputs including machinery, for marketing and storage and for veterinary services are provided to increase agricultural production in the project areas. The agency-wise position with respect to *Markaz* established by 1976-77 and to be established/continued during 1977-78 is summarized below :

Provision/Region	1976-77	1977-78
Azad Kashmir and Northern Areas	..	..
Baluchistan	11	11
N.W.F.P.	21	21
Sind	33	33
Punjab	32	32
Federal Areas	38	43
Tribal Areas	2	2
	1	1
Total	138	143

65. The slow progress of the programme has resulted from certain conceptual and organizational difficulties. Efforts will be made to sort out the difficulties during 1977-78 with a view mainly to strengthening the functioning of the existing *Marakaz*. It is for this reason that opening of only a few new *Markaz* is envisaged during 1977-78. Effective linkage between local bodies (when established) and IRDP/PWP should be established and training programme of personnel so arranged as to keep pace with the opening of new *Marakaz*.

Agricultural Economics and Statistics

66. Enumeration work and post enumeration work etc. on the National Livestock Census was completed during the year 1976-77. The Census Report will be completed during 1977-78. Preliminary work on the Third Census of Agriculture will be initiated during 1977-78.

Consolidation of Land Holdings

67. Under the scheme for consolidation of land holdings initiated in 1960-61 in Punjab and NWFP, an area of 17.13 million acres was consolidated upto June, 1977. About 0.06 million acres will be consolidated in NWFP during 1977-78. The Punjab Government has transferred the programme to the non-development budget with effect from July, 1977.

Animal Husbandry

68. The long and short term measures already initiated to increase production of milk, meat and eggs will be strengthened. Due attention will be paid to measures which produce quick results. In addition to setting up of some new livestock farms, the programme will cover improvement and expansion of facilities for prevention and control of diseases, opening of new veterinary hospitals/dispensaries and setting up of diagnostic laboratories at strategic places. The details of the programmes for the various administrative units/provinces are described below :—

Milk and Meat Production

69. *Federal*.—Direct breeding facilities were provided in the Federally Administered Tribal Areas through about 80 bulls and 40 rams during 1976-77. The programme for 1977-78 includes continuance of direct breeding services.

70. In Azad Kashmir, 55 cow/buffalo bulls and 110 rams and bucks were maintained under subsidy programme for providing free breeding services to the livestock breeders during 1976-77. The programme for 1977-78 includes continuance of direct breeding facilities.

71. *Provinces*.—In Baluchistan, work on the on-going programmes for range and sheep/goats development will continue. The existing dairy farm at Quetta will be developed into a Dairy Complex for which 102 Freisien cattle including 2 bulls alongwith a dairy plant and equipment etc. were imported from Denmark during 1976-77. In addition, 80 cow bulls and 100 rams were located in the important breeding areas. These bulls and rams will be maintained during 1977-78. Three centres for artificial insemination will be opened and 500 cows will be inseminated during 1977-78 against 2 centres opened and 200 cases inseminated during 1976-77.

72. To increase the potential for milk, meat and wool production in the NWFP, breeding facilities will continue to be provided during 1977-78. About 42 bulls and 100 rams/bucks will be maintained under subsidy programme during 1977-78 against 26 bulls and 100 rams/bucks maintained during 1976-77. In addition, artificial insemination facilities will be provided to 30,000 cows/buffaloes through 10 centres during 1977-78.

73. In Sind, work on the improvement of cattle/buffalo breeds through artificial insemination taken up during 1973-74 will be expanded/improved and about 20,000 cows/she-buffaloes will be inseminated during the year against 1,950 animals inseminated during 1976-77.

74. In the Punjab, a comprehensive programme for large scale production of milk, meat, poultry, butter and forage was taken up in 1973-74. This programme will be expanded during

1977-78. It is proposed to initiate a scheme entitled Punjab " (Sheikhupura) Livestock Project " for milk and beef production. In addition, artificial insemination coverage will be provided to about 90 thousand cows/she-buffaloes from 70 centres during 1977-78. About 69 thousand cases were inseminated in 1976-77 from 60 centres.

Poultry Production

75. *Federal.*—The Demonstration and Research Poultry Farm at Jutial in the Northern Areas was established. The closing stock on this farm on June 30, 1977 was 2,300 layers, 3,000 broilers and 1,800 day old chicks. Another similar poultry farm will be established at Skardu during 1977-78.

76. A scheme entitled " Coordinated National Programme for the development of rural poultry in the Azad Kashmir was initiated during 1976-77. Under this programme three farms will be opened during 1977-78.

77. *Provinces.*—In Baluchistan, about 3.00 million eggs, 20 thousand layers and 18 thousand broilers will be produced at the Government Poultry Farms during 1977-78, against 2.70 million eggs, 13 thousand layers and 7 thousand broilers estimated to have been produced during 1976-77. In addition, it is programmed to open 3 new poultry farms during 1977-78 against 3 such farms opened during 1976-77.

78. About 0.204 million eggs will be produced at Government farms during 1977-78 in NWFP. About 62 thousand eggs were produced in 1976-77.

79. The production of broilers and layers in Sind during 1977-78 is expected at about 6.05 million and 2.59 million, respectively. The corresponding production in 1976-77 was estimated at 4.50 million broilers and 2.08 million layers, respectively.

80. The existing Government poultry farms and demonstration units developed in Punjab would be fully utilised during 1977-78 for increasing supply of hatching eggs and breeding birds to private breeders. The constraints on the growth of poultry industry is high cost of hatching eggs, breeding birds and quality feed. The Punjab Government has started programme for supply of poultry feed at cheap prices by establishing a poultry feed mill. The production targets for layers and broilers for 1977-78 in the Punjab are 1.50 million and 3.0 million birds, respectively. About 1.45 million layers and 2.90 million broilers are estimated to have been produced during 1976-77.

Animal Health (Disease Control)

81. Due emphasis on disease control will continue to be placed during 1977-78 in order to achieve production increases on a short term basis.

82. *Federal.*—The work previously started for improvement of the existing veterinary dispensaries in Baltistan will be completed during 1977-78 while 3 veterinary hospitals and dispensaries will be opened in Ghizer and Gilgit districts.

83. For improving veterinary aid facilities, 8 veterinary dispensaries were opened in the Federally Administered Tribal Areas. The programme for 1977-78 includes enhanced veterinary coverage.

84. The disease control programme in the Azad Kashmir will be improved by opening 4 disease investigation centres and adding over 60 stock assistants.

85. *Provinces.*—The veterinary aid facilities for prevention and control of livestock and poultry diseases in Baluchistan will be improved by opening 5 veterinary dispensaries during 1977-78. Eleven veterinary hospitals and dispensaries were opened during 1976-77. About 7.5 million cases of livestock and poultry will be treated and 6.5 million inoculated/vaccinated during 1977-78 while 6.5 million cases were treated and 6.0 million were inoculated in 1976-77. About 0.2 million sheep doses of sera/vaccine were produced during 1976-77 while 0.3 million doses will be produced during 1977-78.

86. To conserve the existing livestock population of the NWFP, facilities for treatment of animals and birds will be improved by opening 19 veterinary dispensaries and constructing buildings for a dispensary and 2 veterinary centres during 1977-78. Ten veterinary dispensaries were opened and buildings for 7 dispensaries and 10 centres were constructed during 1976-77. The production of sera and vaccine at the Veterinary Research Institute Peshawar will be 4.327 million doses in 1977-78 against 3.772 million doses produced during 1976-77.

87. In Sind, about 1.80 million animals/poultry will be treated and 5.50 million will be inoculated/vaccinated during 1977-78 against 1.67 million animals/poultry birds treated and 4.35 million numbers inoculated/vaccinated in 1976-77. In addition, 3 veterinary mobile units will be organised during the year against one set up during 1976-77. The construction work on veterinary hospital buildings started during 1976-77 will be completed and construction will be started at 4 new sites.

88. Opening of 7 veterinary hospitals/dispensaries and 24 veterinary centres are proposed in Punjab during 1977-78 against 10 veterinary hospitals/dispensaries and 11 veterinary centres opened during 1976-77. About 52.00 million doses of sera and vaccine will be produced during 1977-78 against the estimated production of 50.87 million doses in 1976-77. About 20.00 million cases of diseased livestock and poultry will be treated and 35.00 million will be given preventive inoculation/ vaccination during 1977-78. During the corresponding period in 1976-77, about 18.80 million cases were treated and 32.10 million cases were inoculated.

Education and Training

89. *Federal.*—In Azad Kashmir, 80 stock assistants were trained under the Coordinated National Programme for the development of Rural Poultry while 34 were trained under the general disease control programme. The programme for 1977-78 is to train 63 new stock assistants for providing vaccination facilities for the development of rural poultry.

90. *Provinces.*—In Baluchistan, livestock breeders will be trained to work as veterinary auxiliaries. Funds will be provided for award of 15 scholarships for BVSc/DVM studies during 1977-78, against 9 scholarships provided during 1976-77 in NWFP. In Sind, 30 stock assistants will be trained at the Agricultural Institute, Sakrand during 1977-78.

Range Management

91. Vast tracts of range land lying unproductive, can help raise livestock, if properly managed. Programmes are in progress to develop this resource on systematic basis. In Azad Kashmir, an area of about 2,000 acres was covered by range management activities during 1976-77. Demonstration work on range land development will continue during 1977-78. It is proposed to cover an additional area of 2,500 acres under range management activities during the year.

92. In Sind, range management operations during 1976-77 consisted of re-seeding of 1,140 acres of new area in addition to maintenance of 861 acres of re-seeded area, raising of 1,300 fodder and shrub plants and 481 thousand container plants; establishment of grass nursery in 0.05 acres, range trials over an area of 2 miles and installation of a wind mill. During 1977-78, it is programmed to re-seed an additional area of 1,200 acres in addition to maintenance of existing works. Range trials would continue during the year.

93. In Punjab, work on range management has been taken up on an extensive basis in Cholistan, Thal, D. G. Khan and Pothwar areas. The work during 1976-77 comprised re-seeding and forage range development over 1,750 acres. It is proposed to reseed an additional area of 1,300 acres during 1977-78. Twenty four *tobas* already excavated will be maintained.

94. In NWFP, the area brought under scientific range management during 1976-77 was about 6,154 acres. It is proposed to cover an area of 6,000 acres during 1977-78 in addition to 4,800 acres proposed under watershed management programme in Hazara Division. In Baluchistan survey of forest and range lands potential in the Marri-Bugti areas is likely to be completed during 1976-77.

Forestry

95. Estimated production of industrial and fuel wood in the country from 1971-72 to 1976-77 alongwith average annual production for six years is shown in Table 9.

TABLE 9
Industrial and Fuel Wood Production for 1971-72 to 1976-77

Year	(Million cft)		
	Industrial Wood	Fuel Wood	Total
1971-72	12.8	24.0	36.8
1972-73	15.5	18.0	33.5
1973-74	12.3	18.7	31.0
1974-75	7.8	14.2	22.0
1975-76	8.4	18.6	27.0
1976-77	11.1	22.2	33.3
Average per annum ..	11.3	19.3	30.6

96. It may be seen that the average annual production for the last six years comes to about 30.6 million cft, against the estimated annual requirement of 52 million cft. To help meet the wood deficit, programmes have been underway to accelerate the pace of afforestation and increase the productivity of the existing forests through proper management. Afforestation programme consists of compact afforestation and afforestation along canal, roads and rail-roads. Canal/tubewell irrigation facilities, wherever feasible, are being provided for irrigated plantation. Emphasis has been laid on fast growing tree species such as *Robinia*, poplar, mulberry, eucalyptus etc. Instead of the conventional hard and soft wood tree species. Furthermore, programme with the assistance of World Bank, are under preparation for the Hazara Division of NWFP and Azad Kashmir, which, *inter alia*, envisages improvement in the management of existing forests, introduction of industrial forest plantation and introduction of intensive exploitation of the forests. The area planted in 1976-77 and proposed to be planted during 1977-78 in the four provinces is shown in Table-10.

TABLE 10
Province-wise Achievement and Targets of Afforestation for 1976-77 and 1977-78

Provinces	Compact Plantation			Linear Plantation		
	Target 1976-77	Achievement 1976-77	Target 1977-78	Target 1976-77	Achievement 1976-77	Target 1977-78
	Acre			Avenue Miles		
(i) Baluchistan	220	148	—	38	38	—
(ii) N.W.F.P.	8,105	5,295	15,011	573	375	317
(iii) Sind	2,200	1,860	1,290	—	—	—
(iv) Punjab	19,571	4,430	3,795	2,231	2,240	1,525
Total	30,196	11,733	20,096	2,842	2,653	1,842

97. It may be seen that achievement during 1976-77 under afforestation was only 38% while for linear plantation it came to about 93%. The achievement under afforestation programme was unsatisfactory. Cooperation of the general public for raising and maintenance of new trees and for protecting the existing plantation is essential. Every effort needs to be made to win over the willing cooperation of the masses for the purpose. The question of raising commercial plantations by the industrialists for meeting their requirements of soft wood needs to be given due consideration. During 1977-78, only maintenance of newly planted trees is proposed in Baluchistan under afforestation and linear plantation programmes.

98. In Azad Kashmir, under the scheme "Afforestation of Blank's", about 3,770 acres were declared to be closed. About 8,000 acres were afforested and linear plantation undertaken in about 5 avenue miles. In addition, 2,500 plants were procured and transplanted at Gilgit. It is proposed to declare 3,000 acres to be closed and afforest 8,000 acres during 1977-78.

99. To help meet requirements of planting stock for afforestation, intensive management of forests and grow more tree campaign, forest nurseries were raised over about 1160 acres during 1976-77, of which 50 acres were in Punjab, 156 acres in NWFP, 22 acres in Sind and 38 acres in Baluchistan. In addition to maintenance of the nurseries since established, it is proposed to raise nurseries over 1,256 acres during 1977-78, of which 960 acres will be in Punjab, 228 acres in NWFP, 30 acres in Sind and 38 acres in Baluchistan.

100. Work relating to survey and demarcation of forest area continued in NWFP and about 531,000 acres were demarcated during 1976-77. It is proposed to demarcate an area of 41,000 acres during 1977-78.

101. Sericulture industry has been given due consideration in recent years. In Baluchistan, a scheme for expansion of sericulture is being implemented under which disease free silk seed is being provided to the rearers. Similar projects are underway in NWFP, under which import of exotic silk worm seed, improvement and production of local seed, raising of mulberry nurseries, and training to the personnel and families are proposed. A scheme entitled "Establishment and Maintenance of Five Divisional Sericulture Demonstration Farms" was launched during 1976-77 in Punjab. About 950 thousand green cocoons and 316 thousand dry cocoons are estimated to have been produced. The programme will continue during 1977-78.

102. It is proposed to improve the existing national parks, game sanctuaries and game reserves in all the provinces, Azad Kashmir and Northern Areas during the year.

Watershed Management

103. Watershed Management Project in the Kaghan and Daur Areas in NWFP, which envisages to introduce watershed management practices, on a pilot basis, over an area of about 30,000 acres, was completed in June, 1976. On the basis of the experience gained under the project an expanded scheme, covering whole of the Hazara district was launched in 1976-77 under the NWFP assistance. Physical work carried out comprised afforestation over 3,477 acres, and planting of 192 thousand fruit plants. During 1977-78 it is programmed to afforest 10,800 acres, complete 10% of the building construction work, soil conservation operations in 1,440 acres of cultivated area and planting of 1,40,000 fruit plants. Rehabilitation and watershed management programme was launched in Hazara and Swat district (earthquake affected areas) in 1975-76 which continued during 1976-77 and 1977-78. About 6,800 were afforested and 60 acres of forest/fruit nurseries were raised, and 2.0 lakh plants distributed during 1976-77. Terracing over 2,315 acres and soil conservation measures over 4,345 acres were carried out. It is programmed to afforest 8,000 acres, carry out soil conservation operation over 5,000 acres and terracing over 3,000 acres and distributed 7,000 lakh fruit and other plants.

104. In Azad Kashmir about 1.52 lakh plants and 10 maunds of seed were planted/sown in 8 acres and 237 acres respectively under the watershed management programme during 1976-77. It is proposed to afforest 6,000 acres and carry out soil conservation measures over 2,000 acres in 1977-78.

105. Watershed Management practices continued in the Lethrar Valley, (Punjab) during 1976-77. The physical progress achieved comprised afforestation over 300 acres planting of 58,000 fruit plants and soil conservation work over 930 acres. It is programmed to carry out afforestation over 1,175 acres and anti-erosion work in 2,000 acres during 1977-78.

Fisheries

106. The fisheries development programme endeavours to increase fish production both from the marine and inland waters. The production of fish is expected to increase from 184 thousand metric tons in 1976-77 to about 215 thousand metric tons in 1977-78.
107. Under the Federal Government scheme of Cured Fish Investigation, Junior staff has already been appointed and equipment such as jeep, chemicals and furniture were purchased during 1976-77. Senior technical staff will be appointed during 1977-78.
108. About 50% of construction work on the Karagh trout farm was completed during 1976-77, while land measuring about 1.5 *Kanal* was acquired for the establishment of trout hatchery at Bara in the Northern Areas. Also, equipment and material were purchased for fish disease research and treatment laboratory. About 11,000 brown trout were produced through artificial hatching in Baltistan during 1976-77. The remaining construction work on trout hatchery at Karagh will be completed and a new hatchery will be established in Baltistan during 1977-78.
109. *Baluchistan*.—Layout plans for landing jetty at Sonmiani were prepared during 1977-78 and construction work will start during 1977-78. Preparation of layout plans for a jetty at Pasni remained under progress during 1976-77 and is expected to be completed during 1977-78.
110. *N.W.F.P.*—Under the trout development programme, about 300 thousand eggs of trout were produced and about 87 thousand fries/fingerlings of trout were stocked during 1976-77. Under warm water fisheries programme, about 120 thousand common carp fries were produced and stocked in dams and reservoirs during the year. Land measuring 6.5 *kanals* was purchased for establishment of fish hatchery. In addition, a survey of water bodies in NWFP was undertaken.
111. During 1977-78, emphasis will be on commercial fish farming and utilisation of dams and reservoirs for fish culture. The main activities will, *inter alia*, involve establishment of hatcheries for artificial breeding of fish to improve output and distribution of fish seed. About 770 thousand eggs of trout and about 250 thousand fries of common carp will be produced during 1977-78. About 135 thousand fish fries will be stocked in dams and reservoirs during the year. Land measuring 3 *kanals* will be purchased and 68 fish rearing tanks will be constructed during 1977-78. In addition, 3 *kacha* nursery units will be excavated.
112. *Sind*.—Under the scheme "Carp Fry collection and distribution facilities, a site covering an area of 7 acres for establishment of fish nursery has been acquired in the Sukkur District. Land measuring about 100 acres has been selected for a hatchery at the Kinjhar lake. Site has also been selected by the Qasim Port Authorities for Fish Harbour under the scheme "Designing and Cost Estimation of Fish Harbour and Tuna Complex at Phitti Creek".
113. During 1977-78, land for establishment of nurseries at Jaccobabad and Hyderabad will be acquired and designs and cost estimates will be prepared. Under the scheme "Establishment of Fish Hatchery at Kinjhar lake, the building designs for a hatchery and fish farm will be completed during the year and staff will also be appointed. Work on the scheme "Designing and Cost Estimation of Fish Harbour and Tuna Complex" will be undertaken during 1977-78.
114. *Punjab*.—Work on the development of small dams, reservoirs, lakes waterlogged areas and village ponds etc. was intensified during 1976-77. Apart from improvement in the existing fish hatcheries and nurseries, establishment of two new fish hatcheries and four fish seed nursery units continued during the year. Renovation of 200 village ponds was carried out and fish farms over an area of about 350 acres were established during 1976-77. In addition, abandoned canals covering an area of 230 acres were developed for fish culture.
115. Special emphasis was placed on stock replenishment programme of natural resources and their judicious management and exploitation during 1976-77. About 4 million fish fries were salvaged in the natural waters and 10,000 Chinese grass carp/silver carp were imported from China during 1976-77 for further propagation. About 2.4 million fish were stocked under the extension programme. A training programme was undertaken at the Fisheries Training Institute, Qadirabad for 300 persons during the year.

116. During 1977-78, fish production programmes will be further strengthened and efforts will be made to utilize untapped fish resources in private and public sectors. Work on establishment of fish hatcheries at Chennawan, Mian Channu and Faisalabad will be completed during 1977-78. Fish farms over an area of 300 acres will be established in private sector under a crash programme. Under the village pond development programme, 200 village ponds will be developed for fish culture. In addition, development work over 600 acres of the waterlogged area, 150 acres of small dams, 534 acres of flood channels and abandoned canals will be further intensified for improving fish culture practices.

117. Establishment of 2 modern fish rearing and fish fattening farms will be undertaken, while maintenance of 6 existing farms will continue. A feasibility study of cage culture of indigenous fish varieties for utilization of perennial canals for fish culture will be undertaken. Under the stock replenishment programme of rivers and natural resources, about 4 million fish seed would be salvaged and 3 million fish seed will be stocked during 1977-78.

CHAPTER 5

WATER RESOURCES DEVELOPMENT

An increase in overall water availability was observed in 1976-77. Water availability at farm gate increased from 93.29 MAF in 1975-76 to 94.44 MAF in 1976-77. The proportionate variation from surface and ground water sources was as follows :—

		1975-76	1976-77	% increase
(a) Surface Water (MAF)		63.30	62.21	-1.7
(b) Ground Water (MAF)		29.29	32.23	+7.5
Total (MAF) ..		93.29	94.44	+1.2

2. Decrease in surface water supplies was due to special reasons. The rim station inflows of western rivers during 1976-77 were 12% higher in Kharif as compared to inflows during 1975-76. On the contrary the canal withdrawals in Kharif were substantially lower than 1975-76. This was due to canal closures because of disastrous floods of August 1976. Canal withdrawals during Rabi were however the highest ever in spite of the fact that rim station flows (excluding about 7.5 MAF Tarbela releases) were about 24% less than those of the corresponding season of 1975-76. During Rabi 1976-77 it is estimated that about 38.8 MAF of water was diverted at canal head as against the rim station inflows of about 26 MAF. The excess diversion came from Tarbela releases (7.45 MAF) and partly from unexpected releases made by India in the eastern rivers. The increase in ground water reflects the growth in the number of tubewells, in the public as well as private sector.

3. The annual river inflows at rim station from 1965-66 to 1976-77 are given in Annexure VII which shows that there was an increase of about 5% in the river flows during 1976-77 as compared to the average of last 10 years. Water availability at farm gate since 1965-66 is shown in Annexure VIII. Source-wise water availability during 1976-77 is shown in Annexure IX.

4. Progress in controlling waterlogging and salinity continued. During 1976-77, about one million acres of affected lands were given protection. The areas protected were as follows :

	Acres
(a) Baluchistan	40,000
(b) N.W.F.P.	50,000
(c) Sind	5,00,000
(d) Punjab	4,00,000
Total ..	9,90,000

5. An amount of Rs. 2198.38 million was provided for water resource development programme during 1976-77, which was 1.8 per cent higher than in 1975-76. According to the revised estimates, Rs. 2497.82 million have been utilized against Rs. 2159 million spent in 1975-76. The agency-wise financial details are given in Annexure I. The increase expenditure during 1976-77 was mainly utilized on repair work at Tarbela, accelerated activities under anti-waterlogging and salinity programme, and for quickening the pace of progress on Hub and Khanpur Dams.

DEVELOPMENT SINCE 1970

6. During the period 1970-77, development in the water resources sector took place at a rapid rate. It is estimated that during this period about Rs. 5000 million were spent which excludes

the expenditure on Indus Basin works. Details of expenditure are shown in the paragraphs that follows. On the physical side, water availability at farm gate exhibited an increase from 76.71 MAF in 1970-71 to 94.44 MAF in 1976-77. The increase in water availability was as follows :

	1970-71	1976-77	% increase
Surface water (MAF)	55.91	62.21	-3.7
Ground water (MAF)	20.80	32.23	+31
Total ..	76.71	94.44	+5.9

With the increased water availability, about 4.0 million acres were benefited by supplementary irrigation supplies. In addition, 8.5 million acres were provided protective drainage. The flood protection works damaged during 1973 and 1976 were restored and strengthened.

7. The physical achievements during this period are given in Annexure VI and others summarised below :

Construction of new canals	360 miles
Remodelling of existing canals	1690 miles
Construction of small dams	11 Nos.
Installation of tubewells :—	
(a) Public (SCARPS)	6,154 Nos.
(b) Private	55,909 Nos.
Construction of surface drains	3,910 miles.

8. The investment excluding IBP works, during this period in the water resources sector were distributed into the various sub-sectors as follows :

Survey and investigation	307 million (6%)
Irrigation	1691 million (34%)
Drainage & reclamation	2142 million (43%)
Flood Control	495 million (10%)
Research	45 million (1%)
Miscellaneous	320 million (6%)
Total ..	5,000 million (100%)

REVIEW OF 1976-77

9. During 1976-77, the Water Resources Sector was allocated Rs. 2198 million, which represented an increase of 1.8% over 1975-76. The actual expenditure has been Rs. 2498 million or 15.6% more than 1975-76. The expenditure was thus 114% of the original allocation. The increase during the year was mainly due to larger allocation of funds for restoration of flood damage.

10. The acceleration in water development programmes during 1976-77 is brought out in the following table :—

	1975-76			1976-77		
	Revised Est.			Revised Est.		
— Million rupees —						
Water Development				1108	1422	28.3
Floods				136	430	216
Tarbela IBP				915	646	—29
Total ..				2159	2498	15.7

The increased allocation for water development programmes, went mainly to the SCARPs, drainage and flood control. Also, work was accelerated on Hub and Khanpur Dam and a start was made with water management schemes.

11. A substantial modification of the original programme became necessary as a result of the heavy damage suffered due to floods in 1976. The damage is estimated at Rs. 5400 million. The expenditure involved in reconstruction was Rs. 980 million, of which Rs. 6.1 million was in water sector. The expenditure was met by readjustments within Provincial ADP and supplementary grants by Federal Government (partly financed by IBRD loans). During the year, a decision was taken to federalise the flood protection programme. The details of the new arrangements are given in Annexure XXIV.

12. The amounts allocated to different programmes in 1975-76 and 1976-77 (and percentage) are given below :

	1975-76		1976-77	
	Revised Est.		Revised Est.	
	Amount	% of water sector	Amount	% of water sector
(i) Survey & Investigation	63	3	105	4
(ii) Surface Irrigation (including Hub & Khanpur)	416	19	483	19
(iii) Scarps, Drainage and Reclamation ..	580	27	755	31
(iv) Flood Protection and Reconstruction ..	136	7	430	17
(v) Water Management and Research ..	20	1	33	1
(vi) Miscellaneous	29	1	46	2
(vii) Indus Basin Works	915	42	646	26
Total ..	2159	100	2498	100

13. The allocation agency-wise and programme-wise are as follows :

Sub-sector	Federal	Prov.	Total	%age
1. Survey and Investigation	44	61	105	4
2. Irrigation	267	216	483	19
3. Scarps, Drainage and Reclamation	738	17	755	31
4. Floods	—	430	430	17
5. Research & Water Management	29	4	33	1
6. Miscellaneous	10	36	46	2
7. Indus Basin Works	646	—	646	25
Total	1734	764	2498	100

14. The principal physical targets for 1976-77 compared with estimated achievements are given below :

Irrigation (excluding Hub & Khanpur)	Target	Achievement
1. Construction, remodelling & enlargement of canals (miles)	1007	409
2. Construction & remodelling of structures (Nos.) ..	963	159
3. Hub Dam		
E/Work (MCF)	98.7	N.A.
Concrete (MCF)	4.46	N.A.
Khanpur Dam		
E/Work (MCF)	33.0	N.A.
Concrete (MCF)	1.012	N.A.
4. Private tubewells (Nos).	10,000	6,000
SCARPS & Drains		
5. Public sector tubewells (Nos).	1,500	1,428
6. Drains (Miles)	301	650
7. Area protected (Million)	1	1
8. Earthwork (MCF)	500	2,093
Water Management		
9. Water courses (Nos.)	Nil	18
10. Precision land levelling (acres)	Nil	1,629

20. Repairs of tunnels and stilling basin made sufficient progress to enable the reservoir to be filled in early Rabi. However in February, 1977 the problem of sink holes re-emerged and it was found necessary to dump the water quickly. The reservoir releases are given in Annexure XII. Of the total releases of 7.45 MAF in Rabi 1976, 52% was in February and March, 1977.

21. (b) *Hub and Khanpur*.—The allocation for Hub and Khanpur were increased by 92% during 1976-77 to accelerate the completion of the projects. During the year, Rs. 219 million were spent on the two projects. The physical targets for the year are reported to have been achieved to a substantial extent but details are not available. The Hub Dam is likely to be completed by June, 1979 and Khanpur by June, 1980. A major problem is that arrangements by user agencies for utilization of the water have lagged behind. The work on utilization of water is still in the planning stage and it is possible that utilization of water may be delayed even if the dams are completed on schedule.

22. (c) *New major dams*.—Investigations are continuing on new multipurpose dams. An amount of Rs. 8.5 million was spent for initial work on Kalabagh Dam.

23. *SCARPs and Drainage*.—The programme which has been given the highest priority in the water sector is the anti-waterlogging and salinity programme consisting of SCARPs and drainage projects. During 1976-77, WAPDA had under implementation 32 projects from the Federally financed programme. The expenditure incurred during 1976-77 amounted to Rs. 728.8 million of which 95% was for project implementation and 5% for project preparation. The table below gives the scope of work undertaken and the actual achievements during 1976-77.

	Target of 32 projects	Progress or completion in 1976-77
Area (Acres)	12,933,000	990,000
Tubewells (Nos.)	10,864	1,265
Pumping (MAF)	—	860,00
Drainage (Miles)	7,269	621
Earthwork (MCF)	6,090	335

24. The progress during 1976-77 ranged between 5% and 11% of aggregate project targets and reflects the somewhat extensive basis on which the programme has been undertaken. The details of the programme are given in Annexure XIX. The progress of foreign aided projects has been brought out specifically in Annexure XX.

Research

25. The important projects in the Federal research and data collection programmes are given below :—

Scheme	Scope	Expenditure 1976-77 (Million rupees)
1. Central Monitoring	Monitoring and evaluation of SCARPs.	13.4
2. Mona project	Intensive research on SCARP, water management etc.	6.8
3. Irrigation Research Council	General research projects.	5.28
4. Alluvial channel observation	Canals	3.4
	Total ..	28.88

15. To provide an indication of the rate of progress, a comparison is made below of achievements in 1976-77 with those made during the period 1970—1977 in respect of a few key programmes:

	1970 71 to June 1977		1976-77
	Total	Annual Average	
Tubewells (Nos)			
SCARPs	5,919	846	1,265
Private	55,909	7,987	6,000
Drains (Length miles)			
Area protected against waterlogging (MA)	3,910	560	560
	8.5	1.2	1
Flood control (E/W MCF)	N.A.	N.A.	1,067
Total expenditure (excluding Indus Basin) (Rs. million) ..	5,000	714	1,852

16. A brief review of progress in Federal and Provincial Programmes is given in the subsequent paragraphs :—

Federal

17. On Survey and Investigation during 1976-77 an expenditure of Rs. 25 million was incurred on preparation of the Revised Action Programme which is intended to up-date and modify the long-term programme for water development upto 2000. A separate organisation has been created in WAPDA for this UNDP aided enterprise.

18. Other federal survey and investigation projects are listed below :—

Scheme	Scope	Expenditure in 1976-77 (Rs. Million)
1. Hydrological studies	Continuing activity	6.4
2. Post Tarbela Investigation	Overall Planning of post Tarbela & other scheme	3.6
3. General consultancy	Vetting of projects & Plans.	9.0
4. Schemes for Tribal area Azad Kashmir and Northern Areas.	General Investigation & Project Preparation.	6.8

Irrigation

19. (a) *Tarbela/Indus Basin Works.*—During 1976-77 an amount of Rs. 645 million was spent. A breakdown of the expenditure is given below :

	Rs. Million
1. Main project	
(i) Compensation & Rehabilitation	75.6
(ii) Main Dam	343.8
2. Fifth Tunnel	25.7
3. Repairs	130.0
4. Other IBP works	70.4
Total	645.5

Flood protection

30. The original allocation for flood control was Rs. 132 million for the four Provinces. As a result of the damage caused by heavy floods in the monsoon 1976, the allocation had to be increased to Rs. 430 million. The bulk of the expenditure was incurred on restoring flood damage but in some cases on extension and improvement of the protective bunds was also undertaken. The allocation was used mainly for earthwork. The province wise position is as follows :

Provinces	Amount (Rs. million)	Earthwork
Baluchistan	20.6	103 MCF
N.W.F.P.	22.4	150 MCF.
Sind	223.7	1030 MCF.
Punjab	136.3	883 MCF.

Water Management

31. During the year Sind and Punjab commenced action on water management projects aimed at improvements of 1394 water courses and precision land levelling of 3,94,000 acres. The expenditure incurred was Rs. 1 million in Sind and Rs. 2.84 million in Punjab. Eighteen water courses were improved and 1629 acres levelled.

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32. As a result of resource constraints, the Government was compelled to restrict the size of the public sector development programme in 1977-78 to Rs. 17,000 million which was the same level as in 1976-77. The restricted size of the annual development programme has resulted in a smaller allocation for the water sector. The programme for 1977-78 amounts to Rs. 1957 million, which is 11% less than the original allocation for 1976-77 and 22% less than revised estimates for 1976-77. The reduction in the basic water programmes is not as severe as might appear from these figures. Firstly, the 1976-77 revised estimate included an extraordinary expenditure of Rs. 430 million on flood repairs. Secondly, both in the case of Tarbela as well as Hub/Khanpur the reduced allocations in 1977-78 are in accordance with implementation schedules. The allocation in 1977-78 for the key programme in the water sector, namely Scarps and drainage, have been maintained at previous year's level, while for water management, a substantial increase of 51% has been provided.

33. The allocations by broad categories are analysed in the table below :

	1976-77 (Revised)	1977-78 (Budget)	% + or -
Water development	1422.26	1312.20	-7.7
Flood Protection	430.26	295.28	-31.4
Tarbela/IBP	645.56	350.00	-45.8
Total	2497.82	1957.48	-21.6

34. The basic objectives of the water development strategy, remains unchanged though progress towards meeting the objectives would be slower in 1977-78 due to shortage of resources. The objectives may be briefly recapitulated below :—

(i) A massive assault will be made on the problem of waterlogging and salinity. Schemes for useable ground water areas (amounting to 48% of irrigated area) would be completed within 6 years. Full protection would be afforded to saline areas within a period of 11 years.

(ii) The availability of water would be steadily increased, at approximately 2.3% per annum.

(iii) A substantial beginning would be made with improved water management.

26. It would be noted that nearly 70% of the resources have been concentrated on the problems relating to the anti-waterlogging and salinity programme.

PROVINCIAL PROGRAMMES

Survey and Investigation

27. The principal schemes and the expenditure incurred on them is given below province wise :

	Expenditure in 1976-77
<i>Baluchistan</i>	Rs. Million
Ground water investigation	40.3
<i>N.W.F.P.</i>	
Ground water investigation	1.6
<i>Sind</i>	
Survey of 700 sq. mile of riverain area	} 7.9
Six feasibility studies (including Malir)	
<i>Punjab</i>	
Indus Sailaba area, Sutlej sailaba area, Papin and Pindsabika Dam	10.78

The physical progress is given in Annexure XV to XVIII.

Irrigation

28. Total expenditure incurred by the four Provinces on irrigation amounted to Rs. 215.82 million. The Provincial programme consists largely of improvements of the existing canal systems. The progress on remodelling and construction of irrigation channels, structures and other irrigation works is given in the Annexure XIV. Brief comments on major schemes of each provinces are given below :—

- (i) *Baluchistan*.—The total expenditure was Rs. 36.35 million. The work was concentrated on small dams and some minor works on the Pat feeder canals.
- (ii) *N.W.F.P.*.—An amount of Rs. 53.77 million was spent on extension and remodelling of canals in different parts of the province. As a result, 12604 new acres were provided irrigation and another 1339 acres received supplementary irrigation. Water availability increased by 28,000 acre feet.
- (iii) *Sind*.—The expenditure amounted to Rs. 56.24 million. Work was concentrated on Kotri system, Guddu and K. B. Feeder. Increased water availability has not been reported. Work on Saifullah Magsi Branch was completed.
- (iv) *Punjab*.—The expenditure amounted to Rs. 69.46 million. The principal components of the programme were extension, remodelling and enlargement of canals, totalling 800 miles. The total earthwork amounted to 245 MCF. Work was also continued on small dams. Increased water availability is not known.

Surface Drainage

29. Provision of Rs. 37.467 million was made for surface drainage project, outside the accelerated programme. The details of expenditure incurred and progress made for 1976-77 is given below :

Province	Scope of work	Expenditure incurred	Physical Progress
N.W.F.P.	.. Remodelling open drains	Rs. 1.49 ml.	40 miles/25 sq. mile acre.
Sind	.. Small Surface Drains	Rs. 1.36 ml.	1 MCF.
Punjab	.. Raiwind and Samundri drains	Rs. 14.01 m.	96 MCF/340 structures.

(iv) Phase I of the flood protection programme would be completed very quickly and work commenced on Phase II of the programme.

(v) Backward areas, outside the Indus Basin Irrigation System will receive special attention.

35. A comparison of major targets for 1977-78 with targets in the medium term perspective for 1977-78 is given below :—

	1977-78	1977-83
Area to be protected from waterlogging and salinity (MA) ..	1	11
No. of tubewells :		
(i) Private (Nos.)	5,500	33,000
(ii) SCARP (Nos.)	1,428	9,000
(iii) Public Irrigation (Nos.)	150	900
Length of surface drains (Miles)	358	4,020
Flood Control :		
Earth work (MCF)	944	7,000
Water Management :		
W/c improvement (Nos.)	89	1,500
Land levelling (acres)	25,325	2,24,000

The reasons for slow progress towards medium term targets is mainly the shortage of resources, as already explained.

36. An analysis of the 1977-78 allocations, programme-wise, is given below :—

	(Rs. Million.)		
	1976-77 Revised estimate	1977-78 A.D.P.	% + or —
Survey and Investigations	104.58	121.74	+ 16.4
Irrigation (including Hub and Khanpur)	483.04	350.80	—27.4
Accelerated programme and drainage	755.53	745.18	— 1.4
Research & Water Management	32.72	49.63	+ 51.7
Miscellaneous	46.39	44.97	— 3.1
Sub-total	1,852.26	1,607.48	—13.2
Indus Basin Project	645.56	350.00	—45.8
GRAND TOTAL	2,497.82	1,957.48	—21.6

Reasons for decrease in allocations for Hub, Khanpur and Indus Basin Project have been given earlier. Broadly, survey and investigations, water management and to a lesser extent anti-waterlogging and salinity programmes have been protected while a cut has been applied to other sub-sectors in response to shortage of resources.

37. The allocations, by administrative agencies, are given in Annexure II and summarised below :—

		(Rs. million)
A. Federal Government		
(i) WAPDA	.. .. .	948.40
(ii) Flood Commission	.. .. .	170.00
(iii) Other agencies	.. .. .	50.95
(iv) I.B.P./Tarbela	.. .. .	350.00
	Sub-total ..	1,519.35
B. Provincial Governments		
(i) Baluchistan	.. .. .	78.95
(ii) N.W.F.P.	.. .. .	60.58
(iii) Sind	.. .. .	137.80
(iv) Punjab	.. .. .	160.80
	Sub-total ..	438.13
	GRAND TOTAL ..	1,957.48

38. The reduction in allocations for different agencies reflects the overall decrease in size of water programmes and the priorities between subsectors. The large increase in the Federal programme (outside the WAPDA) is due to the federalization of flood control programme. The reduction in the Provincial programme is partly due to a transfer of provisions relating to flood control to the Federal Flood Commission.

39. The principal physical targets for 1977-78 are given in Annexure XXII. These and some other targets are compared with those given in revised estimates for 1976-77 in the following table :—

	Achievements 1976-77	Targets 1977-78
(a) Area protected from waterlogging and salinity (m.a.)	1	1
(b) No. of tubewells :		
(i) Private	6,000	5,500
(ii) SCARPs	1,428	1,428 (Provisional)
(iii) Other Irrigation	96	107
(c) Length of surface drains (Miles)	792	575
(d) Flood control, Earthwork (MCF)	1,067	945
(e) Water management :		
(i) W/c improved	18	101
(ii) Land levelled	1,629	26,325

40. A detailed description of the anti-waterlogging and salinity programme in 1977-78 would be given in a subsequent section. A broad summary of the targets for 1977-78 compared to 1976-77 is given below :

	1976-77	1977-78
Area Protected (000 acres)	1,000	1,000
Tubewells (Nos.)	1,428	1,428 (Provisional)
Length of surface drain (miles)	621	358

The substantial difference between size of programme under execution and results for 1977-78 is due to the fact that the programme is spread out somewhat thinly. An effort would be made to concentrate the programme in order to get effective results though over a smaller area. In particular, WAPDA will revise targets for new tubewells to ensure that tubewells already installed are energised first before new tubewells are sunk.

FEDERAL PROGRAMME 1977-78

Survey and Investigations

41. During 1977-78, an allocation of Rs. 30 million has been made for substantially completing the master planning activity undertaken by WAPDA under the assistance of UNDP with the IBRD acting as executing agency. This will result in the formulation of Revised Action Plan by WAPDA for the planning, preparation and implementation of irrigation, surface storage and related hydro-electric generation drainage, reclamation and flood protection schemes during the next fifteen years (upto 1990) and for the prospective plan period upto the year 2000.

42. Other federal survey and investigation projects to be undertaken during 1977-78 are listed below :

<i>Scheme</i>	<i>Scope</i>	<i>A.D.P. Allocation (Rs. million)</i>
Surface Hydrology	Continuing activity.	2.0
Planning and Investigation of post Tarbela works.	Overall Planning of post Tarbela and other schemes.	3.0
Survey and Investigation in Tribal areas ..	General Investigation and project preparation.	1.2

Irrigation**A. Tarbela/Indus Basin Works**

43. An Amount of Rs. 350 million has been allocated for Indus Basin Works, details of which are given below :

<i>Item</i>	<i>Allocation (Rs. million)</i>
(a) Tarbela Dam :	
Main Project :	
(i) Dam	69.632
(ii) Re-settlement and compensation ..	70.000
Fifth Tunnel	4.200
Repairs	129.500
Sub-total ..	273.332
(b) Other IBP works	76.668
GRAND TOTAL ..	350.000

45. It will be noticed that nearly 37% is for repairs while the remainder, except for a small amount for the fifth tunnel will, be spent almost equally on the main dam, resettlement and other IBP works. It is expected that Tarbela will be filled to the maximum reservoir level of 1,350 feet for the first time which will enable the full storage of 9.3 MAF of water to be available during Rabi 1977-78.

B. Hub Dam

45. A provision of Rs. 100 million has been made for Hub Dam to enable the major works to be completed by the end of 1978. The spillway and canal are only half completed and the emphasis will be to complete these items. Remaining work on the main dam and saddle embankments (about 18%) is expected to be largely completed by the end of 1978. However due to slow rate of progress of MCPL caused by delayed import of spares and machinery and heavy rains during 1976 and 1977, it appears that the closures of the dam will not occur before June 1979.

C. Khanpur Dam

46. There has been a re-orientation of work at Khanpur Dam, for which Rs. 50 million have been provided during 1977-78 to complete the canal system and the foundation treatment. Work will also be completed on preliminaries, land acquisition and saddle embankments. It is expected that the dam will be completed in June 1980.

SCARPs

47. The general strategy under this programme has been given earlier. With the main objective of utilizing the entire fresh groundwater potential within 6 years, work will be accelerated as far as possible within the resources limitation. With this in view a sum of Rs. 728 million (45.8% of total water sector excluding Indus Basin Works) has been allocated to the accelerated programme for waterlogging and salinity control. Out of this amount Rs. 697 million or 96% will be for project implementation while Rs. 31 million or 4% will be for project planning and preparation. The overall physical targets are shown in Annexure XIX, and include installation of 878 tubewells, energisation of 1,428 tubewells and rehabilitation/replacement of 350 damaged tubewells. As indicated earlier, these are provisional targets and are being reviewed in order to give higher priority to energization of completed tubewells. Excavation of about 238 MCF of earth work is envisaged in the surface drains. It is expected that about one million acres would be given protection during the year. Some of the major projects to be undertaken in each province are listed below :—

- | | | | | | |
|-----------------|----|----|----|----|--|
| (a) Baluchistan | .. | .. | .. | .. | Hairdin Surface Drain. |
| (b) N.W.F.P. | .. | .. | .. | .. | Scarps Mardan, Bannu, Pabbi pilot. |
| (c) Sind | .. | .. | .. | .. | Left bank outfall drain, Khairpur tile, drain, Ghotki FGW project, North Dadu Surface Drain. |
| (d) Punjab | .. | .. | .. | .. | Scarps III (saline zone;,) Panjnad Abbasia, Shahpur, Fordwah Sadiqia. |

Flood Control

48. As mentioned before, the Federal Flood Commission would formulate the implementation strategy and coordinate the implementation of the National flood programme through the provinces. However, till such time as a nation-wide Flood Control Plan is prepared, allocations have been provided for on-going works which will form part of phase I of the Flood Control Plan. A sum of Rs. 170 million has been allocated to the provinces through Federal Flood Commission and a sum of Rs. 125.78 million has been allocated by the provinces from their own ADPs. Details are given in Annexure IV and summarised below :

	(Rs. million)				
	Baluchistan	N.W.F.P.	Sind	Punjab	Total
Federal Programme ..	8.962	13.430	94.017	51.486	167.895
Provincial Programme ..	0.80	8.43	69.70	46.35	125.28
Total ..	9.762	21.86	163.717	97.836	293.175

49. Within the federal programme a sum of Rs. 2.105 million will be utilized for consultancy services. The overall physical targets include about 944 MCF of earth work as shown below :

Provinces	Earth Work, MCF				
Baluchistan	17
N.W.F.P.	8
Sind	151
Punjab	768
Total ..					944

50. Major projects so far identified include strengthening/restoration of bunds in Baluchistan. No projects have been identified by Sind. In the Punjab most of the work will be on strengthening and improvement of existing embankments.

Research

51. The allocations for schemes under the Federal programme are given below :—

<i>Scheme</i>	<i>Allocations</i> (Rs. million)
1. Central Monitoring Organisation	12.0
2. Mona Reclamation Exp. Project	6.0
3. Irrigation Research Council	5.3
4. Alluvial channel observation programme	2.8

52. It will be seen that nearly 44% of the allocation is on problems relating to anti-water-logging and salinity programmes.

Other Federal Programme

53. The allocation to the other federal agencies, excluding WAPDA and the Federal Flood Commission is Rs. 45.9 million as shown below :

<i>Agency</i>	<i>Allocation</i> (Rs. million)
1. FATA Development Corporation	23.438
2. Pakistan Meteorological Deptt.	18.000
3. Survey of Pakistan	1.01
4. Northern Areas	3.399
5. Azad Kashmir	0.103

54. The programme of FATA includes survey and investigation of 60 sq. miles and installation of 150 tubewells in the FATA Region. The Pakistan Meteorological Department will instal weather surveillance radar and read-out station at Sialkot for improving flood forecasting. It will also provide additional meteorological facilities in Northern Region and weather surveillance radar at Lahore airport besides developing river and flood forecasting techniques. The Survey of Pakistan will continue work on multipurpose geodetic surveys. Details are given in Annexure XXIII.

Provincial Programmes

55. (i) *Survey and Investigation.*—The provinces have been allocated Rs. 72.14 million for undertaking the following major schemes :

<i>Province</i>	<i>Allocation</i> (Rs. million)	<i>Targets</i>
Baluchistan :		
Groundwater Investigation.	44.06	Geoph. Survey .. 6,920 sq. miles. Groundwater survey .. 2,000 sq. miles. Recon. survey .. 1,400 sq. miles. Test holes 125
N.W.F.P.		
Sailaba area small dams	1.65	
Sind :		
Survey of riverain areas, canal remodelling investigations etc.	10.93	Recon. survey .. 80 sq. miles. Surface water development schemes .. 5 Nos.
Punjab :		
Survey of river Ravi, Cholistan, new dam sites.	15.5	Rec./Topo survey .. 400 sq. miles

56. (ii) *Irrigation*.—Rs. 173.74 million have been allocated to the four provinces to continue work on canal re-modelling, construction of new channels, structures etc. The allocation for Baluchistan, N.W.F.P., Sind and Punjab are Rs. 22.6 million, Rs. 47.6 million, Rs. 47.58 million and Rs. 55.9 million respectively. The details of work to be undertaken by the provinces are shown below :—

Provinces	New channels (miles)	Channels Remodelled (miles)	Structure remodelled (Nos.)
Baluchistan	—	—	—
N. W. F. P.	60.0	6.0	—
Sind	50.0	100.0	35
Punjab	83.0	123.0	450
Total	193.0	229.0	485

57. (iii) *Drainage and Reclamation*.—In order to improve the surface drainage system constructed by the Provincial Governments, an amount of Rs. 17.18 million has been allocated. (Rs. 1.9 million to N.W.F.P.; Rs. 2.39 million to Sind and Rs. 12.89 million to Punjab). In all about 110 miles of surface drains will be constructed to protect about 70,000 acres of land. In N.W.F.P. drains in Mardan and Peshawar districts will be extended and improved. In Sind work will be initiated on construction of a drain near Jamrao head, and work on on-going schemes will continue. In the Punjab work will continue on Raiwind and Pandoki drains and in the R-Q link, lower Jhelum canal and Thal canal areas.

58. (iv) *Flood Control*.—As mentioned earlier, the provinces have allocated funds for continuing the on-going flood control works. In all about 944 MCF of earth work will be done as detailed below :—

Province	Strengthening extension of bund (MCF)	Stone pitching (MCF)
Baluchistan	17	—
N.W.F.P.	8	—
Sind	151	2
Punjab	768	—
Total	944	2

59. (v) *Water Management*.—An amount of Rs. 23.83 million has been provided for on-farm water management programme. Under this US AID assisted programme, it is expected that the following works will be undertaken :—

Province	Watercourse Remodelling (Nos.)	Land Levelling (acres)
Baluchistan	2	5,000
N.W.F.P.	5	1,325
Sind	12	1,000
Punjab	70	18,000
Total	89	25,325

CHAPTER 6

MINERAL DEVELOPMENT

In Pakistan significant deposits of important minerals, have been identified. However, the exploitation of these minerals is very limited. This is clear from the fact that the contribution of minerals to the gross national product is less than one per cent. The efforts at geological mapping and mineral exploration have resulted in the preparation and completion of geological maps to the scale of 1: 50,000 and/or 1" = 1.6 kms., over an area of 44,500 sq. kms, and discovery of large quantities of minerals used for (i) agriculture such as gypsum and rock phosphate ; (ii) metalliferrous industry such as iron ores, chromite, antimony, copper, bauxites ; (iii) glass and ceramic industry such as silica sand, feldspar, nepheline syenite and china clay ; (iv) refractory industry such as high alumina clays, fire clays, chromite, magnesite, dolomite ; (v) construction industry such as cement grade limestone, marble, building stone, gravel, sand and bloated clays ; (vi) natural solid fuels such as coal and radio-active minerals for nuclear energy ; (vii) iron and other metals moulding materials such as natural bonded moulding sands, bentonite, silica sand ; and (viii) precious minerals such as emeralds, ruby and aquamarine. Large quantities of many other minerals such as rock salt, barite, beryl, soapstone, sulphur etc., that are used in chemical and other industries have been established. Preliminary experiments for the upgrading of low-grade ores, for example, porphyry copper, chromite, iron ores, graphite, coal etc., and separation/beneficiation studies of heavy minerals of Indus sand, have also been undertaken for brining the sub-marginal deposits within the economic reach.

2. During the last five years an ambitious minerals exploration and mines development programme was launched for setting up industries based upon the proven mineral reserves, to find new deposits based on the knowledge of the geological environment and to bring the low grade ores to the consumer's specifications through technological studies. To provide an adequate institutional frame work for the development of this sector, mineral development corporations were set up by the Federal and Provincial Governments. An investment of Rs. 186.8 million was made in this sector during the 1970-75 period which included Rs. 101.8 million in the public sector and Rs. 85.00 million in the private sector.

3. The consumption of minerals is expected to increase sharply during medium term perspective period. The increase in demand will originate mainly from the expansion programme of mineral based industries, recognition of new uses for the available minerals and the export of surpluses. Thus, for example, the proposed expansion in cement production from an estimated 3.1 million tons in 1976-77 to 6.00 million tons by 1982-83 would increase the limestone requirements from 4.2 million tons to 8.00 million tons. The fertilizer demand of rock phosphate will increase from about 61,000 tons in 1976-77 to more than 820,000 tons in 1982-83 and the rock phosphate for the production of phosphatic fertilizer would be supplied from the phosphate deposits of Hazara (NWFP). Similarly the projected use and enormous demand of gypsum as a soil conditioner for offsetting the effects of salinity and alkali in soils is strongly felt and is likely to increase manifold. The setting up of steel industry will generate a demand for large quantities of locally available iron ores, coke, manganese ores, limestone, fluorite, high aluminous clays/bauxite and other minerals. In the non-ferrous metal industries, the mining and processing of copper deposits of Saindak (Baluchistan), partly for import substitution and primarily for export, will be undertaken during medium term perspective Period. Efforts are also Continuing for the extraction of alumina from high aluminous clays/bauxite for the establishment and growth of aluminium industry. In construction industry, use of gypsum boards and blocks holds encouraging future. With the widespread development of glass and ceramic industries, the demand for nepheline syenite as a substitute of feldspar will increase. Finally, an acceleration in the programme for the use of Lakhra Coal for meeting energy requirements, including the generation of electricity will also take place during medium term perspective period.

REVIEW OF 1976-77

Investment

4. Against an allocation of Rs. 140.59 million, actual investment in 1976-77 is likely to be

about Rs. 109.25 million. The details are given in Table I :

TABLE I
ADP Allocations and expenditure in 1976-77

		(Million Rs.)		
		1976-77 ADP Allocations	1976-77 Estimated Expenditure	Percentage Implement- ation
(A) Federal :				
1. Ministry of Petroleum and Natural Resources :				
(a) GSP		10.13	9.50	94
(b) PMDC		51.80	40.00	77
(c) RDC		37.70	19.00	50
2. Production Division :				
— PIDC		15.00	15.00	100
3. Azad Kashmir (AKMDC)				
		0.62	0.61	98
4. State and Frontier Regions Division :				
— FATADC		1.20	2.32	193
Total (Federal) ..		116.45	86.43	74
(B) Provincial :				
1. Baluchistan (BDA)				
		—	—	—
2. N.W.F.P. (SDA)				
		8.94	13.12	146
3. Sind				
		—	—	—
4. Punjab (PUNJMIN)				
		15.20	9.70	64
Total (Provincial) ..		24.14	22.82	95
Total (Federal and Provincial) ..		140.59	109.25	78

The above table shows that PMDC, RDC and PUNJMIN were not able to fully utilize their ADP allocation during 1976-77. The reasons for the shortfalls were the non-availability of technical manpower, procedural bottle-necks in obtaining the mining concession leases and delay in the shipment of machinery. However, the overall implementation in the mineral sector during 1976-77 was fairly satisfactory.

Production

5. Actual figures for the output of various minerals in 1976-77 are not available as yet. The preliminary estimates are given in Table II which indicate an increase in output in some important minerals like Coal, Chromite, Rock Salt, China Clay, Fire Clay, Magnesite etc.

TABLE II
Production Estimates of some Important Minerals 1975-76 and 1976-77

		('000' Tons)		
S. No.	Minerals	1975-76 Actual	1976-77 Estimates	Percentage growth over 1975-76
1.	Coal	1100	1200	9
2.	Rock Salt	419	450	7
3.	Chromite	11	12	9
4.	Silica Sand	37	40	8
5.	Gypsum	429	450	5
6.	Lime Stone	2744	4200	53
7.	Marble	27	30	11
8.	China Clay	0.50	0.7	40
9.	Fire Clay	25	30	20
10.	Fuller's Earth	15	20	33
11.	Magnesite	4	5	25

Source : C.S.O. Bulletins.

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Production

6. The targets of production for some of the major minerals in 1977-78 are give in Table III.

TABLE III
Production Targets for 1977-78

S. No.	Mineral	1976-77 Estimated Production	1977-78 Targets	Percentage growth
1.	Coal	1200	1300	8
2.	Rock Salt	450	500	11
3.	Chromite	12	15	25
4.	Silica Sand	40	50	25
5.	Gypsum	450	550	22
6.	Lime Stone	4200	4400	5
7.	Marble	30	40	33
8.	China Clay	0.7	1	43
9.	Fire Clay	30	35	16
10.	Fuller's Earth	20	25	25
11.	Magnesite	5	6	20

In 1977-78, the emphasis will be on the production of those minerals which have been proven and the completion of underway projects for improving the operation of existing mines by expansion and modernization. Several coal and rock salt mines are being expanded and it is expected that during 1977-78, work on these projects would be completed. This will enable an increase of 8% in coal production and 11% in rock salt production during 1977-78.

Investment

7. In 1977-78, it is proposed to implement an investment programme of Rs. 164.34 million in the Public Sector. This includes an ADP allocation of Rs. 129.44 million and Rs. 10.50 million to be financed from self-financing (PMDC) and bank borrowings of Rs. 24.40 by (PMDC, RDC and PUNJMIN). The details are given in Table IV.

TABLE IV
ADP Allocation 1977-78

	1976-77 Revised Estimate	1977-78 Allocation	Change Percentage
(A) Federal :			
(1) Ministry of Petroleum and Natural Resources :			
(a) GSP	9.50	8.18	(-) 14
(b) PMDC	40.00	56.99	59
(c) RDC	19.00	34.20	80
(2) Production Division Nokhundi Iron Ore Project	15.00	25.00	66
(3) AKMIDC	0.61	1.64	1540
(4) FATADC	2.32	6.65	565
Total (Federal)	86.43	132.66	53
(B) Provincial :			
(a) Baluchistan (BDA)	—	—	—
(b) N.W.F.P. (SDA)	13.12	13.23	0.8
(c) Sind	—	—	—
(d) Punjab (PUNJMIN)	9.70	18.45	90
Total (Provincial)	22.82	31.68	39
Total (Federal and Provincial)	109.25	164.34	50

Note :—Sources of financing :

(i) A.D.P.	129.44
(ii) Bank borrowing	24.40
(a) PMDC	8.40
(b) RDC	6.00
(c) PUNJMIN	10.00
(iii) Self-financing : (PMDC)	10.50

In 1977-78, an increase of about 50% is being provided over the estimated investment in 1976-77. However, the level of investment is still small. Much larger investments would be required to exploit the potential of the mineral sector. Investment in this sector will increase when the mining operations of new minerals such as chromite, copper and iron ore are undertaken. Investment in the private sector in 1976-77 was Rs. 36.5 million up from Rs. 33.2 million in 1975-76. This investment was primarily in coal and marble. In 1977-78, private investment in minerals is projected at Rs. 40.0 million. To increase private investment in this sector it is proposed to improve procedures of obtaining mining leases and to encourage financial institutions to take a greater interest in this sector.

MAJOR PROJECTS IN THE FEDERAL PROGRAMME

I. Geological Survey of Pakistan

8. The main function of the GSP is to study the geology of the whole country and explore its mineral resources on the surface as well as down to mineable depth by geological, geochemical, geophysical and drilling methods. The area so far covered by reconnaissance geological mapping is about 512,000 sq. kms., whereas the total area of Pakistan is 785,774 sq. kms. The G.S.P. has carried out regional geological mapping on 1:50,000 and or 1" = 1.6 km scale over an area of 1,13,920 sq. kms. The regional break up of the geological mapping coverage is as follows: Baluchistan 26,240 sq. kms, N.W.F.P., 28,160 sq. kms, Sind 17,280 sq. kms, Punjab 39,680 sq. kms and Azad Kashmir and Northern areas 2,560 sq. kms. Due to this geological mapping, significant mineral reserves have been established. Mineralized areas or belts known as Mineral Districts or Mineral Regions have been delineated. In the ADP for 1977-78, a sum of Rs. 8.18 million has been provided for three exploration projects, namely, the Chagai Mineral District Exploration Project; Lasbela-Khuzdar Mineral Exploration Project; Aeromagnetic survey, and follow up ground investigations in various districts of Baluchistan.

9. (I) *Mineral Exploration in Chagai Mineral District, Baluchistan.*—The Geological Survey of Pakistan has a scheme under implementation, which envisages detailed geological mapping, geophysical and geochemical surveys in the whole region of Chagai District. The total cost of the scheme is Rs. 34.136 million with a foreign exchange component of Rs. 12.130 million. Expenditure up to the end of 1976-77 would be Rs. 6.00 million. An allocation of Rs. 6.00 million has been made in the ADP 1977-78 for implementation of this scheme. The scheme is expected to be completed in June 1979. During 1976-77, an area of about 1,600 sq. kms., was covered by regional geological mapping in the central and western part of Chagai district and 3,200 sq. kms, was covered by regional mineral exploration. About 4,000 sq. kms, area was covered by regional gravity and magnetic surveys. Regional studies have helped in delineating a few encouraging indications of copper and associated mineralization. Non-availability of technical staff is seriously affecting the progress of the project. The physical targets for 1977-78 are: (i) Regional geological mapping and geophysical surveys in an area of about 5,000 sq. kms. (ii) Geochemical reconnaissance in an area of about 3,000 sq. kms. (iii) Detailed geological mapping, geochemical surveys and geophysical investigations in an area of about 1,000 sq. kms. (iv) Completion of preliminary metallogenic studies of the Chagai Massif and the Ras-Koh Range. (v) Exploration of known mineral showings with particular emphasis on iron, copper and other base metal occurrences. (iv) Test drilling to supplement surface studies in parts of main mineralized areas.

10. (II) *Mineral Exploration in Lasbela/Khuzdar Region Baluchistan.*—The Geological Survey of Pakistan has a scheme under implementation which envisages detailed geological mapping of 17,920 sq. kms, geophysical survey and geochemical study in the whole region of Lasbela/Khuzdar mineral district covering an area of about 20,480 sq. kms, followed by trenching, pitting and test drilling at appropriate places. The total cost of the scheme is estimated at Rs. 14.00 million including a foreign exchange component of Rs. 4.770 million. An amount of Rs. 1.5 million was allocated in the ADP 1976-77. Against this expenditure incurred during the same period amounts to Rs. 1.50 million. An allocation of Rs. 1.18 million has been made in the ADP for 1977-78. The scheme is scheduled to be completed in June, 1978. During 1976-77, an area of about 1,200 sq. km, was covered by regional geological mapping in the southern part of Lasbela district and about 3,300 sq. kms, have been covered by regional gravity and magnetic surveys. The scope and magnitude of field work was constrained by the shortage of technical staff and restriction in the movement of field parties in the project areas. The physical targets envisaged to be achieved during 1977-78 are: (i) Detailed geological, geophysical and geochemical studies in an area of 500 sq. kms. This may also include some drilling; (ii) Publication of geological and geophysical maps and reports on the already covered areas.

11. (III) *Aeromagnetic Survey in various Districts of Baluchistan and Follow up Ground Investigations*.—The total cost of the scheme is Rs. 11.98 million including a foreign exchange component of Rs. 10.00 million. Expenditure up to the end of 1976-77 amounts to Rs. 2.00 million. The allocation for 1977-78 is Rs. 1.00 million. The scheme is scheduled to be completed in 1978. Partial survey was completed with Canadian assistance. The follow up ground investigation programme, planned to be taken up during 1977-78, depends upon the results of aeromagnetic data likely to be received from Canada sometimes in September, 1977.

II. Pakistan Mineral Development Corporation :

12. Total investment programme of PMDC during 1977-78 is Rs. 56.99 million. PMDC will be implementing twelve schemes for the exploration of minerals, two schemes for the development of Salt and Coal mines and two schemes for the establishment of Mineral Testing Laboratory and Lapidary Centre for the cutting and polishing of gemstones. The major schemes to be implemented during 1977-78 by PMDC are given below :—

- (i) *Feasibility Study of Lakhra Coal Fields, Sind*.—During 1976-77 and expenditure of Rs. 1.2 million was incurred on this scheme. A topogeological map covering an area of 25.35 sq. kms, was completed and two holes were drilled to a total depth of 502 metres. The samples collected from the cores and the existing coal mines gave an average chemical composition as 22–40% fixed carbon, 29–49% volatile matter, 5–11% total sulphur and 14–46% ash content. As a result of these investigations, 60 million tons of coal have been proved at Lakhra (Sind) that would be sufficient to sustain the proposed coal based power plant at Jamshoro for more than 60 years. Drilling operations are continuing for establishing more coal reserves. The physical targets for 1977-78 include drilling of 44 more bore holes as suggested by CIDA experts and geological mapping of the remaining parts of the un-mapped areas. An allocation of Rs. 0.50 million has been made for this scheme in the 1977-78 ADP.
- (ii) *Exploration of Chromite Deposits of Hari-Chand, Malakand Division, NWFP*.—Topogeological mapping to the scale of 1 : 600, chemical and mineralogical analysis of the samples collected from prospecting pits and trenches from the project area and the construction of approach roads was completed during 1976-77. More than 100 samples of chromite ore were analysed that gave an average analysis as 12–40% chromium oxide, 12–18% iron oxide, 10–40% silica 10–25% aluminium oxide, 4–6% magnesium oxide and 2–9% loss on ignition. This low grade chromite ore, if proved in sufficient quantities will have to be upgraded to make it a marketable product. More field and laboratory work is in progress for the assessment of these chromite reserves. The physical targets to be achieved during 1977-78 are : (i) drivage of 12 adits of 15 to 31 metres length to study the underground behaviour of mineralisation. This would give a composite drivage of about 2286 metres ; (ii) 1066 metres drilling in the economic chromite bearing lenses for proving the reserves ; (iii) sampling from the drifts and drill cores ; (iv) chemical and mineralogical analysis and ore beneficiation tests and preparation of a report on the results of the exploration. If the results are favourable, a mining scheme of this project area would be prepared. An allocation of Rs. 4.50 million has been made for this project in 1977-78.
- (iii) *Exploration and Feasibility Study of China-Clay in Nagar Parkar, Sind*.—An expenditure of Rs. 0.32 million was incurred on this scheme in 1976-77. Topogeological mapping over an area of 12 sq. kms., to the scale of 1 : 10,000 was completed. About 80 pits and trenches were dug for the collection of samples. The representative samples so collected gave an average chemical composition as 13–34% aluminium oxide, 18–65% silica oxide, 6–9% iron oxide, 0.4–1% titanium oxide, 1–4% calcium oxide, 0.5–4% magnesium oxide, 1–10% loss on ignition. The assessment of China clay reserves is under geological investigation. The physical targets for the year 1977-78 are : (i) topogeological mapping of the entire China clay bearing area ; (ii) pitting/trenching at about 150 points and physical/chemical and beneficiation tests of the representative samples. For this purpose an allocation of Rs. 0.286 million has been made in the A.D.P. 1977-78.
- (iv) *Exploration of Pir Jharian coal field Punjab*.—To meet the increasing demand of coal, exploration work on systematic and scientific lines is under way in Pir Jharian, Theam district. A drift of 350 metres, out of the expected length of 374 metres for touching

the coal seam, has been driven. Pir Jihanian coal field, if proved, will enable coal production to be increased substantially. An expenditure of Rs. 1.068 million was incurred on this project in 1976-77.

- (v) *Development of Rock Salt Mines, Punjab.*—The capital cost of this project is Rs. 19.89 million. It is proposed to increase in the production of salt from the existing level of 0.308 million tons to 0.540 million tons per annum when the scheme is completed 1977-78. Orders have been placed for the purchase of machinery, required for increasing the production and to improve the haulage, loading and ventilation system. In Khewra Salt Mines, a ventilation tunnel has been advanced upto 60 metres and the various inclines have been driven at suitable gradients for the haulage of salt from the various underground levels. The civil works for the construction of platform needed for the loading of salt in the railway wagons are under way in Warcha Salt Mines. Work of similar nature is in progress in Kalabagh Salt Mines. Exploratory-cum-development work in Jutana and Goliwali areas for the opening up of new salt mines is also in progress. In Jutana area, two development tunnels of 2 × 2.4 metres dimensions have been driven to a total distance of 17 metres. Geological work is in progress in Goliwali area. An allocation of Rs. 9.89 million has been made for this scheme in ADP 1977-78.
- (vi) *Development of Gullakhel/Makarwal Collieries, Punjab.*—The capital cost of the project is Rs. 44.64 million and it will yield an additional production of 1,40,000 tons of coal per annum when completed in 1977-78. The machinery required for increasing the coal production has arrived from abroad and is being installed. Regarding developmental work, the total drive made in 1976-77 in the country rock is 1173 metres, in coal is 1,865 metres and in coal plus country rock is 2446 metres. The progress of this project is slow as compared to the original targets but it is expected to be completed on schedule. An allocation of Rs. 10.00 million has been made in the A.D.P. 1977-78.

III. Resource Development Corporation :

13. *(I) Saindak Copper Project, Baluchistan.*—Phase-I of the investigation for copper in Saindak area (Baluchistan) cost Rs. 60.00 million. During this phase, topogeological mapping of copper mineralization area to the scale of 1 : 2000, core drilling of 30998 metres, quantitative chemical estimates of 101,322 elements of the core and near surface samples, successful beneficiation tests on bench scale and preliminary rock mechanic studies for mine design were completed. This has resulted in the assessment of 276 million tons of mineable copper ore reserves in the three ore bodies of which 63 and 84 million tons ore contains gold and molybdenum respectively in significant values. In order to obtain precise information on the percentage recovery of valuable minerals in Saindak copper ores, the engineering properties of rocks for mine design and the water and power requirements for concentrating this ore, the consultants of RDC, have recommended the following additional work to be completed in 1977-78 ; (i) Driving two inclines upto commulative dip depth of 600 metres. (ii) Pilot Plant Studies of Saindak ores, about 10,000—15,000 tons of ore will be used for these studies. To complete this work an allocation of Rs. 34.20 million including an FEC Rs. 14.86 million has been made in the ADP 1977-78 for this project.

14. To process the copper ore, large quantities of suitable water are required for the flotation tank to prepare the concentrates from the pulverized ore. Diesel engines, if installed for power generation, would also require treated water of good quality for cooling engine jackets etc. There is no surface water source available near Saindak or even within 160 km, of it. Investigations have been carried out for locating and assessing the subsoil water resources by gravity, electrical resistivity and drilling methods in/around Hamoon-e-Maskhel, Tahlab and Taftan areas (Baluchistan). Seventeen drill wells have been drilled upto a cumulative depth of 2940 metres. An allocation of Rs. 7.70 million was made for this purpose in ADP 1976-77. An allocation of Rs. 1.50 million has been made in the ADP 1977-78 to continue to explore the water potential in the area.

IV. Pakistan Industrial Development Corporation :

15. *Iron Ore Exploration Work, Chigendik/Pachinkoh, Nokkundi, Baluchistan.*—Evaluation of geological, geophysical, drilling, test mining and laboratory studies have confirmed the establishment of 10 million tons of iron ores in Pachinkoh and Chigendik Nokkundi (Baluchistan) with an average iron content of 45% to 50%. The chances of proving 5 million tons of more reserves are very bright. There is a possibility that the proved reserves may be enhanced by 10 million tons if the geophysical anomalies prove productive. PIDC is carrying out a study on the various processes

of iron and steel making with an out put of 100,000 to 400,000 tons per year. Studies regarding the source of water supply for the ore-dressing plant and the steel mill, transportation requirements, fuel and power facilities etc., are also under way. The Government of People's Republic of China is giving technical and financial assistance for this project. The physical target for 1977-78 are ; (i) exploration work at Pachinkoh (ii) survey and investigation for mine and mill (iii) Development of mine at Chigendik. An allocation of Rs. 25.00 million including an FEC of Rs. 5.00 million has been made in the ADP 1977-78 for this project.

V. Azad Kashmir Mineral and Industrial Development Corporation

16. AKMIDC was allocated Rs. 0.6 million in the ADP 1976-77. The expected expenditure during 1976-77 will be Rs. 0.10 million. A provision of Rs. 1.64 million has been made in the ADP 1977-78 for this Corporation to continue developing the mineral sector. Major projects of the Corporation are exploration and development of graphite deposits in collaboration with PMDC, and the geological survey and mineral investigation in Poonch and Kotli districts.

VI. Federally Administered Tribal Areas Development Corporation

17. The Federally Administered Tribal Areas Development Corporation is entrusted with the assignment of exploration and development of mineral resources in these tribal areas. An amount of Rs. 1.2 million was allocated in the ADP 1976-77 for the mineral development in FATA. Against this the expenditure incurred up to June, 1977 amounts to Rs. 1.00 million. Major projects of this corporation are marble industry at Painsi Lalma (Khyber Agency) and mining of soapstone in Khurram Agency. An allocation of Rs. 6.65 million including an FEC of Rs. 4.265 million has been made in the ADP 1977-78.

MAJOR PROJECTS IN THE PROVINCIAL PROGRAMME

VII. Baluchistan Development Authority

18. *Sulphur Refining Plant.*—BDA in collaboration with PMDC has planned to set up a sulphur refining plant with an initial capacity of 3000 tons per annum. The plant would be based on raw sulphur to be obtained from Kohi-i-Sultan area (Baluchistan). PMDC is carrying out topogeological and sub-surface investigation work around Miri Top, Nawar and Lalgai area for the assessment of mineable sulphur reserves. BDA would start work for the establishment of the sulphur refining plant after obtaining geological report from PMDC.

19. *Bolan Mining Enterprises.*—Bolan mining enterprises (BME) is a joint venture between the Government of Baluchistan and Pakistan Petroleum Limited on 50 : 50 basis for the mining and processing of baryte deposits of Khuzdar (Baluchistan). The proved reserves of baryte containing an average barium sulphate 91.7% in the leased area of 1.3 sq. kms, are 1.5 million tons. A grinding mill consisting of two Raymond pulverizing units has gone into commercial production from June, 1976. The annual capacity of the mill is 30,000 tons and it is programmed to increase its production to 70,000 tons within the next five years. The reserves of barytes are sufficient for 30 years at the average rate of production of 50,000 tons/annum. The market of ground baryte is mainly in the Middle East Countries (Saudi Arabia, Iraq, Iran, U.A.E.) and Bangladesh. BME is also supplying barytes for the oil well drilling activities in Pakistan.

VIII. Sarhad Development Authority

20. An amount of Rs. 8.94 million was allocated to SDA for the development of minerals in the ADP 1976-77. It is expected that actual expenditure upto June, 1977 would be around Rs. 13.12 million. An allocation of Rs. 13.23 million has been made for this Corporation in the ADP 1977-78. The details are presented below :

21. (i) *Chitral Mineral Exploration.*—The cost of this exploration project is Rs. 16.90 million including FEC of Rs. 8.31 million. It is expected that expenditure upto June, 1977 would be around Rs. 2.90 million. The work on this project has been delayed. However, basic stores and essential equipment has been collected and stored in Chitral. The consultants to the project hope to complete their field work and submit a detailed feasibility report during 1978.

22. (ii) *Hazara Mineral Exploration*.—This scheme is being implemented in two parts simultaneously. One part is the proving of rock phosphate reserves in Hazara. This is being done in association with British Consultants over an area of 153.60 sq. kms. The report on this phase is expected in October 1977. The other part of the scheme relates to the mining of proven reserves in the Kakul—Mirpur area. The objective of this scheme is to meet the total phosphate rock requirement of the SSP factories of the NFC at Lyallpur and Jaranwala. The total annual requirement is about 61,000 tons. SDA plans to produce phosphate rock from the Mirpur—Kakul mines at the rate of 120 tons per day. Present production at the mines is about 600 tons per month. Necessary equipment for the development of the mines has been imported and is now being installed. Development work at the mine is progressing rapidly and the target of production of 120 tons per day of phosphate rock is expected to be achieved during 1977. An allocation of Rs. 0.328 million has been made for this project in the ADP 1977-78.

23. (iii) *Swat Emerald Mines*.—The cost of this scheme is estimated at Rs. 4.858 million. The expenditure incurred till June 1977 was Rs. 4.2 million. An allocation of Rs. 3.70 million has been made for the project in the ADP 1977-78. The aim for 1977-78 was to continue with the exploration *cum* development work.

IX. Punjab Mineral Development Corporation

24. The Corporation has been allocated a sum of Rs. 18.45 million in the ADP for 1977-78. During the year 1976-77, certain objectives have been achieved by spending Rs. 9.70 million on its seven on going mineral exploration and development schemes. Achievements and future programmes of some of the major schemes are discussed below :

- (i) *Detailed Investigations and Preparation of Feasibility Study or Economic Minerals in Mianwali District*—The total area under investigation is 460.8 sq. kms. reconnaissance geological survey, and topogeological mapping over an area of 153.6 sq. kms, and 20.0 sq. kms, respectively has been completed and 300 samples of limestone, fireclay, silica sand, and gypsum have been collected and analysed. Upon completion of exploratory work, this project is expected to prove enough reserves of clays, silicas and gypsum and limestone for mining and their utilization in industries based on these minerals. An allocation of Rs. 1 million is made for this project in the ADP 1977-78.
- (ii) *Development of Dolomite Quarry at Paikhel, Mianwali District*.—12.57 million tons of good quality dolomite of an average chemical composition, (Calcium Oxide 27.32%, Magnesium Oxide 18.64%, loss on ignition 45.92%, Silicon dioxide 1.33%, Sodium Oxide+Potassium Oxide 1.34%) has been proved. Access roads to the quarry site, and the purchase of machinery has been completed for the mining of dolomite. An allocation of Rs. 2.99 million has been made for this project in ADP 1977-78. When this project is completed in 1977 it will have an annual output of 40,000 tons of dolomite.

25. With a view to achieving the physical targets, both for medium term perspective period and the year 1977-78, several measures are required for solving the problems constraining the development of the mineral industry. A major difficulty in the planning for mineral development is the nonavailability of relevant mineral statistical data. Other problems include the shortage of qualified and trained manpower, cumbersome procedures for obtaining prospecting licenses and mining leases, lack of inland communications, shortage of railway wagons etc. Several remedial measures are being taken for alleviating these problems. For example, a mineral statistical programme is being proposed for the collection, consolidation and publication of all the aspects of mineral statistics. Efforts will be made to overcome the shortage of geo-scientists and technical manpower by enlarging the scope of education and training facilities and to retain the services of high quality geologists, mining engineers and metallurgists in the industry. Proposals for making the mineral concession rules less cumbersome, simple, speedy and development oriented are underway. Efforts are also being made to acquire much needed mining equipment and to ensure its efficient utilization.

CHAPTER 7

INDUSTRY

Production in large scale industry increased at an average rate of 2.6 per cent per annum during 1970—77. This rate is substantially lower than the growth achieved in the previous plan periods. Three important reasons for the lower growth rates were : (i) investment was increasingly directed towards longer gestation projects which have yet to add to production ; (ii) recovery from the recent international recession has been moving slowly particularly in textiles where demand continues to remain depressed, affecting production not only in the biggest industry in Pakistan but also depressing production in related industries, and (iii) a large number of work days lost due to political unrest during the second half of 1976-77. The growth rates during this period are summarised below :—

	<i>Annual rate of growth (%)</i>
Second Plan (1960—65)	16.8
Third Plan (1965—70)	9.9
1970—77	2.6

2. The major increase in output during 1970—77 was in vegetable ghee, sugar and fertilizers. Vegetable ghee production, sustained by liberal imports of edible oil, increased by 164 per cent. Fertilizer production increased from 133 thousand nutrient metric tons in 1969-70 to 326 thousand nutrient metric tons in 1976-77. The higher output was due to new capacity as well as an impressive increase in capacity utilization. In sugar, average annual production during 1970—77 was about 64 per cent higher than average production of 332 thousand metric tons during the Third Plan. Production of cement increased by about 18 per cent and of M. S. Products by 34 per cent. The output of other major industries increased during the period 1970—77 but at a slower rate than the average. In case of steel and engineering industries, the percentage of capacity utilization showed some improvement. The output in small scale industry increased at a much more rapid rate than in large scale industry but the extent of increase is not fully documented.

REVIEW OF 1976-77

Production

3. In the Annual Plan 1976-77 a growth rate of 10.3 per cent was projected for the large scale manufacturing sector. The major contribution to growth was expected from vegetable ghee, cotton textiles, paper and board and cigarettes. While the production of vegetable ghee and paper and board increased in line with the projections, production of cotton textiles fell drastically. As a result, industrial production as a whole declined by 3.1 per cent. The decline would have been even greater if sugar production had not exceeded the Plan target by a substantial amount. The output of major industries in 1976-77 is shown in Table I. The details are given in Annexure I.

TABLE I
Output of Major Industries

Industry	Unit	Actual 1975-76	Revised Estimates 1976-77	Percentage change
Sugar	000 metric tons.	623	736	18.1
Cotton yarn	Million Kilo-gram.	350	286	(-)18.3
Cotton cloth	Million sq. metres.	520	451	(-)13.2
Vegetable Ghee	000 metric tons.	277	328	18.4
Paper & Board	000 metric tons.	42	66	57.1
Cement	000 metric tons.	3168	3121	(-)1.5
Fertilizers	000 nutrient metric tons.	332	326	(-)1.8

4. The level of production in different industries is a function of the installed capacity, the availability of raw materials and the demand for the output. In 1976-77, no major addition of new capacity was made except for the expansion of the National Refinery. This led to an increase of 7.1 per cent in the production of petroleum products in 1976-77.

5. In 1976-77 shortage of raw material (raw cotton) resulted in a sharp decline in the Production of cotton using industries which account for nearly 30 per cent of the total value added in large scale manufacturing. The fall in cotton production could have affected the output of vegetable ghee industry, but this was prevented by arranging larger imports of edible oil. On the other hand, because of the bumper sugar cane crop, sugar production at 736,000 metric tons in 1976-77 was substantially higher than the plan target of 660,000 metric tons. The relationship between raw material availability and output of these major agro-based industries is shown in the following table :

TABLE 2
Raw Material Availability and Output of Agro-based Industries

Item	Unit	1972-73	1973-74	1974-75	1975-76	1976-77 (Estimated)
I. Production of Sugarcane.	000 Metric tons	19946	23910	21240	25545	28152
—Production of Sugar	Do.	433	607	504	623	736
II. Production of raw cotton	Do.	702	659	635	413	429
—Production of cotton yarn	Million Kilogram	376	380	351	350	286
—Production of cloth	Million. sq. meters.	1044	1357	1500	1439	1207

6. The other major factor affecting production is the demand for the output. In the case of vegetable ghee and sugar, demand for the output is assured. In the case of textiles, however, exports are an important component of total demand. In 1976-77 slackness in international demand continued for our textiles partly due to the low quality of our products. The relationship between production and exports in the textile industry is shown in table 3.

TABLE 3
Production and Exports of Textile Industry

Item	Unit	1972-73	1973-74	1974-75	1975-76	1976-77 (Estimated)
I. (i) Production of cotton yarn	Mill. Kg.	376	380	351	350	286
(ii) Export of cotton yarn	Mill. Kg.	182	98	76	110	65
(iii) % Exported	..	48	26	22	31	23
II. (i) Production of cotton cloth	Mill. sq. meters.	1044	1357	1500	1439	1207
(a) Mill Made cotton cloth	Do.	589	592	556	520	451
(b) Non-Mill cotton cloth	Do.	455	765	944	919	756
(ii) Export of cotton cloth	Do.	516	348	397	464	374
(iii) % exported	..	49	26	26	32	31
III. (i) Export of yarn in the form of yarn and cloth	Mill. Kg.	257	148	133	177	119
(ii) %Exported of yarn production	..	68	39	38	51	42

7. Output in number of industries is either linked to or is affected by the level of production in the textile industry. In 1976-77 the decline in textile production resulted in a decline in the demand, and therefore, in the production of soda ash and caustic soda. On the other hand, as an off-set to the decline in cotton textiles, the production of man made yarn and fabrics of man made yarn increased in 1976-77.

8. Finally, domestic output is affected by the competition from imports. Chemical industries like soda ash and caustic soda and the paper industry were under great pressure from imports, at dumping prices, during the early part of 1976-77. Therefore, these industries were afforded protection through regulation of imports. However, these measures did not have an immediate effect on domestic production as large stocks of imports already existed and had to be disposed off first.

9. In 1976-77 capacity utilization in a number of important industries declined from the previous unsatisfactory level of 1975-76. The major declines were in cotton textiles, caustic soda and soda ash. The capacity utilization in paper board and cigarettes continued at a low level because of demand constraints. Impressive increases in capacity utilization were recorded in the case of vegetable ghee and sugar while the high level of utilization continued in the case of fertilizers and cement. The details of capacity utilization in major industries are given in the following table. While overall capacity utilization in 1976-77 in a number of industries appears satisfactory, several units (new one in particular) are working at barely 50% of rated capacity :

TABLE 4
Capacity Utilization

(Output as % of capacity)

Industry	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77 Revised Estimates
1. Sugar	157	134	77	85	112	77	87	103
2. Vegetable Ghee	69	64	76	83	74	89	80	95
3. Cigarettes	48	48	41	53	51	51	45	47
4. Cotton Yarn	90	92	93	92	90	81	79	65
5. Cotton Cloth (Mill Sector)	78	87	83	81	81	76	71	60
6. Paper	23	34	53	53	48	44	41	48
7. Board	86	92	78	62	72	68	64	66
8. Caustic Soda	102	120	132	120	101	99	78	47
9. Soda Ash	86	99	97	94	103	97	99	63
10. Fertilizers	88	89	65	84	90	96	100	98
11. Cement	85	86	83	83	91	96	92	90

Investment

10. Total investment in industry in 1976-77 is estimated at Rs. 7699 million showing an

increase of 95% over the investment in 1975-76. The major contribution to this increase in investment was in the public sector :—

TABLE 5
Investment in Industry (current Prices)

	1975-76 (Actual)	1976-77		% Increase in 1976-77
		Targets	Estimated Achievements	
Public Sector Investment				
A.D.P.	1239	4777	3897	215
Outside A.D.P.	1146	1705	1952	70
Sub-Total	2385	6482	5849	145
Private Investment				
(a) Large scale manufacturing	1060	1300	1300	23
(b) Small scale manufacturing	510	550	550	8
Sub-Total	1570	1850	1850	18
Total Investment	3955	8332	7699	95

PLAN FOR 1977-78

Production targets

11. Industrial production in large scale manufacturing is projected to increase by 15 per cent in 1977-78. This is a high growth rate but certainly achievable in the context of the extremely low benchmark production of 1976-77 and the existing capacity in industry. The major increases are expected in vegetable ghee, cotton textiles, paper and board, petroleum products and fertilizers. Output of important industrial products in 1976-77 and targets for 1977-78 are shown in the following table. The detailed production targets are given in Annexure II.

TABLE 5
Important Industrial Products in 1976-77 and Targets for 1977-78

Industry	Unit	Revised Estimates	Targets 1977-78	Percentage change
Sugar	000 metric tons	736	762	3.5
Cotton Yarn	Million Kilograms	286	386	35.0
Cotton cloth	Million sq. metres	451	552	22.4
Vegetable Ghee	000 metric tons	328	355	8.2
Paper and Board	000 metric tons	66	92	39.4
Cement	000 metric tons	3121	3150	0.9
Fertilizers	000 nutrient metric tons.	326	350	7.4

12. The output of cotton yarn is projected to increase from 286 million kilograms in 1976-77 to 386 million kilograms in 1977-78, an increase of 35.0 per cent. At the same time, the production

of cloth is expected to increase by 22.4% from 451 million sq. metres in 1976-77 to 552 million sq. metres in 1977-78. The projected target for 1977-78 is well within the capacity available in the country. However, the attainment of this target will not be easy. Cotton availability will improve only in the second quarter of the fiscal year with the arrival of the new cotton crop. Export demand for Pakistani textiles is not going to increase automatically. Therefore, special efforts would be needed to increase production and exports. Needless to say the attainment of these targets will be contingent upon normality in the political situation.

13. The production of paper and board is projected to increase by about 39.4 per cent in 1977-78. The utilization of domestic production capacity is expected to improve as the imported stocks decline and fresh imports are regulated. The production of vegetable ghee is projected to increase by 8.2 per cent from 328 thousand metric tons in 1976-77 to 355 thousand metric tons in 1977-78, which is in line with the demand.

Sugar

14. At present there are 26 sugar factories with an installed cane crushing capacity of 56,000 metric tons per day. In terms of sugar, this gives a capacity of 714,000 metric tons per annum based on a crushing seasons of 150 days and an average recovery of 8.5 per cent. In addition, about 40,640 metric tons of sugar can be produced from the existing beet diffusion capacity. During 1977-78, three new mills at Pattoki, Pasrur and Dadu mills come into partial production and at the rate of 50% of their capacity utilization will give about 35,000 metric tons of sugar. Thus, effective production capacity in 1977-78, will be near 790,000 metric tons of sugar. The actual level of production in 1977-78 will, of course, be determined by the availability of sugar cane. However, the target is being taken as 762,000 metric tons. A major problem faced by this industry is the chronic under utilization of capacity because of the difficulty in arranging adequate supplies of sugarcane to the sugar mills. On the demand side the industry is favourably placed.

Vegetable Ghee

15. The installed capacity in the vegetable ghee industry is 345,440 metric tons per annum, including the capacity of vegetable ghee factory, Bara. During 1977-78, two new factories at Dargai and Haripur, each having a capacity of 9144 metric tons, will come into partial production. Thus, the total installed capacity by end of 1978 would be about 364,000 metric tons. It is the policy of the Government to keep this capacity fully supplied with imported and domestic edible oil. The constraint in this sector is not the manufacturing capacity, but the ability of the country to import edible oil. The future of this industry depends on the progress that can be made in increasing production of oil seeds in the country. The target for vegetable ghee production in 1977-78 is 355,000 metric tons.

Cigarettes

16. There are 21 cigarette factories with an approximate three shift capacity of 60 billion cigarettes per annum. Demand in 1977-78 is expected to be around 30 billion cigarettes and this has been taken as the production target for 1977-78. If export demand can be generated, production, could be substantially higher.

Cotton Textiles

17. By the end of 1976-77, the installed capacity in the mill sector was 3.6 million spindles and 29,000 looms. This capacity is expected to increase to about 3.75 million spindles in 1977-78. There will be no increase in looms. Using an annual output rate of 127 kilogram per spindle and 21,740 square metres per loom the installed capacity would be capable of producing over 476.0 million kilograms of yarn and about 630 million square metres of cloth. Due to the weak export demand for out textiles, demand will remain the basic constraint on output. The production targets for 1977-78 of yarn and cloth have been taken at 386 million kilograms and 552 million square metres respectively, after taking into account domestic demand and export targets of 113 million kilograms of yarn and 502 million square metres of cloth. These targets imply a significant growth in output compared to 1976-77 though production would still be below capacity.

Soda Ash

18. Installed capacity in the two factories is about 79,000 metric tons. Production during 1976-77 was about 50,000 metric tons primarily because of competition from cheap imports. The

imports of Soda Ash have been stopped so domestic production can be expected to increase to full utilization of installed capacity. On this basis production target for 1977-78 has been fixed at 80,000 metric tons.

Caustic Soda

19. The installed manufacturing capacity is around 49,000 metric tons. Capacity utilization in 1976-77 was around 47 per cent because of competition from large imports and sluggish domestic demand with the expected large increase in the production of the textile industry, the demand for caustic soda should increase substantially in 1977-78. In view of this, the production target for 1977-78 has been fixed at 41,000 metric tons.

Cement

20. The installed capacity of cement is 3.50 million metric tons which is not expected to increase during 1977-78. In 1976-77 it is estimated that production was around 3.121 million metric tons showing a capacity utilization of 89 per cent. The production target for 1977-78 is 3.55 million metric tons.

Paper and Boards

21. The installed capacity for the manufacture of writing and printing paper is 52,000 metric tons per annum of which 30,480 metric tons is in the paper mill at Charsadda. Due to technical problems and shortage of bagasse in this mill, paper production has fallen far short of capacity. The problem was aggravated by the competition from cheap imports. Imports have now been regulated. The paper production in 1976-77 was around 25,000 metric tons. The target for 1977-78 has been taken as 41,000 metric tons on the assumption that capacity utilization will improve in response to greater demand for the local products. The installed capacity of paper, straw and chip board is 62,000 metric tons per annum. The production in 1976-77 is estimated at around 41,000 metric tons. The targets for 1977-78 envisages an increase in demand resulting in improvement in capacity utilization and a production of 51,000 metric tons.

Fertilizer

22. Top priority is being given to the expansion of the fertilizer industry. Several projects to create the capacity to meet the growing demand for nitrogenous and phosphatic fertilizers are under implementation. The Pak-Arab fertilizer factory is expected to be commissioned in April/May, 1978. It will however, have a real impact on domestic production in 1978-79. The production targets for nitrogenous and phosphatic fertilizers for 1977-78 have been taken at 335,000 metric nutrient tons and 15,000 metric nutrient tons respectively.

Engineering Goods

23. Pakistan possesses a significant nucleus of engineering goods industry both in the public and private sector. The product range in this sector is considerable, with emphasis on light and heavy engineering machine tools, telecommunication equipments, motors, transformers, switch gears, surgical instruments, part of textile, cement and sugar mill machinery, agricultural machinery automotive parts etc. However in 1976-77 sugar machinery of Rs. 119 million was produced by Heavy Mechanical Complex. It is expected that sugar machinery for Rs. 87 million will be manufactured in 1977-78.

24. In view of the wide variety of goods produced by the engineering goods industry, it is difficult to specify production targets separately for these products. The estimated production during 1976-77 was 242,000 metric tons. Against this, the target for 1977-78 is 280,000 metric tons.

Investment Programme

25. Total investment in industry in 1976-77 was Rs. 7699 million. This investment is expected to decrease to Rs. 7510 million in 1977-78. Detailed break up of this investment is given in Table VI Investment in the public sector is programmed to decline from Rs. 5849 million in 1976-77 to Rs. 5610 million in 1977-78. This decrease is a result of the severe resource constraint in 1977-78. However, the investment programme has been framed to fully provide for important on-going projects. Work on some new projects has had to be postponed. Private investment in large scale manufacturing is projected to remain at Rs. 1300 million in 1977-78. Investment in small scale industry is projected to increase from Rs. 550 million in 1976-77 to Rs. 600 million in 1977-78.

TABLE 6

Investment Programme 1977-78		(Rs. Million)
(a) Public Sector :		
(i) Federal ADP Programme	.. .. .	3784.357
(ii) Investment outside ADP (Including Provincial)	.. .. .	1662.032
(iii) Baluchistan ADP	.. .. .	6.972
(iv) NWFP ADP	.. .. .	19.359
(v) Sind ADP	.. .. .	59.445
(vi) Punjab ADP	.. .. .	77.448
	Sub-Total	5609.613
(b) Private Sector :		
(i) Large Scale	.. .. .	1300.000
(ii) Small Scale	.. .. .	600.000
	Sub-Total	1900.000
	Total Investment	7509.613

Public Sector

26. *ADP Investment.*—Most of the ADP investment in 1977-78 is meant for on-going projects. A major portion of this investment is meant for seven projects : Rs. 2000 million for Karachi Steel Mill, Rs. 762 million for Pak-Saudi Fertilizer, Rs. 221 million for Pak-Arab Fertilizer, Rs. 99 million for Hazara Fertilizer Complex (Phase-I), Rs. 137 million for Mustehkam Cement Plant, Rs. 76 million for Javedan Cement Plant and Rs. 53 million for Heavy Foundry and Forge Project. Details of major projects included in the ADP are given subsequently.

27. *Outside ADP Investment.*—In 1976-77 the outside ADP investment of public sector corporations (Federal and Provincial) is expected to be Rs. 1951.502 million. In 1977-78 the investment programme outside ADP is programmed at Rs. 1662.032 million. The details of this investment is presented in the following table :—

TABLE 7

Investment Outside ADP 1977-78

Name of the Corporation	(Rs. Million)				
	Investment in 1977-78		Financed from Loan		Financed from other sources
	Total	F.E.C.	Local	Foreign Exchange	
	4	5	6	7	
1. Karachi Steel Mill	500.00	—	500.00	—	—
2. Pakistan Industrial Dev. Corporation	32.400	—	32.400	—	—
3. National Fertilizer Corp., of Pakistan	330.000	—	330.000	—	—
4. State Cement Corporation of Pakistan	35.000	35.000	—	—	35.000
					(Foreign Equity)
5. State Electrical Corporation	3.000	—	3.000	—	—
6. Textile Machinery Corp.	53.000	33.000	20.000	33.000	—
7. State Petroleum Refining & Petrochemical Corporation	33.000	14.000	19.000	14.000	—
8. Federal Chemical & Ceramics Corporation	112.000	29.000	83.000	29.000	—
9. Federal Light Engineering Corporation	30.500	—	30.500	—	—
10. Ghee Corporation of Pakistan	20.000	—	20.000	—	—
11. A.K.M.I.D.C.	13.800	—	13.800	—	—
Sub-Total (Federal)	1162.700	111.000	1051.700	76.000	35.000

1	2	3	4	5	6	7
12. B.D.A.	—	—	—	—	—
13. S.D.A.	39.500	—	39.500	—	—
14. Sind Sugar Mills Corporation Ltd ..		145.182	63.182	82.000	—	63.182
					(Suppliers credit)	
15. P.I.D.B.	314.65	34.650	280.000	—	34.65
					(Suppliers credit)	
Sub-Total Provincial	..	449.332	97.832	401.500	—	97.832
GRAND TOTAL	..	1662.032	208.832	1453.200	76.000	132.832

Private Sector

28. It is estimated that private investment in large scale manufacturing during 1976-77 was around Rs. 1300 million as against Rs. 1060 million during 1975-76. The following table shows the level of private investment in large and medium scale industries during the last few years :

TABLE 8

Private Industrial Investment

(Current Prices)

Year	Rs. Million
1969-70	1209
1970-71	1224
1971-72	1016
1972-73	763
1973-74	697
1974-75	990
1975-76	1060
1976-77 (Estimated)	1300

29. The above table shows that private investment which amounted to Rs. 1224 million in 1970-71 declined to Rs. 697 million in 1973-74. Since 1973-74, however, it has started picking up and has increased to Rs. 1300 million in 1976-77. Due to price escalation during this period, investment in real terms is still less than the level of 1970-71. However, the decline in the private sector investment has been more than off-set by the sizeable increase in the public sector investment.

30. The position of PICIC and IDBP sanctions and disbursements is as follows :—

TABLE 9

PICIC IDBP Sanctions and Disbursements

(Rs. Million)

Year	Sanctions			Disbursements		
	PICIC	IDBP	TOTAL	PICIC	IDBP	TOTAL
1972-73	64.1	155.0	219.1	277.0	48.5	325.5
1973-74	364.2	87.2	451.4	39.0	62.5	101.5
1974-75	366.4	230.6	497.0	165.0	141.2	306.2
1975-76	246.3	358.1	601.4	349.0	253.0	602.0
1976-77 (Revised)	378.3	131.7	510.0	168.0	65.2	233.2

31. Disbursements of investment funds by PICIC and IDBP declined sharply in 1976-77. This was a result of the economic situation in the country and the liquidity problems being faced by the industry. Sanctions of new investments also declined but the fall was not as steep as in the case of disbursements. This means that with a revival in industrial growth in 1977-78 private investment can increase significantly. Total investment sanctioned by the department of IP & S during July, 1976 to March, 1977 amounted to Rs. 281 million. During the whole of 1976-77, sanctions are estimated at Rs. 374 million as against Rs. 1016 million in 1975-76.

32. A target of Rs. 1300 million for large scale industry has been proposed for 1977-78 on the following grounds :—

- (i) Sanctions awaiting implementation and applications for new business lying with PICIC, IDBP and IP & S ;
- (ii) Outstanding letters of credit with IDBP and PICIC (Annexure-III) ;
- (iii) Expected levels of BMR of existing units, foreign private investment, non-repatriable foreign investment and PAYE investment.

Small Scale Industry

33. The small scale industry is continuing to experience a high growth rate. It has been estimated that investment in small scale industry increased from Rs. 256 million in 1972-73 to Rs. 550 million in 1976-77 with an average growth rate of 21 per cent annum. A target of Rs. 600 million has been fixed for investment in 1977-78.

DETAILS OF MAJOR PROJECTS

Pakistan Industrial Development Corporation

34. *Pak Iran Textile Mills.*—Pakistan Industrial Development Corporation is setting up two textile mills namely Lasbela Textile Mill and Bolan Textile Mill, Baleli. Each Mill has a capacity of 50,000 spindles and 1100 looms. The projects are being set up as joint ventures between Pakistan and Iran. The cost of the two textile mills is estimated at Rs. 670.670 million with a FEC of Rs. 482.20 million. An expenditure of Rs. 613.01 million had been incurred on these mills by the end of 1976-77. All the machinery has been received and over 50 per cent of the civil works have been completed.

35. An amount of Rs. 47.00 million has been allocated for these projects in the ADP 1977-78. In addition Rs. 6.730 million will be borrowed from the banking system. The mills are expected to start trial production during 1977-78.

36. *Shahdadt Textile Mills.*—PIDC is establishing a textile mill at Shahdadt having a capacity of 25,000 spindles and 550 looms with dyeing, printing and finishing facilities. The total cost of the project is estimated at Rs. 168.920 million with a foreign exchange component of Rs. 95.50 million. An expenditure of Rs. 153 million had been incurred upto June, 1977. As regards physical progress, about 90% of the main factory building and 50% of housing colony has been completed. The machinery for the plant has been received and erection has started. Rs. 19.70 million has been allocated for the project in 1977-78. The mill is expected to start trial production in 1977-78.

37. *Dir Forest Industries Complex.*—PIDC is setting up an industries complex based on Dir Forests at an estimated cost of Rs. 244.691 million with a foreign exchange component (FEC) of Rs. 66.284 million. The project envisages processing of 3.5 million CFT of round timber logs annually to produce sawn and seasoned timber, 5 mm thick ply-wood and 19 mm thick chip-board.

38. About 99% of the machinery for the project has been received at site. The scheme has been on-going for a number of years and has not been completed because of difficulties in matters of locating the factory. Work has been taken in hand after the final decision about its location.

39. An expenditure of Rs. 96 million had been incurred on the project by June, 1977 and Rs. 50 million has been allocated for the complex in the A.D.P. 1977-78. Infra-structure facilities for the project will be completed and design drawings for the installation of machinery in the forest will be prepared in 1977-78. The project is scheduled to go into production in 1979-80.

40. *Tarbela Cotton Textile Mill.*—PIDC is setting up a textile mill of 25,000 spindles at Khalabat with the assistance of the Peoples Republic of China. The capital cost of the project is Rs. 51.65 million with FEC of Rs. 22.67 million.

41. The estimated expenditure upto 1976-77 amounts to Rs. 8.73 million. Land for the project has been acquired, boundary wall and designing of factory building has been completed and about 50% of the work relating to technicians hostel and warehouse for machinery storage has been completed. In 1977-78 an allocation of Rs. 27.00 million with a FEC of Rs. 20.00 million has been made. It is expected that the technicians hostel and warehouse for machinery storage will be completed. About 10% of the civil works on main factory building will also be completed and delivery of machinery will commence.

National Fertilizer Corporation of Pakistan

42. *Hazara Fertilizer Complex (Phase I).*—National Fertilizer Corporation of Pakistan is setting up a urea fertilizer plant at Haripur. The Plant is designed to produce 95,700 metric tons of urea containing about 44,000 metric tons of nitrogen. The estimated cost of the project is Rs. 366.44 million with a FEC of Rs. 175,200 million.

43. An expenditure of Rs. 76 million had been incurred upto June, 1977. Regarding physical progress, land has been acquired, soil survey completed and boundary wall constructed. Civil work on housing colony has been completed to the extent of 20%, and orders for import of machinery have been placed.

44. An allocation of Rs. 99 million has been made for this project in 1977-78. It is expected that civil works on housing colony will be completed, and work on main plant building will start in January 1978. Delivery of machinery is also expected to start in the early part of 1977-78.

45. The estimated cost of Phase-II is Rs. 617.539 million with a FEC of Rs. 285.159 million. The plant will produce 334,231 metric tons of UAP per annum.

46. *Pak-Arab Fertilizer Ltd.*—The scheme envisages the expansion of existing NGFF Multan, by the installation of three new plants for the manufacture of 924 metric tons per day Ammonia, 1031 metric tons per day Nitro-phosphate and 1524 metric tons per day Calcium Ammonium Nitrate. The new units are being built around some of the existing facilities of the NGFF Multan and existing urea and ammonium nitrate plants will continue to be used. The capital cost of the project is Rs. 1926.47 million with a FEC of Rs. 1080.47 million. The project is being set up in collaboration with Abu-Dhabi.

47. An expenditure of Rs. 1572 million had been incurred on the project by June 1977. The following physical works have been completed.

(i) Civil work	..	..	..	..	92 per cent.
(ii) Delivery of equipment	..	..	..	..	92 per cent.
(iii) Erection of Power Plant	..	..	..	..	85 per cent.
(iv) Erection of Ammonium Plant off site.	..	..	..	..	68 per cent.
(v) Erection of Nitric Acid Plant	..	..	..	..	40 per cent.
(vi) Erection NP/CAN	..	..	..	..	38 per cent.

48. An amount of Rs. 221 million with a FEC of Rs. 75 million has been allocated for this project in 1977-78. The project is expected to start trial production in April/May 1977-78.

49. *Pak-Saudi Fertilizer Ltd.*—The Corporation is setting up a fertilizer plant at Mirpur Mathelo designed to produce 1760 metric tons of prilled urea a day or 577,000 metric tons of urea per annum. The total cost of the project is Rs. 1912 million with a FEC of Rs. 1376 million.

50. An expenditure of Rs. 920 million had been incurred on the project till June, 1977. As regards physical progress, civil work relating to main plant building and housing colony have been completed to the extent of 41% and 62% respectively. About 60% of the machinery has also been delivered.

51. An allocation of Rs. 762.0 million with FEC of Rs. 520.445 million has been made for this project in 1977-78. It is expected that following physical work will be completed during the year.

(i) Land and Land Development	..	..	100 per cent.
(ii) Communications	..	..	100 per cent.
(iii) Housing Colony	..	..	87 per cent.
(iv) Plant Civil Works	..	..	69 per cent.
(v) Delivery of equipment	..	..	100 per cent
(vi) Erection	..	..	64 per cent.

State Heavy Engineering & Machine Tool Corporation

52. *Heavy Foundry & Forge, Taxila.*—State Heavy Engineering and Machine Tool Corporation is setting up a Heavy Foundry and Forge Project at Taxila at a capital cost of Rs. 616.375 million with a FEC of Rs. 202.247 million. The project envisages the production of following products at full cycle.

(i) Steel Castings	..	..	..	6,600	metric tons.
(ii) Steel Ingots	..	..	..	38,600	metric tons.
(iii) Cast Iron Castings	..	..	..	5,000	metric tons.
(iv) Press forgings of special and alloy steel	..	..	..	4,670	metric tons.
(v) Forged Balls of carbon steel	..	..	..	2,500	metric tons.
(vi) Non Ferrous Castings	..	..	..	80	metric tons.

53. An expenditure of Rs. 475 million had been incurred on the project upto June, 1977. As regards physical progress, about 9% of the factory and 60% of the housing colony have been completed. A provision of Rs. 53,383 million has been made in the ADP 1977-78. The project has already gone into trial production and is expected to start full production in 1977-78.

State Cement Corporation of Pakistan

54. *Mustehkam Expansion Cement Project.*—The State Cement Corporation of Pakistan is establishing a new cement factory with an annual capacity of 0.3 million metric tons at the existing premises of Mustehkam Cement Plant, Hattar. The project would be using dry process of manufacturing and will be based on imported machinery. The total cost of the project is Rs. 310.0 million with a FEC of Rs. 172 million.

55. An expenditure of Rs. 96 million had been incurred on the project upto June, 1977. Regarding physical implementation, soil investigations and civil design work have been completed, orders for local fabrication of machinery have been placed with Heavy Mechanical Complex and about 30% of the imported machinery for the main Plant has arrived.

56. An allocation of Rs. 137 million with a FEC of Rs. 80.0 million has been made for this project in the ADP 1977-78. It is expected that in 1977-78 a major portion of the civil works will be completed, all the machinery for main plant will be received and erection will start. The plant is expected to start trial production in 1978-79.

57. *Javedan (expansion) Cement Project.*—The Corporation is establishing a new cement factory with an annual capacity of 3 lakh metric tons at the existing premises of Javedan Cement Plant, Karachi. The project would be using dry process of manufacturing and is based on imported machinery. The total cost of the project is Rs. 312.0 million with a FEC of Rs. 172.0 million.

58. An expenditure of Rs. 215 million had been incurred on the project upto June, 1977. As regards physical progress, a major portion of civil works on the main building has been completed and 60% of the machinery has arrived. An amount of Rs. 76 million with a FEC of Rs. 30.00 million has been allocated for this project in the ADP 1977-78. It is expected that in 1977-78 civil works on the main plant building will be completed, the machinery for the plant will arrive and a major part of the erection work will be completed. The plant is expected to start trial production in the early part of 1978-79.

59. *Pak-Iran Cement Project.*—The Corporation proposes to set up a 300,000 metric tons cement factory based on the dry process of manufacturing in Baluchistan. The total cost of the project is estimated at Rs. 361.00 million with a FEC of Rs. 282.00 million.

60. An expenditure of Rs. 5.5 million had been incurred on the project upto June 1977, land for the project has been acquired and site investigations have been completed. Arrangements are being made for the supply of water at the site.

61. An allocation of Rs. 50 million with a FEC of Rs. 35.00 million has been made for the project in the ADP 1977-78. It is expected that civil designing will be completed and civil works on main plant building will commence in 1977-78. Orders for the import of machinery will also be placed and about 15% of the machinery will be delivered.

62. *Kohat Cement Project.*—The Corporation proposes to set up a port-land cement factory at Babri Bands, Kohat District with an annual capacity of 0.3 million metric tons. The plant is proposed to be based on dry process of manufacturing. The estimated cost of the project is Rs. 308 million with a FEC of Rs. 230 million.

63. An expenditure of Rs. 38.0 million has been incurred on the project. Regarding physical implementation, land has been acquired and soil investigations have been completed. Orders for import of machinery are being finalised.

64. An amount of Rs. 56 million with a FEC of Rs. 42 million has been allocated for this project in the ADP 1977-78. It is expected that in 1977-78 civil designing will be completed and civil work on main plant building will be started. About 15% of machinery will also be delivered.

65. *Dandot Cement Project.*—The corporation proposes to set up a new cement factory with an annual capacity of 0.3 million metric tons at Dandot. The project would be based on dry process of manufacturing. The estimated cost of the project is Rs. 320 million with a FEC of Rs. 208 million.

66. An amount of Rs. 9 million has been allocated for this project in ADP 1977-78. It is expected that in 1977-78 land will be acquired, soil investigations and civil designing will be completed and work on infrastructure facilities will be started. Orders for plant and machinery will also be placed.

67. *Thatta Cement Project.*—The Corporation proposes to set up a cement plant at Thatta. The plant is designed to produce 330,000 metric tons of cement per annum. The project is based on the dry process of manufacturing. The project is estimated to cost Rs. 334.17 million with a FEC of Rs. 216.00 million.

68. An amount of Rs. 10 million has been allocated for this project in ADP 1977-78. It is expected that in 1977-78 land will be acquired, site investigations and civil designing will be completed and work on infrastructure facilities will be started. Orders for plant and machinery will also be placed.

Textile Machinery Corporation

69. *Spinning Machinery Project.*—The Textile Machinery Corporation of Pakistan is setting up a spinning machinery project. The plant will manufacture 300 ring spinning frames of 400 spindles each (120,000 spindles) per annum under technical collaboration with M/s Schubert and Salzer "Ingolstadt" of West Germany. The capital cost of the project is Rs. 80 million with a FEC of Rs. 36.6 million. An expenditure of around Rs. 12.3 million has been incurred on the project so far. Land for the project has been selected and orders for the procurement of machinery have been finalised. A provision of Rs. 34.00 million has been made for this project in 1977-78. In addition, Rs. 20 million will be raised from Banking System. It is expected that land will be acquired, civil works on main factory building will be initiated and the delivery of machinery will start in 1977-78.

State Petroleum Refining and Petrochemical Corporation

70. *Carbon Black Project.*—The State Petroleum Refining and Petrochemical corporation is setting up a Carbon Black Project to be located at Korangi. Carbon Black is used in the tyre, ink, and paint industries. At present there is no facility to produce carbon black in Pakistan. The project aims at utilising a by-product from National Refinery Ltd. The plant is designed to produce the following types of carbon black.

- (i) High abrasion furnace (HAF) type.
- (ii) Intermediate super abrasion furnace (ISAF) type.
- (iii) Fast extrusion furnace (FEF) type.
- (iv) Semi-Reinforcing furnace (SRF) type.

79. The project is expected to go into partial production by 1978-79 and will attain the full cycle of product-mix by 1983-84.

80. The output of KSM will result in import substitution amounting to Rs. 2,255 million. It will help satisfy the increasing demand for steel products, pig iron and coke by the Ship Building Industry, the Container Industry and the Fabrication and Engineering Industry.

81. A total number of 15,000 personnel will be required for the operation of KSM. Consequent upon the smooth functioning of the project, it is expected that job opportunities for about 200,000 artisans/craftsman alone will be created indirectly in subsidiary industries.

82. An allocation of Rs. 2500 million, including Rs. 500 million of borrowing from financial institutions, was made for this project in 1976-77. It is reported that actual expenditure would be around Rs. 2,026 million. An amount of Rs. 2,000 million is provided for this project in ADP 1977-78. In addition, Rs. 500 million is proposed to be raised from the financial market.

83. The details of physical implementation so far and the targets for 1977-78 are given in Annexure-X.

PROVINCIAL PROGRAMME

84. The ADP of the four Provincial Governments for the manufacturing sector during 1977-78 amounts to Rs. 163,224 million. In addition, the Provincial Governments plan to invest in industry Rs. 4,0332 million from sources outside the ADP.

Baluchistan

85. The provision made in the ADP 1977-78 for the development of industrial sector in Baluchistan is Rs. 6,972 million. (Annexure-VI). Besides the a locations for promotional and training schemes provision has been made for (i) Industrial Estate Uthal ; (ii) Automatic Brick Plant ; (iii) Stone Decoration Project ; and (iv) Flourite Project.

N. W. F. P.

86. The ADP provision for industries made by the Government of NWFP for 1977-78 amounts to Rs. 19,359 million. (Annexure-VII). Out of this allocation Rs. 6,859 million will be spent on the implementation of different promotional and training schemes sponsored by the small industries corporation. The main feature of the ADP is a provision of Rs. 12.6 million for Sarhad Development Authority to set up a Brick Kiln Plant Cattle Feed Plant and an Industrial Estate at Jamrud. The investment programme outside ADP is Rs. 39.50 million. A number of on-going projects of SDA are expected to be completed in 1977-78. These include four cold storage plants at Mardan, Haripur, Swat and Peshawar and one corn complex at Jehangira. Details are given in Annexure XI.

Sind

87. The ADP provision for industries made by the Government of Sind amounts to Rs. 59,445 million (Annexure VIII). The allocation will be spent on the implementation of various projects of Sind Small Industries Handicraft Development Corporation and for the work on three sugar mills namely Dadu, Thatta and Sanghar. In the case of Dadu Sugar mill, the estimated expenditure upto 1976-77 amounts to Rs. 135.7 million. Civil works relating to technician's hostel have been completed, factory building is in an advanced stage of completion and delivery of machinery has started. The project is expected to go into production during the 1977-78 cane crushing season.

88. In the case of Thatta Sugar Mill, the estimated expenditure upto June 1977 amounts to Rs. 95,787 million. Land for the project has been acquired and designing of the factory building is in progress. In 1977-78 civil works on main factory building will be completed to the extent of 85% and machinery installation by 60%.

Punjab

89. The Government of Punjab's ADP provision for the development of industries during 1977-78 is Rs. 77,4 million (Annexure IX). Out of this Rs. 16,991 million is proposed to be spent, on various promotional, training and research schemes sponsored by the Directorate of Industries the Punjab Small Industries Development Corporation and the Printing and Stationery Department, Rs. 60,529 million are allocated for sugar mills to be located at Sammundri, Ahmed Pur (East), D. G. Khan and Kamalia. The investment programme outside the ADP is Rs. 398.65 million. The major projects being implemented by the Punjab Industrial Development Board are as follows :

90. *Pattoki and Pasrur Sugar Mill.*—Two sugar mills are being set up at Pattoki and Pasrur each with a cane crushing capacity of ,500 metric tons per day. The cost of each project is Rs. 147.8 million. Each project will provide employment to about 510 workers throughout the year in addition to 700 seasonal workers. Regarding physical progress of Pattoki Sugar Mill, civil works on main factory building have been started, 1,279 cases of imported machinery and materials and 1167 cases of local machinery have arrived at site. In the case of Pasrur Sugar Mill civil works on main factory building have been started, 1 054 cases of imported machinery and 2,169 cases of locally fabricated machinery have arrived at site. Both the projects are expected to start trial production during the crushing season of 1977-78.

91. *D. G. Khan and Kamalia Sugar Mill.*—Two sugar mills are being set up at D. G. Khan and Kamalia each with a cane crusing capacity of 2,000 metric tons per day. The capital cost of each project is Rs. 188.8 million with a FEC of Rs. 77.6 million. Each project will provide employment to 450 workers throughout the year in addition to 650 seasonal workers. As regards physical progress of D. G. Khan sugar mill the site has been selected near Jampur and sub-soil investigations have been started. A contract for supply of machinery has been signed with HMC and deliveries are expected to start in April 1978. In the case of Kamalia sugar mill land for the project has been acquired, a contract for the import of machinery has been signed with M S. Tate and Lyle and the letter of credit was established in February 1977. The deliveries of machinery are expected to begin in February 1978 and finish in October 1978. The civil works on the main factory building will be started during 1977-78.

92. *Sammundri and Ahmed Pur East Sugar Mills.*—Two sugar mills are being set up at Sammundri and Ahmed pur East. The capital cost of the projects are Rs. 292.9 million and Rs. 279.6 million respectively. In the case of Sammundri Sugar Mill land has been selected and sub-soil investigations have been started. 249 cases of imported machinery have arrived at Karachi. As regards Ahmed Pur East Sugar Mill orders for the supply of machinery have been placed with HMC. In 1977-78 it is expected that civil works on main factory buildings of both the plants will be started and delivery of machinery at site will commence.

93. *Textile .*—Three Textile Mills are being set up at Bahawalpur, Dera Ghazi Khan and Sahiwal. Each mill has a capacity of 25,000 spindles and 355 looms. As regards physical progress of the mills, the spinning section of the Peoples Textile Mill Bahawalpur has been completed and is expected to start trial production shortly. In the case of Ghazi Textile Mill civil works on main factory building is in progress and the machinery for the spinning section has arrived at site. As regards Harappa Textile Mill, land has been acquired and sub-soil investigations have been started. Orders for the import of complete plant have been placed with M S C. Itoh & Co. and delivery is expected to start in December 1977. The financing for the import of machinery of the weaving sections of Peoples Textile Mill and Ghazi Textile Mill has not been arranged as yet. It is, however, expected that orders for the import of the machinery for the weaving sections of these mills will be placed in 1977-78.

Conclusion

94. The investment programme for 1977-78 shows a decline of 1.4% over the revised estimates of 1976-77. This decrease is a result of the severe resource constraint in 1977-78. As a result, work on new projects had to be postponed. However, the investment programme has been framed in such a way that the progress of on-going projects is not affected.

95. A number of projects are expected to be completed during 1977-78. However, the increases in capacities are expected towards the end of the fiscal year. The details of these projects are given in Annexure-XI.

96. In a country like Pakistan where resources for development are extremely difficult to mobilise, it is imperative that public sector industries generate funds for re-investment and do not become an increasing burden of the exchequer. In 1976-77, the investment of BIM Corporations and Provincial Industrial Development Agencies outside ADP amounted to Rs. 1952 million. This reflects the reduced dependence of these corporations on the funds to be obtained from ADP. However, it is important that public sector companies generate funds through financial discipline and efficient operations rather than depending solely on borrowing from financial institutions. In 1976-77 the self financing of public sector corporations was only Rs. 180 million.

97. For the efficient implementation of the programmes of the public sector industries, it is necessary to introduce procedures which would ensure that projects are completed in time without large cost over-runs. This requires better project preparation, scientific monitoring of project implementation and a system of accountability that forces the management to prepare realistic estimates and make strenuous efforts to remain within these estimates.

98. Investment in small scale industry has continued to be buoyant. However, statistics on investment and production in this sector are still very inadequate. To meaningfully plan for this important sector, it is necessary that concerted efforts are made at improving the data base for this sector.

CHAPTER 8

FUEL AND POWER SECTOR

Review of overall Energy Sector 1976-77

The total commercial energy supply in Pakistan during 1975-76 was 365.33 million million BTU. For 1976-77 it is estimated that total commercial energy consumption was about 379.81 million million BTU (3.96% Growth) as against a target of 414.97 million million BTU set in the Annual Plan 1976-77. A comparative statement of targets net estimated achievements during 1976-77 and the actual consumption during 1975-76 is given in table E-I below :—

TABLE E-I
Estimates of Energy Consumption

Source	1975-76 (Actual)		1976-77 Target		1976-77 Revised Estimates		Percentage increase over 1975-76
	Quantity	Energy content Trillion BTU	Quantity	Energy content Trillion BTU	Quantity	Energy content Trillion BTU	
Natural purified Gas (Excluding Fertilizer Feed-stock) (a) ..	1,24,797 MMCF	1,21,068	1,35,000 MMCF	131.62	1,30,483 MMCF	127.22	4.55
Natural Gas (rawgas) ..	6,036 MMCF	5.63	11,560 MMCF	10.79	10,698 MMCF	9.98	77.26
Oil (net of Export Ocean Bunkers & non energy products) ..	3.22 million tons	144.26	3.70	165.69	3.38	151.42	4.96
Hydroelectricity ...	5,419 GWH	65.03	6,157	73.88	5,183	62.20	(—)4.35
Coal (c) ...	1.1 million tons	20.94	1.2 million tons	22.85	1.2 million tons	22.85	9.12
Nuclear ...	565 GWH	6.78	720	8.64	422	5.06	(—)25.37
LPG ...	20,461 tons	1.01	30,461	1.5	22,000	1.08	6.93
Total ...		365.33		414.97		379.81	3.96
Population ..		71.29		73.43		73.43	3.0
per Capita Million BTU ..		5.14		5.65		5.19	1.0

(a) Fertilizer consumption estimated to be 15000 MMCF/annum.

(b) Consumption for Bunkering is somewhat estimated.

(c) Consumption of coal is also based on estimates.

(d) Heat rates given in table E-2.

2. Shortages in energy supply have persisted and were visible by way of load sheddings in Power System and pending applications. However, the quantum and frequency of load shedding was much less than in the past few years which may be attributed to (a) that the economy has grown more slowly than anticipated and (b) Consumers have switched over to other forms of energy which is evident due to relatively high growth rates of natural gas, oil and coal consumption during 1976-77.

3. The developmental investment made in various projects and activities in the Energy Sector in the past few years started paying off in the form of commissioning of three units of 175 MW each at Tarbela, 220/132 KV Guddu-Sibbi-Quetta transmission line Sui Karachi gas pipeline and expansion of National Refinery. The exploration of oil and gas which was intensified only recently has resulted in the discovery of a field at Dhodak with estimated reserves of 200 million barrels of oil and 4.5 trillion cubic feet of gas.

Energy policy and overall targets for 1977-78

4. The Plans for 1977-78 are based upon an overall policy framework set out by the Planning Division for a medium term time horizon (6 years) and are consistent with the directions set in the annual plans in past few years. The salient features of the overall policy are :

1. Intensive exploration of Indigenous resources of fuel.
2. Development of existing and new oil and gas fields.
3. Maximum use of hydro energy.
4. Increase of nuclear power generation to reduce imports of energy.
5. Maximum use of coal resources.
6. Judicious use of gas, giving priority to fertilizer use.

5. During 1977-78, in line with the above policy, exploration of oil and gas in different areas of the country will be carried out at a higher pace than in the past, proven field at Toot will be developed, further work will be done on Dhodak, use of hydro-energy will increase because of availability from Tarbela and work on Nuclear Power Station at Chashma will continue besides many other Power projects. Efforts will be made to increase the use of coal and carry out further studies and investigations to overcome the problems in the exploitation of Lakhra Coal fields and the use of Lakhra coal for power generation. Further details are given in the specific plans for Power and Fuels in the following paragraphs. An estimate of the commercial energy consumption during 1977-78 is given in table E-2 below :—

TABLE E-2
Energy Consumption Targets

Source	Heat Rate 1976-77		Revised Estimates		1977-78 (Target)		% Increase
		BTU	Quantity	Energy content Trillion BTU	Quantity	Trillion BTU	
Natural purified Gas (Excluding Fertilizer Feedstock)	975/CF	1,30,483 MMCF	127.22	1 31,009 MMCF	127.73	0.4
Natural Gas (raw)	933/CF	10,698 MMCF	9.98	12,000 MMCF	11.7	17.23
Oil (net of Export, Ocean Bunkers and non-energy production)	20,000/lb	3.38 million tons	151.42	3.51 million tons	157.25	3.85
Hydro-electricity	12,000/Kwh	5,183 GWH	62.20	6,969 GWH	83.63	34.45
Coal	8,500/lb	1.2 million tons	22.85 million tons	1.3	24.75	8.32
Nuclear	12,000/Kwh	422.0 GWH	5.06	400 GWH	4.8	5.14
LPG	22,000/Lb	22,000 Tons	1.08	23.654 Tons	1.17	8.33
Total ..				379.81		411.03	8.2
Population ..				73.43		75.63	3.0
<i>Per capita</i> million BTU				5.19		5.43	4.6

6. The above table shows that the overall increase in energy consumption will be 8.23%. A comparison of the growth rate of energy inputs and percentage share from each energy source in past few years is given in tables E-3 and E-4.

TABLE E-3

Yearly Percentage Increase in Energy consumption

Source	1973-74 to 1974-75	1974-75 to 1975-76	1975-76 to 1976-77	1976-77 to 1977-78
Natural purified Gas (Excl. Fertilizer Feed stock)	+3.88%	+0.62%	+4.55%	+0.40%
Natural Gas (Raw)	—	—	+77.26%	+17.23%
Oil (Net of export, Ocean Bunkers and non-energy product)	+13.35%	-10.25%	+4.96%	+3.85%
Hydro-Elect	+5.27%	+24.32%	(-)-4.35%	+34.45%
Coal	+2.43%	+3.36%	+9.12%	+8.32%
Nuclear	+22.57%	+1.50%	(-)-25.37%	-5.14%
L.P.G.	+127.59%	-53.03%	+6.93%	+8.33%
Total	+10.47%	+0.78%	+3.96%	+8.23%

TABLE E-4

Percentage Share of Various Energy Sources in Commercial Energy Consumption

Source	1973-74	1974-75	1975-76	1976-77 (Estimated)	1977-78
Natural Purified gas ..	34.93	32.84	33.31	33.49	31.07
Natural Gas (Raw) ..	—	1.80	1.54	2.63	2.85
Oil	42.51	43.65	39.49	39.87	38.26
Hydro-Electricity	14.91	14.21	17.80	16.38	20.35
Coal	5.93	5.50	5.73	6.02	6.02
Nuclear	1.63	1.82	1.85	1.33	1.17
L.P.G.	0.09	0.18	0.28	0.28	0.28
Total ..	100	100	100	100	100

7. Both these tables show that during 1977-78 the share of hydroelectricity and the increase over 1976-77 is the highest. This is primarily because of availability of Power from Tarbela. The

relatively slower growth rate in natural gas consumption projected for 1977-78 is also explained by this fact. Of the total hydro-electricity 6969 million Kwh, the contribution of Tarbela is placed at 3020 million kwh.

8. To sum up, the total energy consumption in 1977-78 will be 8.23% higher than in 1976-77 and the *per capita* consumption will increase from 5.19 million BTU to 5.43 million BTU. The total ADP allocation for Energy Sector scheme is Rs. 3,666.911 million as against Rs. 3,287.988 million in 1976-77 which is an increase of 11.52%. The allocations for 1977-78 emphasize quicker progress with major 'ongoing' schemes. A break up of allocations is given in table E-5 below :—

TABLE E-5
ADP allocations for Energy Sector Schemes

Power	(Rs. in Million)	
	1976-77 (Revised Estimate)	1977-78 Allocation
WAPDA	2,360.500	2,532.980
PAEC	113.662	550.300
Underdeveloped areas	32.704	49.131
Small hydel projects in Azad Kashmir and N.W.F.P.	40.000	40.000
Energy Resources Cell	1.300	2.000
Total ..	2,548.166	3,174.411
OGDC	419.80	450.000
Refineries (Directorate of oil operations)	205.900	0.500
Gas (Dte. of Gas Operations)	87.939	—
Foreign Exploration (Dte of Petroleum Concessions)	26.183	42.000
Total ..	739.822	492.5
GRAND TOTAL ..	3,287.988	3,666.911

9. Besides, credit allocations are being made for KESC, Gas Companies and Refineries. In addition to the above OGDC is expected to make investment of about Rs. 100—120 million from its self generated funds for exploratory drilling.

POWER SYSTEM

Review of Development Plans for 1976-77

10. *Generation.*—The generation plan envisaged completion of four units of Tarbela Hydro-electric station and continuation of work on stage II of Guddu-Thermal Power Station, Mangla Power Station Units 7 and 8, Warsak Power Station Units 5 and 6 and Kotri Gas Turbine Station.

Summary of the achievements made against targets of generation scheme, is given in the table P-I below :—

TABLE P-I
Generation plans for 1976-77 and Estimated Achievements

Name of Scheme	Target	Achievement	Remarks
Tarhala Units 1-4	Commissioning	3 units have been commissioned Unit-1 commissioned on 1-5-1977 Unit 2 on 27-5-1977 and unit 3 on 18-6-77.	The fourth unit is likely to be commissioned in July.
25MW Gas Turbine at Quetta	Completion of remaining works	The remaining works have been completed.	Progress according to schedule.
Guddu Thermal Power Station Stage-II	50% completion of civil works	30% of the civil works are complete and 98% of the material have been received.	Erection contract for plant has not yet been signed. Representatives of Techno-expert are expected in July, 1977 to sign the contract.
Mangla 7 & 8	Finalization of contract with suppliers, completion of civil works upto 70%.	Civil works 5% contract to NCC. Contract awarded for Generators to HITACHI, for Turbines to AGEC of Belgium, transformer ITALERAFO of Italy. Zero bay civil works completed, equipment being shipped.	
Tarbela 5 to 8	No specific targets were laid down in the ADP 75-76.	Contract not yet awarded.	A team to visit Manila for negotiations with ADB.
2 x 25 Kotri Gas Turbines.	Order for gas turbines to be placed.	Award of contract made to MS Thomasson of Holland for manufacture supply erection testing and commissioning.	
Warsak 5 & 6	Completion of 20% Civil works, 20% delivery of Plant and equipment and 10% of erection works.	Contract for Turbine and Generator has been awarded to Dominion of Canada for generators and exciters to Ms. GEC of Canada, for transformers to Ms. Federal Pioneer of Canada and for Switch Yard to Ms. McGraw Edison of Canada. For civil works two bids were received from Ms. NCC and Albario and are under evaluation.	
200 MW Gas Turbine Lyallpur.	Completion of remaining works.	The power station is complete.	
Lakhra Coal Fired Station	Preliminary Studies etc.	Montreal Engineering Co. have completed a Reconnaissance study on behalf of CIDA.	Further studies will be required on various problems brought out by Ms. Montreal Engineering Co.
Small Hydel Station.	Work on 10 sites was to be completed.	Work on 5 sites is in advanced stages of completion.	

11. Besides WAPDA, KESC planned to commission 125MW steam Station at Korangi and 100 MW Gas Turbines Station at SITE during the fiscal year 1976-77. Most of the work on the Korangi project has been completed but the final commissioning is expected during the early part of the fiscal year 1977-78. Commissioning of 100 MW Gas Turbines is somewhat delayed and the equipment is being imported. An uncertain situation regarding availability of KANUPP in future was felt due to fuel supply position, therefore, it was decided to start work on turbine station of 125 MW in Karachi. Preliminary work on this project has been completed.

12. The total installed capacity in the country increased from 2,686 MW to 3,211 MW due to the commissioning of three units at Tarbela. A brief break-up is given in table P-2 below :—

TABLE P-2
Installed Capacity

						(MW)		
						1970-71	1975-76	1976-77
WAPDA .. .. .	..	..	..	..	..	1317	1935	2460
KESC .. .. .	..	..	..	..	..	382	521	521
Private captive .. .. .	..	..	..	..	..	201	230	230
Total ..						1900	2686	3211

13. The maximum demand during the fiscal year 1976-77 was 1586.6 MW in WAPDA's integrated grid system, 31.5 MW in Quetta and 417 MW in KESC system. There was no significant load shedding in the system. Some load shedding had to be done on account of forced outages or delays in the recommissioning of the plants after maintenance. A comparison of the system demand during the fiscal year 1976-77 with 1975-76 and 1970-71 is given in the table P-3 below :—

TABLE P-3
Maximum Demand

						(MW)		
System						1970-71	1975-76	1976-77
WAPDA :								
Northern Zone .. .. .	..	..	..	..	..	847	1410	1586.6
Upper Sind .. .. .	..	..	..	..	..	49	For integrated system	
Lower Sind .. .. .	..	..	..	..	..	38		
Quetta .. .. .	..	..	..	..	..	14	27	31.5
Total ..						948	1437	1618.1
KESC						285	347.8	417

14. The total energy generation in the country during 1976-77 is estimated to be 11095 million Kwh, as against 10730 million Kwh during 1975-76. A break-up of energy generation on agency-wise basis is given in the table P-4 below :—

TABLE P-4
Energy Generation

						(Million KWH)		
						1970-71	1975-76	1976-77
WAPDA :							8300	8593
Northern Zone .. .. .	..	..	..	..	..	5211	For Integrated System	
Upper Sind .. .. .	..	..	..	..	..	257		
Lower Sind .. .. .	..	..	..	..	..	201		
Quetta .. .. .	..	..	..	..	..	72		
Total ..						5741		
KESC						1401	1980	2050
Others							450	450
Grand Total : % increase ..						7142	10730	11093

15. The *per capita* generation in the country remained practically stagnant at 151 KWH since growth in power output was barely in excess of population. The total investment in the generation plans of WAPDA was Rs. 488.144 million. KESC and PAEC's expenditure are over and above this expenditure.

16. *Transmission.*—The transmission line plans for 1976-77 envisaged commissioning of Guddu Sibbi Quetta Transmission line, 500 KV Tarbela-Lyallpur Transmission line and 220 KV Tarbela Wah Transmission line, besides continuation of work on, extension of transmission line to Azad Kashmir and 220 KV Tarbela-Mardan Transmission line. A brief summary of the targets and estimated achievements is given in table P-5.

TABLE P-5

Transmission Plans and Estimated Achievements during 1976-77

Name	Target	Achievement	Remarks
Primary Transmission			
(1) 500 KV Tarbela-Lyallpur T/Line	To be completed by March, 1977.	75% completed	To be commissioned in July/August.
(2) 200 KV D/C Tarbela-Wah T/Line.	To be completed.	completed.	
(3) Guddu-Sibbi-Quetta	To be completed.	completed.	Presently operating on 132 KV.
(4) 220 KV Mangla Transmission extension.	—	completed.	—
(5) 500 KV Lyallpur-Multan-Karachi T/Line.		\$50 million from IBRD and \$40 million from Kuwaiti fund is available. On Lyallpur-Guddu Section design work is complete. Tenders for towers have been opened and are being examined. Bids have been called for conductor Insulators and handwares etc.	
		For Guddu-Karachi Section study is being carried out.	

17. In order to extend transmission line to Vinder-Uthal and B:la areas which are remote from WAPDA's grid, a project of extension of transmission line from KESC was sanctioned. Work on this transmission line is in progress.

18. *Secondary Transmission.*—The plans for 1975-76 set a target of construction of 329 miles of transmission lines and installation of 576 MVA transformation capacity. Details of achievements are not available at this stage. Upto end of May 1977, however, WAPDA had constructed 74 miles of transmission line and 49 grid stations.

19. *Distribution.*—The 1976-77 plan set a target of supplying new connection to 1,68,000 consumers and 1,000 villages for WAPDA. Table P-6 below gives the details of these targets and estimated achievements.

TABLE P-6
WAPDA New Connection During 1976-77

				(Numbers)			
				1970-71	1975-76	1976-77 Targets	1976-77 Estimated achievements
General	..	..	..	99,676	1,30,000	1,50,000	1,66,993
Industrial	..	..	..	3,164	4,000	10,000	6,278
Agricultural	..	..	..	3,759	8,000	8,000	3,858
Total				1,06,599	1,42,000	1,68,000	1,77, 29
Villages	..	..	..	—	500	1,000	784

20. In KESC system 27,668 new consumers were connected. A detailed breakup is given in table P-7.

TABLE P-7
KESC's New Connection During 1976-77

								(Numbers)
Domestic	..	..	..	..	..	..	..	19,192
Commercial	..	..	..	..	..	..	..	6,906
Industrial	..	..	..	..	..	..	..	1,397
Agricultural (Tubewell)	..	..	..	..	..	..	..	7
Others	..	..	..	..	..	..	..	166
								27,668

21. In overall terms, the total number of new consumers added in Pakistan was 204,797.

22. *Isolated Diesel Stations.*—Work on installation of small diesel sets in Baluchistan remained in progress and out of 32 sites, diesel sets were commissioned at 18 sites.

23. *Small Hydel Stations.*—It was proposed to complete 10 small hydel stations. However, at 5 hydel stations work is in advanced stages and on the other it is progressing slowly. The cost per KW for these stations is exorbitant and number of measures are being considered to reduce these costs in future projects.

Power Plans for 1977-78

24. Long lead times are a characteristic feature of power sector projects. Therefore, most of the projects are conceived in a long or medium term perspective. The rationale of these projects

therefore lies in over all plans whereas the Annual Plans are only links in the chains towards the achievement of the long term/medium term objectives. With these boundry conditions, the power plans for 1977-78 are discussed below :—

25. *Generation.*—For WAPDA Rs. 554.8 million have been provided for generation projects which is 22% of the total ADP allocation for WAPDA. This amount, is largely for projects which have already been initiated and no new project has been initiated (except Kotri 150 MW). During the year, the main addition in the installed capacity of WAPDA's system will be of 175 MW due to commissioning of Tarbela unit 4. However, extensive work will be done on various projects. A brief description of the likely achievements by the end of the fiscal year 1977-78 on various projects is given in table P-8.

TABLE P-8

Targets for 1977-78 in Generation projects

Name of the project	Targets
Guddu Thermal Power Station Stage-II	100% Supply of equipment, 30% completion of civil works.
Tarbela Hydro-electric Power Station units 1—4	Commissioning of fourth unit.
Tarbela Hydro-electric Power Station units 5—8	Material Procurement, down payments etc.
Warsak Hydro-electric Station 5 & 6	Supply of E & M equipment and award of civil works.
50 MW Gas Turbines at Kotri	90% completion of supply and erection of equipment and 60% completion of switch yard.

26. Besides the above schemes investigation work will be carried out for major hydro-electric plants and Lakhra Coal Power Station.

27. In KESC's system, 100 MW Gas Turbine Station at SITE and 125 MW steam station at Korangi will be commissioned and work on 125 MW Gas Turbine station being constructed as a replacement of KANUPP will be in full swing. The total expenditure for generation by KESC will be Rs. 526.0 million. PAEC will incur an expenditure of Rs. 100 million in connection with work on Chashma Nuclear Plant.

28. In over-all terms the total addition in the capacity in Pakistan during 1977-78 will be 400 MW, and the total installed capacity will become 3611 MW at the end of 1977-78 as against 3211 MW at the commencement of the plan period. The capacity under installation, will be 1365 MW. A brief break-up of the total capacity alongwith targets in Medium Term Perspective is given in Table P-9 below :—

TABLE P-9

Targets for Generation Capacity

	1976-77	1977-78	1982-83
WAPDA	2,460	2,635	3,034
KESC	521	746	1,071
Private	230	230	395
	3,211	3,611	6,560

29. *Primary Transmission.*—Rupees 798.1 million have been provided for primary transmission in the ADP 1977-78 as against Rs. 676.356 million in ADP 1976-77. As already stated for generation plans that this year's allocation is primarily for continuation of works on these schemes which have already been initiated and no new scheme is provided for primarily because of resources constraints. The entire transmission line plan is in line with the overall medium term strategy to synchronise the commissioning of transmission lines of adequate capacity with the commissioning of the generating stations. With the commissioning of Tarbela unit 1-4 about 700 MW of power will be available from Tarbela. To carry this power to the main grid station a single circuit 500 KV transmission line from Tarbela to Lyallpur is already in the advanced stage of execution and will be commissioned during 1977-78. Two double circuits of 220 KV transmission line from Tarbela to Wah have recently been commissioned. A 220 KV double circuit transmission line from Mangla to Wah has already been started and will be completed during 1977-78. 500 KV Lyallpur-Guddu-Karachi Transmission line has been planned to ultimately integrate the Northern power system of WAPDA with KESC system in South, in 1981-82. Rupees 600 million have been provided for this project which is the largest investment in any power project so far to enable the speedy implementation of this project. Work on this transmission line is being done in two sections: Lyallpur-Multan-Guddu Section and Guddu-Hyderabad-Karachi Section. In the former section it is proposed to complete 75% of the civil works, 30% of foundation work, and 10% of tower erection. Foreign aid is being obtained for this section from World Bank. The second section for which the aid is being obtained from Kuwait is still in a stage of investigation and data collection work. The economic feasibility of transmission line has already been established but because of special contamination problem of this area a special study is being conducted to collect the data required for designing the towers for the transmission line, type of conductor and choosing appropriate level of insulation. This study is likely to be completed by the end of January 1978. The work will be accelerated after the results of this study are in hand. Because of this reason some delay in the target date of commissioning is being anticipated and stop gap arrangements are being considered. The work of extension of transmission line to Azad Kashmir and 220 KV transmission line from Tarbela to Mardan will be in progress whereas preliminary work will be done on 2nd circuit of 500 KV Tarbela-Lyallpur transmission line. KESC will continue work on Vinder Uthal Bela transmission line and will spend Rs. 55.0 million from credit budget allocation.

30. *Secondary Transmission and Grid Station.*—For this project Rs. 550 million have been provided for the fiscal year 1977-78 as against a revised estimate of expenditure of Rs. 510.0 million during 1976-77. The physical targets have not been determined by WAPDA, at the time of preparation of this document.

31. *Distribution of Power.*—For 1977-78, Rs. 630 million have been provided as against a revised provision of Rs. 656 million during 1976-77. The targets for the year are as in table P-10 below;—

TABLE P-10

	WAPDA			KESC			Total		
	1976-77 Estimate	1977-78 Target	% Diff.	1976-77 Estimate	1977-78 Target	% Diff.	1976-77 Estimate	1977-78 Target	% Diff.
Domestic and Commercial	1,66,993	85,000	-49	26,098	36,120	38.4	1,93,091	1,21,120	-37
Industrial	6,278	5,800	-7.6	1,397	890	-36	7,675	6,690	13
Tubewells	3,858	5,800	50	7	350	4,900	3,865	6,150	59
Others	—	—	—	166	340	105	166	340	104
Total	1,77,129	96,600	-45	27,668	37,700	36	2,04,797	1,34,300	-34

32. Besides WAPDA will electrify 867 villages as against 784 in 1976-77. From the above table it would appear that WAPDA's targets for 1977-78 for domestic consumers are drastically less than achievements in 1976-77. Targets for Industrial consumers are also on the lower side. The issue is still being discussed but WAPDA explains that this is because of lower allocation (Rs. 60 crore in 1977-78 as against revised estimates of Rs. 65.6 crore in 1976-77) escalations in the cost and increase in number of villages to be electrified and tubewells connections.

33. In the past the work of village electrification has not been carried in a properly planned manner. Most of the measures were taken on adhoc basis. However now efforts are being made to organize and plan most systematically. Similarly the work of secondary transmission and distribution projects will also be carried out in a better planned manner. Projects covering these aspects are being revised and refined.

34. Re-organization of WAPDA is being considered in order to improve its efficiency in performing various functions. Some concrete steps will be taken in the Annual Plan period 1977-78.

35. *Load Dispatching.*—In past, WAPDA's power dispatch operations have not been conducted along modern lines. With the expanding size and introduction of 500 KV voltage levels it will be imperative to change the past practice. The power control centre should be equipped with a computer which has optimal and economic dispatch, load flows, stability, short circuit calculations, load forecasting and other important system analysis programme in its memory library. This should be accompanied by improved telemetry and telecommunication system. All these facilities will help in economic utilization of electrical energy and efficient catering of power demand. This will also help in reducing the losses of the system. Power Control Centre renovation plans are currently being considered and will be implemented in stages. Negotiations with the World Bank team are scheduled in September 1977 after which WAPDA will prepare a complete proposal.

36. *Improvement in Efficiency.*—The losses in WAPDA system recorded during the period 1970-71 to 1975-76 increased from about 31% to 36% including consumption for auxiliaries. These percentage of losses are considered quite high and comprise of technical losses and pilferage. Technical losses are high because of long lengths of secondary transmission lines and uneconomic load flows in the absence of proper computer support to the load dispatchers. With the improvement in the existing system of secondary transmission and also better distribution facilities envisaged in the Medium Term Perspective and ameliorative steps suggested in the Power Control Centre above, it is expected that technical losses would be cut down to some extent. As far as pilferage of energy is concerned, this can be reduced through detailed investigation and by taking effective measures to control these losses. A Plan of action is to be devised to bring the losses down to reasonable limits. WAPDA is taking necessary steps in this connection.

37. WAPDA will also take necessary measures to improve the reliability of supply to various consumers. The reorganization of the functions of distribution will also help in efficient handling of consumer complaints and taking remedial steps.

38. *Diesel Generation.*—Rs. 30.0 million have been provided in the ADP for work on the installation of diesel generating sets in Baluchistan.

39. *Investment plan.*—The total Power Sector investment from the ADP 1977-78 will be Rs. 3,174.411 million as against 2,548.166 million in 1976-77. The percentage increase is 24.6%. A brief breakup to the investment of power system is given in table P-12 and P-13 and scheme wise details given in Annexure P-1.

TABLE P-12

(Rs. in million)

	1976-77		1977-78	
	Revised Estimates	% of Total	Allocation	% of Total
Generation (Incl. PAEC) & Diesel sets	580.168	24	687.8	26.1
Transmission	676.356	28	798.1	30.2
Secondary Transmission	510	21	550	21.0
Distribution	656	27	600	22.7
Total ..	2422.168	100	2635.98	100.0

TABLE P-13

Miscellaneous Provisions

	1976-77 Revised Estimates	1977-78 Revised Estimates
Northern Areas	6.588	6.601
Azad Kashmir	10.232	17.907
FATA	15.884	24.623
Small Hydrel	33.5	40
Energy Resources	1.3	2.0
Other Schemes of PAEC	51.638	447.3
Total ..	119.142	502.431
GRAND TOTAL ..	2541.31	3174.411

FUELS

40. As discussed in the plans for Power Development the rationale of Annual Plan lies in the long term and medium term plans which are prepared in the light of overall demand forecast to facilitate initiation of projects with lead times greater than one year. Details of Annual Plan for each fuel are given below :—

Natural Gas

41. *Review.*—The demand forecast for both Southern and Northern systems were prepared in 1974. In the light of these demand forecasts S.G.T.C. had started the project of laying 18-in. diameter 305 miles pipeline on the Right Bank of River Indus from Sui to Karachi. The first

phase of this project envisaged completion of 40 miles of pipeline from Sari-Hundi to Karachi to provide 12 MMCFD of gas on immediate basis while phase II of the project envisaged completion of the rest of section of pipeline. Phase-I of the project was completed in 1975. The phase-II of the project was completed on 14th March in 1977. This project has increased the total capacity of the SGTC system from 147 MMCFD to 283 MMCFD. Besides this project, SGTC has started preliminary work on Sulphur recovery plant at Sui during the year 1976-77.

42. In the SNGPL system, project 4 was started in 1974 to provide 40 MMCFD of gas to Multan Fertilizer Factory on urgent basis (known as project 4-A) and further extension of pipeline in the Northern part of the country to meet the demand of various consumers, (known as project 4-B). The project 4-A was completed in 1975 and the project 4-B is likely to be completed in December 1977. During 1976-77 the work of laying of pipeline has been completed. The remaining work of installation of compressor station etc. will be completed in the next year. The project 4 (project 4-A and project 4-B) will add 118 MMCFD to the SNGPL system and the ultimate capacity of the system will become 415 MMCFD.

43. The Indus Gas Company, Karachi Gas Company and SNGPL together connected 40,133 new connections during the year 1976-77. The total sale of Natural Gas during 1976-77 is estimated to be 1,45,483 MMCF out of which about 15,000 MMCF was consumed in non energy use in Fertilizer Production. The company-wise statistics are given in Annexure. G-I.

44. *Reserve Position.*—Out of the total originally discovered reserves of 8.62 TCF at Sui 1.38 TCF of the gas was consumed by 31st December 1976. It is estimated that by the commencement of Annual Plan 1977-78 in July 1977 the total consumption will be 1.455 TCF leaving a balance of 7.16 TCF. Taking a recovery factor of 0.85 TCF the total recoverable reserves at Sui is estimated to be 6.1 TCF by 30th June, 1977.

45. Assuming that off take from Sui will be 705 MMCFD in 1985 and its growth will be levelled off at its optimum deliverability level of 880 MMCFD in 1990, the Sui reserves are projected to last upto the year 2000. New discoveries may however, change this position.

46. Regarding Sari and Hundi Fields, the original reserves were about 0.08 TCF out of which 0.01 TCF were used upto 31st December 1976. It is estimated that the total utilization will be about 0.011 TCF by July 1977. The remaining reserves 0.069 TCF will last upto 1990 assuming 12 MMCFD off-take and a reserve recovery factor of 0.8.

47. The other gas fields are not considered economical for exploitation because of low level of reserves and poor quality of gas.

48. The most significant development in the context of reserves is the recent discovery of Dhodak Oil Field. The total recoverable gas has been tentatively estimated at 4.5 trillion cubic feet. Conceptual planning for this field has been initiated during 1976-77.

Natural Gas Plans for 1977-78

49. SGTC plans to continue work on its Sulphur Recovery Plant. This plant is proposed to be of capacity of 9,000 tons per annum. At present the actual demand of Sulphur in the country is estimated to be 18,000 tons for Sugar Fertilizer and Chemical Industry. SGTC plans to bring this project for consideration and approval of the Government during current financial year.

50. SNGPL will continue work on project 4. It is hoped that it will be completed by December, 1977.

51. SNGPL and IGC are contemplating new projects of supply of gas to various townships and to bring this project for evaluation by the Government. The KGC's plans are primarily for extension in their existing distribution network for meeting demand of KESC and other consumers, installation of new computer system and production of 6,000 metres from their Assembly Plant.

52. OGDC is actively engaged in preparing a project for laying a 16 inch, 130 mile long pipeline for transmission of associated gas from Dhodak to Multan. OGDC aims at starting physical work on this pipeline project during 1977-78.

53. To facilitate work and to meet the requirements of energy at Chashma where a 600 MW Nuclear Power Plant is being installed by PAEC, laying of gas pipeline is also under consideration.

54. It is proposed that 78,140 new consumers will be connected during 1977-78. Details are in Annexure G-I. The total gas consumption during the year 1977-78 will be 1,46,009 MMCF including 15,000 MMCF for non energy fertilizer use. Following table (table G-I) shows the company wise statistics and details are given in Annexure G-2.

TABLE G-I
Natural Gas Consumption

	MMCF				
	1975-76	1976-77	% increase	1977-78	% increase
KGC	33,999	35,773	5.2	45,571	27
IGC	21,014	20,367	-3.1	21,520	5.7
SNGPL	84,783	89,343	5.4	78,918	-16.6
Total	1,39,796	1,45,483	4.1	1,46,009	0.36

55. The above table shows that there will be very little increase in total consumption of gas. The growth in SNGPL system is in fact negative (-16.6%). The reason for this is that availability of energy from Tarbela is likely to influence the gas demand in the North. On the other hand, KGC has shown a very high growth rate of 27%. This may be explained by the fact that 100 MW gas turbines at Karachi will be commissioned in early 1977-78, besides requirements of new consumers etc.

56. The total investment in the Natural Gas Plans will be from sources other than ADP because the equity contribution required from the Government has already been made from past years ADP. The financial requirements will be met either by loan, self generated funds by the Companies concerned or by credit budget allocations. A credit budget of Rs. 58.00 million has been earmarked for this purpose, tentatively.

ON

57. Review of 1976-77.—The consumption of oil products during 1976-77 is estimated to be 3.77 million tons as against 3.556 million tons in 1975-76. The overall growth rate is 6% as against the target of 4%. A brief summary of availability and consumption of various products is given in table 0-1 and 2 below while Annexures 0-1 and 2 give further details. Data for 1974-75 is also given because data published in previous documents have been revised and firmed up.

TABLE 0-1
Oil Consumption Including Bunkering

	1974-75	1975-76		1976-77 (Estimate)	
		Quality in tons	Growth in %age	Quality in tons	Growth in %age
Light Distillate	4,19,139	4,22,128	0.7	4,56,206	8.0
Middle Distillate	22,20,971	22,75,647	2.46	24,04,072	5.6
Furnace oil	9,57,684	7,10,441	-2.6	7,42,659	4.5
Total Fuel Products	35,97,794	34,08,215	-5.3	36,03,335	5.7
Others	—	—	—	—	—
Grand Total	37,97,969	35,56,312	-5.3	37,97,996	6.0

TABLE 0-2

Balance Sheet of Disposal of POL

	(Tons) 1976-77
Production	31,80,642
Imports	10,48,501
Total Availability	42,29,143
Domestic consumption	35,43,535
Bunkers	2,26,791
Exports	5,98,628
Total	41,42,161
Charges in Stock	+ 86,982

58. The Annexures 0—1&2 show that there was a little growth in the consumption of light distillates from 1974-75 to 1975-76 where as the estimated growth from 1975-76 to 1976-77 is 8%. CCAC is strongly of the opinion that the change in the trend of growth of light distillates is because of the high influx of Suzuki wagons which are now being extensively used for luggage and other road haulage. The consumption of middle distillates grew by 2.46% from 1974-75 to 1975-76. The decline in growth rate in middle distillates could be attributed to two factors:—

- (i) To the switchover of road haulage to motor spirit consuming Suzuki vans.
- (ii) To the greater availability of natural gas and hydro electricity.

59. The growth in furnace oil consumption was also suppressed and in fact negative during the periods, 1974-75 and 1975-76 also because of availability of natural gas and hydro electricity.

60. *Exploration.*—It is estimated that OGDC has drilled 874 metres as against the revised target of 4,892 metres in 1976-77. Moreover as against a target of surveying of 285 kilometres under Geological Survey project OGDC surveyed about 650 Km. No. progress has been reported by OGDC with respect to Seismic survey and Gravity surveys. Details of OGDC's performance in drilling and surveying is enclosed in Annexures 0—3, 0—4.

61. The most significant success of the exploration programme is the discovery of Dhodak Oil and Gas field. This field is tentatively estimated to have about 200 million barrels of oil and 4.5 trillion cubic feet of gas.

62. The foreign oil companies covered an area of 200 kilometres under Geological Survey 2250 kilometres under Seismic Survey, 1601 line kilometres under Marine Seismic and Gravity Survey and 1664 kilometres of off shore Seismic Survey. Regarding exploratory drilling by private and foreign companies, against a target of 59,468 kilometres 44,053 kilometres were drilled in various areas of Pakistan. Details of exploration activities of these companies are given in Annexure 0—5, 0—6.

63. *Development of Oil field.*—The Government has a policy to give highest priority to the development of proven and newly discovered oil fields to reduce import bills. A project of accelerated development of Toot Oil field has already been started. The drilling target to be achieved at Toot was 7,472 metres but only 2,623 metres were drilled during 1976-77. Well-wise details are in Annexure 0—3. The main reason for this short fall in meeting the target was delays in the arrival of the rigs from abroad and non-availability of in-land transportation. Some drilling equipment was also engaged in Toot at well-4 which could not be deployed for drilling of well No. 8 on schedule because of some unanticipated problems at Toot-4.

64. *Refining.*—At the commencement of 1976-77 the total refining capacity in the country was 3.3 million tons. During the plan period the expansion of National Refinery Limited was completed. This has increased the capacity by 1.5 million tons. The total refining capacity is now 4.8 million tons. Work on Karachi-Multan oil pipeline also continued during the plan period.

65. The Ministry is actively considering alternatives for refining at output of oil from Dhodak including re-adjustments of Pak Arab Refinery at Multan. For Toot it has been decided to expand Attock oil Company from its existing capacity of 0.5 million tons to 1.5 million tons.

66. *Plans for 1977-78.*—The total consumption of petroleum products excluding export is expected to rise to 4.003 million tons as against 3.77 million tons in 1976-77 (6.2% increase)

67. A brief summary of the consumption targets for 1977-78 is given in table 0—3 and 0—4 whereas Annexure 0—7 give further details :—

TABLE 0—3

Target of Pol consumption including bunkering

	1976-77 (tons)	1977-78 (tons)	Growth
Light Distillates	4,56,206	4,98,500	9.27
Middle Distillates	24,04,072	25,74,200	7.1
Furnace Oil	7,42,659	7,11,000	—4.2
Total Fuel products	36,03,335	37,87,700	5.1
Others	—	—	—
GRAND TOTAL	37,70,326	40,03,106	6.2

TABLE 0—4

Balance Sheet of Disposal of Pol

	(Tons)
	1977-78 Estimate
Production	45,96,746
Imports	6,33,291
Total Availability	52,30,037
Domestic Consumption	37,29,106
Bunkers	2,74,004
Exports	12,17,898
Total Disposal	52,21,004
Changes in Stock	+9,033

Exploration

68. The Oil and Gas Development Corporation (OGDC) will carry out Seismic survey over 1600 kilometres, Geological Survey over 900 linear kilometres and establish 4,000 gravity stations during the year 1977-78. The private exploration companies will perform Geological survey over an area of 750 sq. miles. Besides, off shore Marine Seismic and gravity survey will be carried out by Marathon Petroleum and Seismic Survey in Dakhni Block will be carried out by Pakistan Gulf Inc. Regarding exploratory drilling Oil and Gas Development Corporation will drill 14,686 metres at 5 sites. Besides, the foreign oil companies will drill 10,522 metres as a part of their exploration programme of four exploratory wells. Further details of exploration programme are given in Annexures 0-8 through 0-12.

69. *Development.*—It is proposed that OGDC will drill three development wells at Toot and three development wells at Dhodak besides some drilling at Radho. The total target of drilling is 26,046 metres. Well-wise details of drilling programme are given in Annexure 0-12.

70. *Refining.*—As is stated in the review of last year Annual Plan decision has been taken to expand Attock Oil Company from 0.5 million tons to 1.5 million tons. For this purpose necessary design and engineering work will be undertaken. Work on the Karachi Multan Oil pipeline will continue during the Plan period. For Dhodak the proposal of installing topping unit at Dhodak Well be finalized by the Ministry of Petroleum and Natural Resources. Situation regarding Multan Refinery is also expected to be clear after drilling more wells at Dhodak and reconstruction of design of this Refinery may then be undertaken. A pipeline project is being prepared by Ministry of Petroleum and Natural Resources to carry condensate oil from Dhodak to Multan.

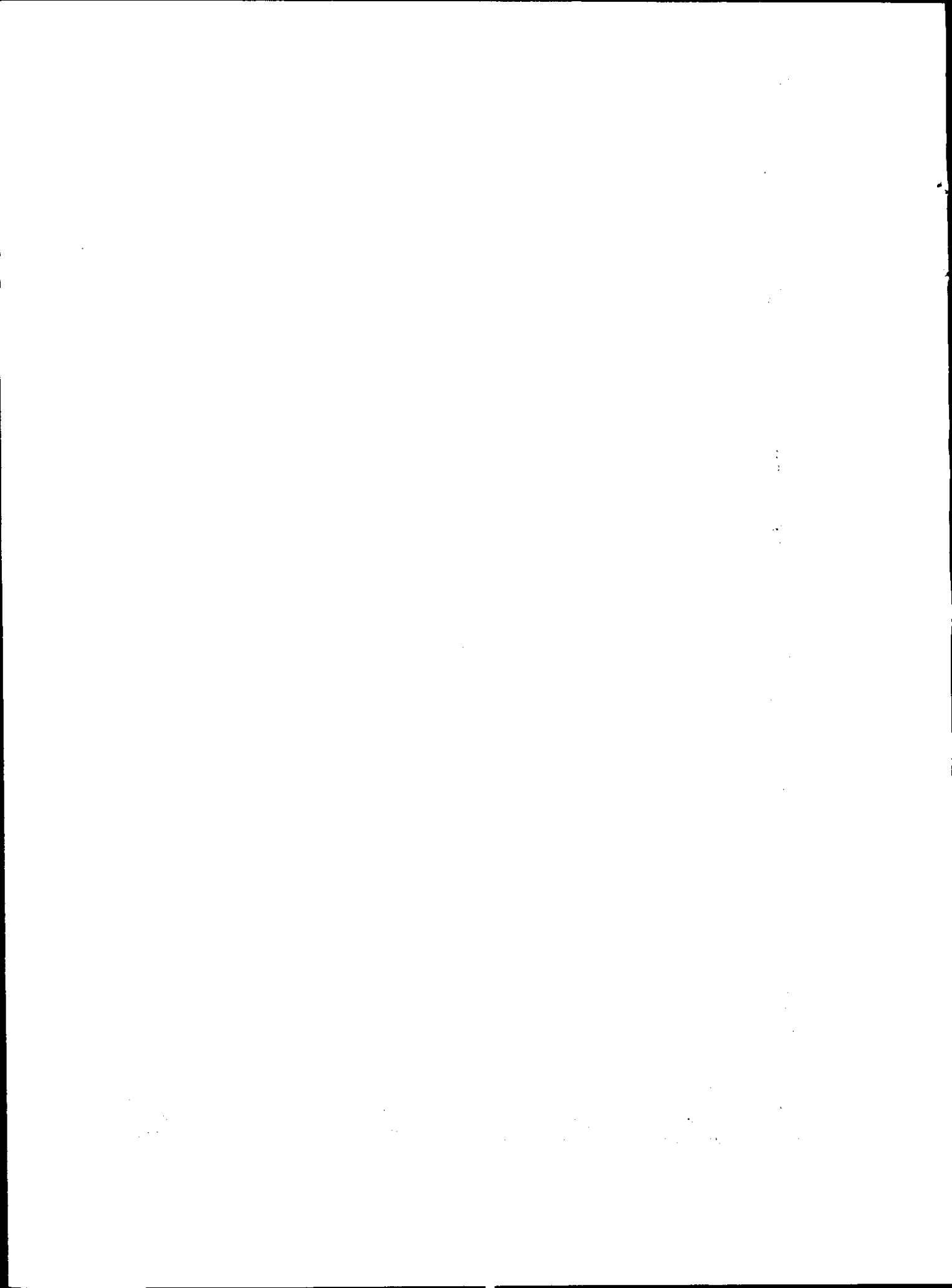
71. *Investment 1977-78.*—The total investment in the fuel subsector will be Rs. 492.5 million as against Rs. 739.8 million in 1975-76. The reduction in gross total is because most of the equity share of the Government in gas companies and refinery was provided in 1975-76 and no such allocation is made this year. The allocation to OGDC has however increased from Rs. 419.8 million to Rs. 450.0 million. A brief summary of this allocation of various agencies is given below whereas details are given in the Annexure F-I. Besides there will be foreign investments in exploration programme in the country.

Miscellaneous Energy Sector Plans

72. *Liquefied petroleum Gas : (LPG).*—The total production of LPG during 1976-77 was estimated to be about 22,000 tons. After the expansion of National Refinery, Karachi, the production of LPG is expected to increase by about 10,000 tons during the fiscal year 1977-78 and will increase to 20,000 tons in subsequent years. At present only three companies are marketing LPG. The marketing capacity during 1976-77 was about 10,500 tons for Burshane Company, 7,100 tons for FONGAS and about 3100 tons for IGC. In order to increase the sale in view of the no increase in production these companies will have to enhance their marketing efforts. Since definite plan is available from the concerned agencies, therefore it is estimated that the sale of LPG in 1977-78 will only increase by about 7.5%. The actual consumption may be greater than this conservative target if the marketing efforts are made vigorously otherwise the remaining amount of LPG will have to be flared off for the time being.

73. *Coal.*—The coal mining and distribution is also not very well organized. This is because there is not much effective centralized coordination. Because of this the total coal consumption in the country is expected to register only a moderate increase from 1.2 million tons to 1.3 million tons. Besides the mines which are already producing large amount of coal reserves have been found at Lakhra. Because the quality of the coal is poor and its high sulphur content does not permit stock piling and long distance transportation therefore it's past use is considered to be for electricity generation at a site close to the mines. Investigations to overcome various problems and designing efficient mining procedure are already in hand and will remain in progress during the year 1977-78. Further details of development of coal mining etc. are given in the Industrial Sector Plan.

74. *Energy Resources Survey Cell.*—The plans envisages installation of Bio-Gas Plant at some locations and other Small Rural Energy and Geo-Energy problems. The total allocation for the year 1977-78 is Rs. 2.00 million as against Rs. 1.3 million in 1976-77. The main endeavour under this programme is to increase the use of non-commercial energy in the country.



CHAPTER 9

TRANSPORT AND COMMUNICATIONS

The performance of the transportation system during 1976-77 did not show anticipated progress owing to floods and heavy rains during the first half of the year and disturbed political condition during the latter part of the year. The Railways freight traffic declined by 9.3% from 5,515 million ton miles in 1975-76 to 5,000 million ton miles in 1976-77, (against available estimated capacity of 5,991 million ton miles after implementation of the Crash Plan). The passenger traffic went up slightly from 7,964 million passenger miles in 1975-76 to 8008 million passenger miles in 1976-77. The position of availability of wagons deteriorated further. Port congestion and urban road transport continued to be problem areas. In the case of ports, additional capacity is under construction which is not expected to be available before 1978-79. The waiting period for the ships at Karachi Port went up from 15 days to much higher level, as a result of basic pressures magnified by labour trouble.

2. As regards Road Transport, in the case of goods traffic there was a repeated shortage of trucking capacity in 1975-76 as well as in 1976-77. During these two years the sale of trucks was about 60 percent compared to the level reached in 1974-75. However, the shortage was more due to local and adverse operating conditions rather than shortage of aggregate capacity. The position in case of passenger road transport was rather un-satisfactory because of lower sales of buses in 1976-77 as compared to the previous year. The reduction in sale of trucks and buses has been partly offset by investment in light commercial vehicles. The difficulties of urban passenger transport has continued. Urban Transport Corporations established for major cities have yet to make any major impact.

3. The actual traffic handled in 1975-76, estimated traffic for 1976-77 (on the basis of actual for Railways upto 31st May, 1977) and forecasts for 1977-78 are given in Table-1 below :

TABLE I
Forecast of rail/road traffic during 1977-78

	1975-76 (Actual)	1976-77 (Estimated)	1977-78 (Projected)	%Change 1977-78/ 1976-77
Rail				
Goods (MTM)	5,515	5,000	6,291	25.8
Passenger (MPM)	7,964	8,008	8,372	4.5
Road				
Goods (MTM)	7,056	7,509	8,102	7.9
Passenger (MPM)	34,036	36,827	40,215	9.2

4. Projections for railways goods traffic have been made at a growth rate of 5.0 per cent per annum over the actual estimated capacity of 5,991 million ton miles available in 1976-77, but which could not be utilized due to abnormal conditions during the year and operating difficulties with locomotives. For passenger traffic the Mid-Term perspective (1977-83) figures have been adopted as the actual performance during 1976-77 is very much in accordance with the projections made for that year. Moreover, the performance of Railways is expected to improve further because of the introduction of new coaches.

5. In the case of road transport, the projections for goods and passenger traffic have been made at a growth rate of 7.9 per cent per annum and 9.2 per cent per annum respectively in line with the growth rates assumed for the Mid Terms Perspective (1977-83).

6. As regards the road development programme, about 1,747 miles of federal and provincial roads were constructed/improved during 1976-77.

7. The performance of P.I.A.C. was quite impressive and the passenger and cargo traffic handled by the Airline registered an increase of 39.2 per cent and 11.7 per cent respectively over the corresponding figures for 1975-76.

Review of 1976-77

8. During 1976-77, an amount of Rs. 2,972.574 million was allocated for the transport and communication programmes in the public sector. This allocation was about 23 per cent higher than the 1975-76 allocation.

9. The actual public sector utilization for the Federal programmes was Rs. 2,295.960 million against an allocation of Rs. 2,066.388 million, while for the Provincial programmes, the utilization was Rs. 977.803 million against an allocation of Rs. 906.186 million. The estimated expenditure for the entire public sector was Rs. 3,273.763 million giving a percentage utilization of about 110 per cent.

10. In the semi-public sector, the federal expenditure stood at Rs. 410.720 million against the provision of Rs. 837.000 million, while the provincial expenditure has been Rs. 31.646 million against the provision of Rs. 150.000 million. The overall utilization thus showed a shortfall of about 55 per cent.

11. The sub-sector wise details of 1976-77 programme are as follows :—

FEDERAL PROGRAMME

1. Railways

12. An allocation of Rs. 682.00 million was made for 1976-77 against which an expenditure of Rs. 620.00 million was incurred. The main objective of the 1976-77 programme was to meet the backlog of replacement and renewals initiated under the Crash Plan and other essential projects required for socio-economic reasons.

13. The actual performance of Railways during 1976-77 was lower mainly due to the floods and heavy rains followed by the disturbed situation in the country particularly between March, 1977 to June, 1977. Other factors which are responsible for the shortfall in actual traffic handled are the problems of "short-haul" traffic which the Railway had to carry on the Provincial Government account and the delay in the emptying of railway wagons where adequate storage was not available. There was also difficulties in maintaining the locomotives fleet in full operating conditions because of shortage of spare parts. As regards the availability of wagons, the wagon turn-around deteriorated from 16.2 days in 1975-76 to 17.3 days in 1976-77 and the average net tons per freight train was 600 as compared to 603 during 1975-76. The daily mileage per Diesel Electric locomotive for goods traffic deteriorated from 144 miles in 1975-76 to 139 miles in 1976-77 while the corresponding figures for passenger traffic were 311 miles and 304 miles respectively.

14. The performance of Pakistan Railways during 1976-77 as compared to that of 1975-76, registered a decrease of 9.3% in case of goods traffic (from 5,515 MTM in 1975-76 to 5,000 MTM in 1976-77) and a slight increase of 0.6% in case of passenger traffic (from 7,964 MPM in 1975-76 to 8,008 MPM in 1976-77).

15. Work progressed satisfactorily on the construction of Pipri Marshalling Yard while on Kotri bridge over River Indus the progress was slow because geotechnical investigations were of necessity being conducted again for review of foundation design. Out of the re-engining of 4 Locomotives, three locomotives have already been re-engined and placed on line while the work on the fourth engine is nearing completion. In addition 100 passenger coaches have been manufactured during 1976-77 and shells of 50 passenger carriages have been completed. Moreover 110 BTJs (Bogie Tank wagon for transportation of petroleum) and 43 BTOs (Bogie Tank wagons for transportation of aeroplane fuel) were manufactured. As regards the track rehabilitation programme, against the targets of 90 miles of complete track renewal and 40 miles of sleeper renewal, 75 miles of complete track renewal, 27.5 miles of sleeper renewal and 13 miles of rail renewal were carried out.

The details of 1976-77 programme are as under :—

16. *Rolling Stock*.—The entire allocation of Rs. 231.00 million for 1976-77 was utilized. During this period 3 locomotives were re-engined and placed on line, while substantial progress of work includes the manufacture of 100 passenger coaches, 50 shells of passenger coaches, 110 BTJs type wagons, 43 BTJs and 4 proto-type BG bogie wagons.

17. *Rehabilitation of Track*.—An allocation of Rs. 200.00 million was made for the 1976-77 programme which envisaged 70 miles of complete track renewal on the Karachi-Lahore main line, 20 miles of complete track renewal on Lalamusa-Peshawar branch lines and 20 miles of sleeper renewal each on the main and secondary lines. An expenditure of Rs. 164.00 million was incurred during 1976-77. Physical implementation of work during this period consists of 55 miles of complete track renewal on Karachi-Lahore main line, 20 miles of complete track renewal on the Lalamusa-Peshawar branch lines and 4 and 23.5 miles of sleeper renewal on the main and secondary lines respectively. In addition 13 miles of rail renewal was also carried out.

18. *New Construction*.—Against an allocation of Rs. 56.5 million for 1976-77, an expenditure of only Rs. 16.00 million was incurred. Some portion of the embankment for re-laying of the Bahawalpur-Yazman railway line was completed. For the Muzaffargarh-Alipur and Chichawatni-Chishtian rail links and the Mari-Indus-Bannu section (conversion from NG to BG) the final location surveys, some portion of the embankment and preparation of plans and preliminary soil investigation for the bridges were completed.

19. *Fipri Marshalling Yard*.—An allocation of Rs. 70.00 million was made for 1976-77 against which an expenditure of Rs. 66.00 million was incurred. During this period, work on construction of on ce/residential accommodation for staff and head train examiner's office, which was initiated in previous years, was completed. Work on linking of track, provision of signals, water supply, sewerage arrangements etc. also progressed.

20. *Doubling of Track between Kotri and Guddu including Bridge over River Indus*.—Against an allocation of Rs. 22.00 million for 1976-77 an expenditure of Rs. 24.00 million was incurred. Both the abutments and 9 out of 14 piers have been completed. Eight of the 13 main girders have been completed out of which four have been erected at the site. The work on remaining piers was held up for technical difficulties.

2. Roads

21. An allocation of Rs. 604.238 million was made for Federal roads during 1976-77 against which Rs. 713.383 million were incurred giving a utilization of about 118 per cent.

22. The 1976-77 programme for Azad Kashmir, Northern Areas and Federally Administered Tribal Areas provided Rs. 118.238 million against which an expenditure of Rs. 106.333 million was incurred giving a utilization of about 90%. In physical terms 113 miles were constructed in addition to improvement of 105 miles of existing roads.

23. Rs. 486.00 million were originally allocated for roads and bridges under Ministry of Communications (including Indus Super Highway and Other Roads) against which Rs. 607.050 million were incurred giving a utilization of about 125%. The increase in expenditure was mainly due to enhanced allocation for Indus Super Highway Board. The details of the programme follow :—

24. *Azad Kashmir*.—An allocation of Rs. 35.011 million was made for 1976-77 for metalling of 14 miles and widening and resurfacing of 42 miles of existing roads. An expenditure of Rs. 30.325 million was incurred during 1976-77. All the physical targets envisaged were achieved.

25. *Northern Areas*.—An allocation of Rs. 8.850 million was made for roads during 1976-77. An expenditure of Rs. 17.183 million was incurred on construction of 18 miles of 3 tonner roads, 31 miles of jeepable roads and 30 miles of pony track alongwith improvement of 16 miles of existing roads and improvement/construction of 8 suspension bridges. In addition, work relating to widening black topping of pucca road from Gilgit airport to residency, construction of footpath drainage and electrification of the road at Gilgit and work on construction of black topped road from KKH to Hotel Intercontinental Gilgit were completed.

90.325
17.183
47.508
58.825
106.333

26. *Federal Administered Tribal Areas.*—An allocation of Rs. 74.377 million was made for 1976-77 which was revised to Rs. 75.983 million. The programme envisaged construction of 78 miles of shingle and 55 miles of black top roads and improvement of 95 miles of existing roads. An expenditure of Rs. 58.825 million was incurred on construction of 35 miles of shingle and 15 miles of black top roads and improvement of 47 miles.

27. *Roads and Bridges under Ministry of Communications.*—An allocation of Rs. 486.00 million was originally made for 1976-77 which was increased to Rs. 607.050 million following supplementary grants for the Indus Super Highway Project, Master Plan for Highways, Coastal Road, F.W.O. and Army FATA Projects. The details of the projects are as follows :—

28. *Indus Super Highway project.*—An allocation of Rs. 20.00 million was made for 1976-77 which was later on increased to Rs. 129.00 million. The programme envisaged completion of engineering services by sectional consultants for the Highway and work relating to construction of buildings, workshops, approach roads and procurement of machinery/equipment for the D.G. Khan training centre and acquisition of land for the training centres at Kohat and Sehwan.

29. The entire allocation for 1976-77 was utilized. All preliminary surveys, studies etc. for the Highway were completed and seven Pakistani firms of consulting engineers were appointed for detailed designing.

30. Major part of machinery and equipment for D. G. Khan Centre was procured.

31. *Third Highway project.*—An allocation of Rs. 8.00 million was made for 1976-77 for preparation of road and road structure inventory, traffic/field surveys and preliminary material survey/structural design. The entire allocation for 1976-77 was utilized.

32. *Bridges.*—An allocation of Rs. 100.00 million was made for Nowshera, Attock, D.I. Khan—Darya Khan, Ghazi Ghat and Dadu-Moro Bridges. For Nowshera bridge mobilization and test piling were completed while 23 working piles were driven. In case of Attock Bridge work relating to columns and counterforts for the abutments, piling and piers progressed. Pre-qualification of contractors and mobilization was carried out for the D. I. Khan-Darya Khan Bridge. For Ghazi Ghat Bridge preparation of detailed design drawings and tender documents were completed and mobilization advance paid to contracting firm. In case of Dadu-Moro bridge, works of preliminary nature e.g. surveying, levelling, lining out of the left guide bank etc. were undertaken.

33. *Other projects.*—Preliminary feasibility study for the coastal road was undertaken during 1976-77. In addition, the Rapid Transit System, Traffic Count Programme, Survey of D.I. Khan-Fort Sandeman road and Master Plan for Highways were also financed.

34. *Other Roads.*—An allocation of Rs. 350.229 million was made for 1976-77 which was revised to Rs. 357.20 million. An expenditure of Rs. 410.00 million was incurred. Work progressed on Karakurram Highway, strategic roads and Lowari Tunnel.

35. During 1976-77 the actual expenditure incurred against FWO programme amounted to Rs. 337.00 million. During this period work progressed on the Havelian-Thakot stretch of the KKH. On the Thakot—Hallegush stretch of KKH, 173 culverts, 11 bridges and road formation of 91.61 miles were constructed in addition to 13.67 miles of metalling. On the KKH Skardu Road, 1 bridge, 68 culverts and 12.43 miles of road formation were completed.

36. In Azad Kashmir, 65.45 miles of roads were widened and 13.24 miles of roads were surfaced in addition to construction of 200 culverts and 39 causeways. Surveys for Kohat and Khuzdar areas were completed.

37. In the Marri-Bugti area of Baluchistan, 160 culverts 12 bridges and 102.55 miles of road formation were constructed in addition to shingling of 75.8 miles.

An allocation of Rs. 75.00 million for the Lowari Tunnel Organization for relating to the Chakdara-Chitral road and the Lowari Tunnel, an expenditure was incurred. The physical implementation included 17.4 miles of widening, 12.63 miles of surface dressing and construction of 164 culverts, 4 bridges relating to ancillary structures for the Chakdara-Chitral road. In case of the 1000 yds of excavation from the south Portal was carried out.

3. Road Transport

39. Road Transport in the past has shown fluctuating trends. Among other reasons uncertainty regarding nationalization of transport industry resulted in low sale of buses and trucks in the initial period. However, this was partly offset by increase in the private sector investment on larger number of mini-buses and light commercial vehicles. The position regarding import and sale of road transport vehicles during the past few years may be seen in Annexure-I.

40. *Northern Area Transport Corporation*.—This corporation was established in April, 1974 as a private company fully financed by the Federal Government. The entire allocation of Rs. 9.00 million for 1976-77 was utilized.

41. *Urban Transport Corporation*.—With a view to alleviating transport difficulties of the urban public, the Federal Government decided to establish Urban Transport Corporation in Karachi, Lahore, Rawalpindi and Islamabad in collaboration with the Provincial Governments. Two corporations one each at Karachi and Lahore became functional in February, 1977. The new corporations took over the existing depots of the Provincial Road Transport Corporations at Karachi, Lahore, Rawalpindi and Islamabad alongwith the staff, useable buses, tools, plants and other facilities. In addition, new buses are being acquired to augment the fleet. An expenditure of Rs. 63.30 million was incurred upto 30th June, 1977.

4. Ports and Shipping

42. Against a total allocation of Rs. 743.55 million during 1976-77 for both the Public and Semi-Public Sectors, an amount of Rs. 569.67 million was incurred giving utilization of about 77 per cent. The shortfall mainly occurred in slower implementation of Karachi Port and Shipping programmes.

43. An allocation of Rs. 460 million was earmarked for the port development programme during 1976-77, out of which Rs. 260 million were provided for Port Qasim project which showed a utilization of 114% by incurring an expenditure of Rs. 297 million. Work progressed satisfactorily on the physical construction of the Port. The remaining amount of Rs. 200 million was allocated to Karachi Port which showed a utilization of about 76%. An expenditure of Rs. 132.50 million was incurred by KPT during 1976-77.

44. Against an allocation of Rs. 257 million during 1976-77, only Rs. 114 million was utilized by the National Shipping Corporation for the purchase of two second hand cargo vessels.

45. The details of the programme follows :

46. *Karachi Port* : During 1976-77, against traffic estimates of 7.2 million tons of dry cargo and 4.6 million tons of oil, 4.383 million tons of dry cargo and 4.366 million tons of oil were handled at the Karachi Port upto May, 1977.

47. An allocation of Rs. 200.00 million was made for 1976-77. The 1976-77 programme envisaged continuation of work on the construction of 4 shipping berths and 2 transit sheds at Juna Bunder, remodelling of M. I. Yard under the Third Port Project, construction of oil tanker berth, capital dredging and procurement of trailing suction hopper dredger under the Fourth Port Project. Preliminary investigations for 8 shipping berths of the Western Backwater Complex envisaged under the Fifth Port Project were started.

48. An expenditure of Rs. 132.50 million was incurred during 1976-77, which means a utilization of 75.5%. During 1976-77 balance of works envisaged by the Second Port Project including transit sheds No. 23 and 24 were completed and commissioned. About 750 linear feet of quay piled bulk-head was driven and reclamation works and work on transit shed foundation and piling initiated for the shipping berths at Juna Bunder. For the M. I. Yard work in respect of the import/manufacture of track materials and hydrants was completed. For the oil tanker berths, work relating to cause way structure and approach structure piling was completed and super structure works taken in hand. In case of capital dredging, the designs were completed and pre-qualification applications were considered in consultation with the World Bank. Normal civil and mechanical works were also executed.

49. *Port Qasim*.—An allocation of Rs. 260.00 million was made for 1976-77, which was revised to Rs. 360.00 million. The 1976-77 programme envisaged the following works :

- (a) Provision of services & important transport links.
- (b) Construction of marginal wharf.
- (c) Commencement of work on Iron Ore & Coal berth.
- (d) Partial dredging for marginal wharf.
- (e) Acquisition of craft and equipment.

50. During 1976-77, against the revised allocation of Rs. 360.00 million, an expenditure of Rs. 297.00 million including a Foreign Exchange component of Rs. 146.00 million was incurred on the project. Works relating to preparation of designs and tender documents for the marginal wharf were completed while pre-qualification of dredging contractors was taken in hand. Mobilization for construction work on iron ore and coal berth for the steel mill was started. Procurement of crafts and equipment against U.K. loan progressed. In addition, various hydrographic and hydraulic surveys and work on infrastructural facilities was undertaken. Work on construction of fly-over, rail link and causeway was also initiated.

51. *Napier Mole Bridge*.—The entire allocation of Rs. 15.00 million for 1976-77 was utilized on completion of 15% of piling work.

52. *Pakistan Marine Academy*.—An allocation of Rs. 10.00 million was made for completion of work relating to construction of administrative, residential and instructional blocks. The entire provision was utilized in achieving 75% total implementation of the aforesaid works.

53. *Seamen Training Centre*.—An allocation of Rs. 1.00 million was made for 1976-77. The full amount was utilized.

54. *Navigational Aids on the Coast of Pakistan*.—An allocation of Rs. 0.5 million was made for 1976-77 for repayment of loan to M/s B.B.T. Paris. An expenditure of Rs. 0.17 million was incurred.

55. *Shipping*.—Accounting for the number of ships lost in war or scrapped and new purchase made during 1970—76, the strength of Pakistan merchant fleet towards the close of this period stood 51 ships, with a total dead weight tonnage of 62,600. Of these 49 were general cargo vessels, 1 dry bulk vessel & one oil tanker.

56. The average age of the fleet is on the high-side (15 years) and age distribution unfavourable. The operational efficiency of the general cargo has been low at around 3 tons cargo per DWT per year against world average of 5.0 tons/DWT.

57. During 1976-77, an allocation of Rs. 257.00 million was made for the National Shipping Corporation. The programme envisaged acquisition of 4 second hand dry cargo ships, one second hand tanker and one second hand coaster. However, only 2 second hand cargo vessels were purchased at a cost of Rs. 114.00 million.

5. Civil Aviation

58. An allocation of Rs. 93.00 million was made for 1976-77 for the Civil Aviation sub-sector, to take care of works relating to :—

- (i) Establishment of new Airports.
- (ii) To provide access to far flung areas.
- (iii) Expansion of facilities for Boeing operation at Multan and Faisalabad.
- (iv) Interim Expansion of Terminal Facilities at Islamabad, Karachi and Lahore International Airports.
- (v) Augmentation of equipment for Aerodrome and Communications services.
- (vi) Improvement and strengthening of existing Aerodrome facilities.

59. An expenditure of Rs. 88.126 million was incurred during 1976-77. Work on establishment of aerodromes at Turbat and Saidu Sharif was initiated. Preliminary work on new aerodromes at Ormara, Pasni, Gwadar, and Panjgur was completed.

60. Work also progressed on interim expansion of terminal facilities at Islamabad, Karachi and Lahore airports.

6. Pakistan International Airlines Corporation

61. Against the allocation of Rs. 380.00 million, PIA utilized Rs. 164.22 million during 1976-77. The details of expenditure are given below :

	(Million Rs.)
(i) Wide-bodied Aircraft HANGER, Supporting Workshop and facilities ..	0.72
(ii) Purchase of two used Boeing 707 aircraft	148.50
(iii) Purchase of one used Boeing 720 B aircraft	15.00
Total ..	164.22

62. During 1976-77 PIA handled 39.1% more RPKs and 11.7% more dead weight RFTKs as compared to 1975-76. Corresponding increase in capacity during 1976-77 was 26.7% in ASKs and 26.5% in AFTKs. The details of 1975-76/1976-77 are given in table 2 below :

TABLE 2

	RPKs	ASKs	Dead Weight RFTKs	Dead Weight AFTKs
1975-76	2937	5265	145	332
1976-77	4083	6670	162	420
% increase	39.1	26.7	11.7	26.5

63. The past performance of PIAC over the last few years may be seen in Annex. II.

7. T & T Department

64. Original allocation for 1976-77 amounted to Rs. 380.60 million which was raised to Rs. 470.60 million in the revised budget estimate. The major targets envisaged were installation of 30,000 telephones, opening of 30 telephone exchanges and 20 Nation Wide Dialling Stations, completion of Karachi—Sukkur—Rawalpindi—Peshawar, Muzaffarabad—Abbottabad, Karachi—Manora and Sukkur—Quetta microwave links, installation of co-axial cable system between Haripur—Abbottabad, Sheikhpura—Kharian, Raiwind—Kasur, and expansion of Kharian—Rawalpindi system. Besides opening of 180 PCO and erection of 3,500 open wire lines, was also provided.

65. Actual implementation, covered installation of 20,000 telephones and commissioning of 13 NWD stations at Karachi, Thatta, Rahimyarkhan, Sukkur, Jacobabad, Larkana, Khairpur, Quetta, Khuzdar, Jhelum, Haripur, Rawalpindi and Murree.

66. On long distance network, there was further progress on installation of microwave systems between Rawalpindi—Sukkur—Lahore—Peshawar, Cherat—Kohat, Abbottabad—Muzaffarabad, Karachi—Minora, Sukkur—Quetta, Hyderabad—Badin, Okara—Sahiwal—Chishtian and expansion of telecommunication facilities in Chitral and Larkana areas, 22 single channel V.H.F. and 8 multi-channel UHF/VHF systems.

67. On coaxial cable system work was in progress on Haripur—Abbottabad, Sheikhpura—Kharian and Raiwind—Kasur sections and upgradation of Kharian—Rawalpindi Section.

68. 197 PCOS, 43 small exchanges and 37 telegraph offices were opened and about 1200 miles of line and 5110 miles of wire were erected.

69. 8. Special Communication Organisation. In September, 1976 the work relating to telecommunications in Azad Kashmir and Northern Areas was transferred to Special Communications Organization. During 1976-77 an allocation of Rs. 8.30 million was made which was increased to Rs. 11.62 million in the revised estimates.

70. During 1976-77 in Azad Kashmir 4 manual exchanges have been commissioned at Dudial, Senoa, Tarar Khel and Kahuta, 5 direct speech circuits between Muzaffarabad—Chinari and Bagh—Kahuta and 3 PCO's have been opened at Kel, Jun and Gulpur. Installation of microwave equipment at Muzaffarabad has been completed.

71. In Northern Areas 50 lines C.B. exchange has been commissioned at Karimabad, and another 20 lines exchange has been installed at Astore. 70 miles of new overhead lines has been constructed between Astore and Mirilmery. All equipment of H.F. radio project has been shifted to Gilgit and installation work has started.

72. Achievement of Physical targets during 1976-77 is given in Annex. III.

9. Pakistan Post Offices

73. During 1976-77 Rs. 8.00 million were allocated for on-going schemes including Directorate General Office building and staff quarters at Islamabad. During the year 1976-77, Rs. 4.100 million was spent on Directorate General Office Building and staff quarters. The remaining 3.90 million was spent on construction of Post Offices operational Buildings and residential quarters at various places. During the year 1976-77, 600 Post Offices have been opened.

10. National Transport Research Centre

74. An allocation of Rs. 3 million was made for 1976-77, against which an expenditure of Rs. 0.381 million was incurred as the study on Master Plan for Highway was transferred to Ministry of Communications. During the period work relating to comprehensive transport studies continued.

PROVINCIAL PROGRAMME

75. The total allocation for the provincial programme for 1976-77 amounted to Rs. 906.186 million and Rs. 150.00 million in the public and semi-public sectors, respectively.

76. Province-wise details are as follows :—

1. Baluchistan

77. *Road.*—Against the original allocation of Rs. 93.60 million, Rs. 109.44 million was incurred during 1976-77 for construction of 51 miles of black top roads, 25 miles of shingled roads and improvement of 35 miles of existing roads. In physical terms 34 miles of black top roads and 25 miles of shingled roads were constructed in addition to improvement of 35 miles of existing roads.

2. N.W.F.P.

78. *Roads.*—An allocation of Rs. 122.428 million was made for 1976-77. The programme envisaged construction of 36 miles of black top roads, 82 miles of shingled roads and improvement of 347 miles of all categories of existing roads in addition to completion of work on 18 bridges. Against these targets about 35 miles of black top and 76 miles of shingled roads were constructed and 181 miles of existing roads were improved at a cost of Rs 119.674 million, in addition to completion of work on 16 bridges.

79. *Road Transport.*—A sum of Rs. 5.686 million was provided for 1976-77 in the provincial ADP. In addition, Rs. 25.00 million were provided under the Semi-public sector programme of which Rs. 2.00 million were raised through debentures and Rs. 6.746 million were provided from own resources. The entire amount of Rs. 24.432 million was spent on procurement of 116 buses of which 25 were brought on road.

3. Sind

80. *Roads*.—An allocation of Rs. 269.20 million was made during 1976-77 for construction of 360 miles of new roads, improvement of 300 miles of existing roads and completion of work on some bridges. An estimated Rs. 286.30 million were spent on construction of 267 miles of new roads and improvement of 350 miles of existing roads in addition to completion of work on 18 bridges.

81. *Road Making Machinery*.—14 Road rollers from China and 2 dumper trucks from West Germany were imported and shipment of 2 dumpers from France is expected. Local purchase of Shahzoor Road rollers and Bedford trucks is also underway.

82. *Road Transport*.—An allocation of Rs. 25.00 million was made during 1976-77 for repair of the existing fleet. However, no expenditure was incurred.

4. Punjab

83. *Roads*.—An allocation of Rs. 408.811 million was made for 1976-77 for widening/reconditioning of 200 miles of existing roads, construction of 150 miles of new roads in addition to completion of work on two major bridges one over river Chenab near Wazirabad and the other on Bein Nullah near Shakargarh. The estimated expenditure stands at Rs. 450.842 million. In physical terms 150 miles of roads were constructed, 200 miles of road were improved and work on 2 bridges was completed.

84. *Road Transport*.—An allocation of Rs. 6.461 million was provided in the provincial ADP 1976-77 in addition to a provision of Rs. 100 million in the Semi-Public Sector. The programme envisaged re-organization of work on setting up of depots at Sargodha, Sahiwal, Bahawalpur and Jhang. An expenditure of Rs. 7.461 million was incurred, which included Rs. 0.6 million from the semi-public sector.

PROGRAMME FOR 1977-78

85. The overall financial allocation for 1977-78 in the Transport & Communications Sector is 3,856 million. The 1977-78 allocation envisages a deceleration of 2.6 per cent over the 1976-77 provision of Rs. 3,959.6 million but an acceleration of about 3.7 per cent over the actual utilization during 1976-77 which amounted to Rs. 3,716 million. The Public Sector allocation of Rs. 3,433 million, however, provides for an escalation of about 15% over the 1976-77 allocation of Rs. 2,972 million. In the Semi-Public Sector the allocation of Rs. 423 million for 1977-78 is about 57 per cent less than Rs. 987 million the original allocation for 1976-77 and about 4.4 per cent less than the actual utilization of Rs. 442.4 million. This is mainly due to the reason that the allocation for Shipping Corporations will be subject to the decision regarding the merger of the two Corporations.

86. The 1977-78 public sector programme envisages an allocation of Rs. 3,433 million out of which Rs. 2,688 million has been allocated for the Federal Programme which is about 78.3% of the total outlay. The remaining amount of Rs. 745 million constituting about 21.7% of the total public sector programme has been allocated for the provincial programme.

87. The financial allocations for 1977-78 as well as the financial allocations and utilization for 1976-77, are given in Table No. 7

Strategy for 1977-78

88. The following strategy which has been initiated recently for Transport and Communications Sector would be pursued during 1977-78 :—

- (i) Major share of long haul bulk freight traffic to be handled by the Railway.
- (ii) Integrated development of different modes of transport.
- (iii) To avoid dilution of resources, number of schemes to be kept at the minimum possible level.
- (iv) Highest priority/adequate financial coverage to be given to on-going schemes nearing completion for early realization of benefits from investments made.
- (v) Improvement of Communication facilities in backward areas to open up these areas and facilitate development.

- (vi) The improvement and construction of roads to conform to standard designs and specifications.
- (vii) Augmentation of port capacity to progress at maximum feasible rate. The future plans of the Karachi Port and Port Qasim to be coordinated to avoid duplications.
- (viii) Capacity of railway to be increased by removing operational bottlenecks and meet requirement of rehabilitation and replacement of worn-out assets.
- (ix) For better planning, comprehensive transport studies to continue.
- (x) The telecommunications system will be improved by providing additional capacity, installation of microwave and carrier system and opening up of new Public Call Offices.

89. Keeping in view the above strategy, an allocation of Rs. 935.7 million has been made to the Pakistan Railways which is the highest ever made to it giving an increase of about 51% over the actual expenditure during 1976-77, to enable it to carry out the track rehabilitation work, ensure completion of Pipri Marshalling Yard by December 1978 in addition to the re-engining of 10 locomotives and manufacture of 150 passenger coaches. During 1977-78, an allocation of Rs. 1,343.448 million has been made for the construction of 1 005 miles of roads and improvement of 657 miles of roads under the Federal and Provincial programme.

90. Adequate funds have also been provided for the development of ports, especially for the Port Qasim project. An amount of Rs. 530 million has been provided during the current financial year so as to provide for the appropriate port facilities to enable it to take ships of 25,000 DWT by mid 1978 and 50,000 dwt by mid 1979 as required by Pakistan Steel Mills Corporation in accordance with their time schedule for operation of the Karachi Steel Mills. The programme also provides for progressing the work on the Pakistan Marine Academy and the Napier Mole Bridge.

91. A provision of Rs. 430 million has been made to the T&T Department and the SCO for the expansion and improvement of the telecommunication system. The main strategy to be followed during the current year is to slow down the installation of new telephone lines and divert the resources on improvement of the system.

FEDERAL PROGRAMME

1. Railway

92. The main problems of the Railway continue to be organizational and operational, which has adversely affected the capacity. The situation has improved some what following implementation of the Crash Plan and other operational reforms but considerable improvement is still needed to bring the operation of Pakistan Railway at a satisfactory level.

93. The performance for 1977-78 envisages an improvement of about 19% in wagon utilization by reducing the wagon turn around time from 17.3 days in 1976-77 to 14 days in 1977-78. Moreover the average net-tons per freight train would be increased to 625 tons as compared to 600 tons during 1976-77. The daily mileage per diesel electric locomotive for goods traffic would increase by about 15% from 139 miles in 1976-77 to 160 miles in 1977-78 while the corresponding figures for passenger traffic would improve by about 11.8 percent from 304 miles to 340 miles. However this could be achieved only after the railway is relieved of uneconomic short haul operations for Govt. controlled commodities like rice and wheat which they are forced to undertake during 1976-77.

94. An allocation of Rs. 935.70 million has been made for 1977-78 which means an increase of 37% over the 1976-77 provision. The details of 1977-78 programme are as follows :—

95. *Rolling Stock.*—An allocation of Rs. 250.00 million (with FEC of Rs. 101.0 million) has been made for 1977-78. The 1977-78 rolling stock programme provides for the re engining of 10 locomotives and manufacture of 150 passenger coaches. Manufacture of proto-type BG bogie wagons will also be undertaken.

96. *Construction of New Lines.*—Work on new construction will be slowed down during 1977-78 and only Rs. 15.60 million have been provided for continuing work on construction of Bahawalpur-Yazman, Chichawatni-Chistian and Mazuffargarh-Alipur rail links and conversion of the Mari Indus-Bannu section from narrow gauge to broad gauge.

97. *Pipri Marshalling Yard*.—An allocation of Rs. 96.00 million with a FEC of Rs. 8.17 million has been made for 1977-78. During 1977-78 work on linking of track, provision of suigas, water supply and sewerage arrangements etc will continue. The project is expected to be completed by December 1978.

98. *Rehabilitation of Track*.—An allocation of Rs. 285.00 million (FEC of Rs. 201.00 million) has been made for 1977-78, which means an increase of 42.5% over the 1976-77 allocation. The 1977-78 programme envisages complete track renewal of 90 miles with 100 Lbs rail on the Karachi Lalamusa-Peshawar section and 35 miles of rail renewal and 110 miles of sleeper renewal on other sections. Rs. 32.00 million have been earmarked for construction of new sleeper factories to increase the indigenous capacity for sleeper manufacture.

2. Roads

99. Following strategy has been proposed for the road development programme :—

- (1) Highest priority would be given to the ongoing nearing completion projects.
- (2) No new projects will be undertaken except for providing accessibility to remote areas.
- (3) Work on Farm-to-Market Roads will continue.
- (4) Work on major bridges will continue.

100. An allocation of Rs. 604.928 million has been made for the Federal roads. The programme envisages 391 miles of new construction and 68 miles of improvement of existing roads in the country. The details are as follows :

101. *Azad Kashmir*.—An allocation of Rs. 35.128 million has been made for 1977-78 for metalling of 27 miles of roads and completion of work on construction of the Malwani Nullah, Chella Bandi, Rajdhani and Chalpam bridges. In addition, work relating to 8 suspension bridges will also be undertaken.

102. *Northern Areas*.—An allocation of Rs. 10.10 million has been made for 1977-78. The emphasis of the 1977-78 programme is on construction of 30 miles of jeepable link roads in the area.

103. *Federally Administered Tribal Areas*.—An allocation of Rs. 50.00 million has been made for 1977-78. The programme envisages construction of new shingled and black top roads totalling 51 miles and 17 miles respectively, in addition to the improvement of 68 miles of existing roads.

104. *Roads/Bridges under Ministry of Communications*.—An allocation of Rs. 507.70 million has been made for 1977-78. Of this amount Rs. 130.00 million have been earmarked for construction of major bridges, Rs. 42.70 million for the Indus Super Highway Project and Rs. 310.00 million for other roads. Other projects to be provided for, include studies of the Rapid Transit System, Master Plan for Highways and D. I. Khan-Fort Sandeman road.

105. *Other Roads*.—An allocation of Rs. 310.00 million has been made for FWO/LTO for completion of work on Karakurum Highway and other strategic Roads. Work on Lowari Tunnel will also continue.

106. The FWO programme provides for the completion of 3 bridges on the Havelian-Thakot stretch and construction work on 316 culverts, 11 bridges, metalling of 131 miles and road formation of 27 miles on the Thakot-Hallegush stretch of the KKH. For KKH-Skardu road, construction work on 3 bridges, 40 culverts and 20.51 miles of road formation are planned. For Azad Kashmir the programme envisages construction of 200 culverts, 30 causeways, 37 miles of metalling and 93 miles of road formation. In Marri-Bugti area of Baluchistan 12 miles of road formation will be completed. Shingling of 40 miles and construction of 40 miles, of road formation will be carried out for the road at Dhodak.

3. Road Transport

107. *Northern Areas Transport Corporation*.—An allocation of Rs. 8.00 million has been made for 1977-78. The programme envisages construction of main workshop and head office at Gilgit.

108. *Federal Urban Transport Corporation.*—ADP 1977-78 provides an allocation of Rs. 25.00 million for improving the condition of buses and depots which are in a deplorable state. Special measures are being taken to stop pilfering of revenues, stores, spare parts etc.

4. Ports & Shipping

PORTS

109. *Traffic & Capacity.*—The dry cargo port traffic handled and forecasts upto 1982-83 together with capacity requirements and proposed capacity development has been given in Table 3 below :—

TABLE 3

Year	Traffic (Million Tons)	Allocation (Rs. Mill)		Capacity (Mill. Tons)			
		Port Qasim	Karachi Port	Port Qasim	Karachi Port	Total	Deficit Surplus
1974-75..	5.684	100.00	63.00	—	5.00	5.00	—0.684
1975-76..	5.800	128.00	182.00	—	5.00	5.00	—0.800
1976-77..	6.567	260.00	200.00	—	5.00	5.00	—1.567
1977-78..	7.806	530.00	200.00	1.20	5.80	7.00	—0.806
1978-79..	8.370	500.00	220.00	3.60	5.80	9.40	+1.03
1979-80..	10.372	350.000	235.00	3.40*	5.80	9.20	—0.172
1980-81..	11.947	250.00	235.00	5.81	5.80	11.61	—0.337
1981-82..	12.900	60.00	140.00	5.81	5.80	11.61	—1.290
1982-83..	13.936	55.00	110.00	5.81	5.80	11.61	—2.326

*Capacity deficiency beyond 1979-80 would be met at either port depending upon relative economics.

110. It is estimated that with the completion of 4 Juno Bunder Berths in 1977-78 the dry cargo capacity at Karachi Port will reach 5.80 million tons. Also 1.2 million tons capacity at the Qasim Port would become available by 1977-78 after the completion of its 4 Marginal Wharf Berths.

111. The oil capacity at Karachi Port, which at present is 5.5 million tons, is sufficient to meet the current demands but because of the deteriorated condition of the oil pier III, and to meet the future oil cargo traffic, work on IVth oil pier has been started under the World Bank Loan. On completion of this pier, the total capacity will rise to 10.00 million tons by the end of 1978.

112. The allocation for development of ports during 1977-78 is of the order of Rs. 775.50 million. The principal features of the development programme are detailed below :—

113. *Port Qasim.*—Major efforts of Port Mohammad Bin Qasim Authority are at present directed towards construction of Marginal Wharf, (4 berths), Iron Ore and Coal berth, acquisition of craft and equipment, aids to navigation and related works/essential infrastructures and preliminaries for dredging of navigation channel. It is estimated that the port facilities will be ready to take ships of 25,000 dwt by mid 1978 and 50,000 dwt by mid 1979 as required by Pakistan Steel Mill Corporation in accordance with their time schedule for operation of the Karachi Steel Mill, as well as, to relieve the congestion at Karachi Port. In case of 4 berths of the marginal wharf casting dock construction has been taken in hand, and in case of Iron Ore and Coal berth, mobilization is an in advanced stage.

114. An allocation of Rs. 530.00 million has been made for 1977-78 which exceeds the 1976-77 provision by 103.85%. The 1977-78 programme provides for partial construction of marginal Wharf (about 25%), completion of iron ore and coal berth, partial dredging of navigational channel and some essential components such as aids to navigation and infra-structural facilities.

115. *Karachi Port*.—An allocation of Rs. 200.00 million has been made for 1977-78. The programme covers only on-going projects and no new projects are envisaged. The strategy is to augment capacity through separate package projects. Work will thus continue on implementation of the schemes already underway, under the Third, Fourth and Fifth Port Projects in addition to normal civil and mechanical works.

116. *Pakistan Marine Academy*.—An allocation of Rs. 20.00 million has been made for 1977-78 for completion of work relating to the construction of administrative, residential and accommodation blocks of the Academy and provision of training aids.

117. *Napier Mole Bridge*.—An allocation of Rs. 22.00 million has been made for 1977-78 for completion of piling work.

SHIPPING

118. The strategy for shipping for 1977-78 is as follows :

- (i) Greater emphasis will be laid on organizational, operational and administrative efficiency of shipping companies. In this context the issue of merger of NSC and PSC will be resolved.
- (ii) Efforts should be made to modernise the liner fleet by acquisition of standard vessels.
- (iii) Preference will be given to construction of vessels for the national fleet by the K.S.E.W.

119. The investment for development programme will mainly depend on the decision on merger of the two corporations and availability of foreign loans.

5. Civil Aviation

120. A provision of Rs. 92.43 million has been made for 1977-78 which is almost the same as for 1976-77. The 1977-78 programme includes improvement and expansion of aerodrome facilities at Pasni, Gawadar and establishment of Basic aerodrome facilities at Ormara and Saidu Sharif in Swat. In addition, other essential works for improvement of flight safety would be carried out and work on the on-going projects of expansion of facilities at Karachi, Faisalabad and Islamabad will continue. Work on the expansion of the Lahore Air Terminal will also be taken in hand.

6. P. I. A. C.

121. During the 5th Plan period, it is proposed to augment capacity of the airline from 1,315 million tonne kilometers in 1977-78 to 2616 million tonne kilometers in 1982-83 while passenger capacity is expected to increase from 8,832 million seat kilometers to 18,153 million seat kilometers, which means an increase of about 100% and 105% respectively. These targets will be achieved through a fleet augmentation programme, which among other things would require augmentation and improvement of ground facilities.

122. The 1977-78 programme envisages an allocation of Rs. 192.80 million. Adequate provision has been made for maintaining a reasonable momentum of construction work on the wide bodied aircraft hanger, supporting workshops and facilities and the air cargo terminal. Work on automation of passenger reservation and check in system, new town terminal complexes at Karachi and Lahore and new cargo terminals at Lahore and Islamabad will be initiated. Part payment for wide bodied aircraft flight simulator will also be made. Induction of short haul wide bodied aircraft has also been envisaged.

123. PIA handled 3200 million passenger kilometers, 146 million tonne kilometers on international and 883 million passenger kilometres, 16 million tonne kilometres on domestic routes during 1976-77. The projections for 1977-78 are 4070 million passenger kilometers, 194.5 million tonne kilometers on international and 1077 million passenger kilometers, 24.5 million tonne kilometers on domestic routes. The detailed comparison of estimated figures for 1976-77 and

projected figures for 1977-78 is as shown in table 4 below :—

TABLE 4

(Figures in million)

	1976-77	1977-78	% Increase
RPK's	4,083	5,147	26.1
International	3,200	4,070	27.1
Domestic	883	1,077	21.9
ASK's	6,670	8,609	29.1
International	5,353	6,958	29.9
Domestic	1,317	1,651	22.6
Dead Weight RFTK's	162	219	35.2
International	146	194.5	33.2
Domestic	16	24.5	46.8
Dead Weight AFTK's	420	424	0.9
International	360	374	3.8
Domestic	60	50	16.6

124. The projected increase during 1977-78 in RPK's is 26.1% and increase in RFTK's is 35.2% over that of 1976-77. Corresponding increase in capacity is planned to be 29.1% for ASK's and 0.9% for AFTK's

125. The position of the fleet in 1977-78 has been indicated in table 5 below :

TABLE 5

PIA Fleet

PIA Operations	No. of air- crafts as on 30th June, 1976	30th June, 1977
Boeing 747	2	2 (on lease from TAP)
DC-10-30	3	4
Boeing 707	5	7
Boeing 720-B	5	6
Fokker F-27	8	8
	23	27

7. Telecommunications

126. An allocation of Rs. 430.00 million has been made for the expansion and improvement of telecommunication system. Out of this Rs. 415.00 million have been earmarked for Telegraph and Telephone Department, Rs. 403.20 million for on-going schemes and Rs. 11.80 million for new schemes. Rs. 15.00 million has been earmarked for Special Communications Organization for development of telecommunications in Northern Areas and Azad Kashmir.

127. *Strategy for 1977-78.*—(i) Concentrating on on-going projects with higher priority or nearing completion schemes and the schemes which contribute towards improvement of capacity.

(ii) Removing bottlenecks in multi-exchange areas for optimum utilization of the installed exchange capacity.

(iii) To slow down on the installation of new telephone lines and divert the resources on improvement of the system.

(iv) To continue providing basic telecommunication links to remote areas by providing PCOs.

128. Following are the main targets :—

(i) Installation of 15,000 telephones.

(ii) Installation of 15 N.W.D. stations, 20 small exchanges and 15 trunk positions.

(iii) On long distance network work will be in progress on Karachi-Sukkur-Rawalpindi-Peshawar, Sukkur Quetta, Hyderabad-Badin, Shikarpur-Larkana-Dadu-Moro, Sahiwal-Arifwala-Burewala-Chishtian microwave links. Also installation of 31 P.C.M. systems 100 single channel V.H.F. & 8 multi channel V.H.F. systems, 7 open wire carrier systems and 4 cable carrier systems will be completed.

(iv) Opening of 50 PCO's, 15 telegraph offices and erection of 5000 miles of open wire.

(v) Construction of Central Telecommunication Research Laboratories at Islamabad.

129. An allocation of Rs. 15.00 million has been made in the A.D.P. 1977-78 to Special Communication Organization.

130. In Northern Areas 11 new exchanges and 7 PCO's will be opened. Overhead lines between Gilgit-Gupis, Astore-Ratu and Skardu-Olding will be installed. In Azad Kashmir 5 small exchanges and 7 PCO's will be opened, 3 small auto exchanges will be replaced by C. B. exchanges, capacity of 3 manual exchanges will be increased 3 auto exchanges at Mirpur, Rawalakot and Kotli will be commissioned.

131. Traffic forecast based on actual traffic during previous years, is given in table 6.

TABLE 6

Year	Actual traffic handled	
	Million calls	ACGR
1966-67	28.67	} 9.2%
1976-77	70.50	
Forecast at 9.2% ACGR from 1977-78 to 1979-80 (before NWD is commissioned)		
1977-78	76.98	
1978-79	84.06	
1979-80	91.80	

131. Traffic forecast based on actual traffic during previous years, is given in table 6.

TABLE 6

Forecast at 14% ACGR from 1980-81 to 1982-83
(after NWD is commissioned)

1980-81	..	..	..	..	..	..	..	104.65
1981-82	..	..	..	..	..	..	..	119.30
1982-83	..	..	..	..	..	..	..	136.00

132. The physical targets of telecommunications programme during 1977-78 are given in Annexure-III.

8. Pakistan Post Offices

133. During 1977-78, an allocation of Rs. 15.00 million has been made Rs. 13.50 million for on-going works and Rs. 1.500 million for new works. The main expenditure of Pakistan Post Office Department will be on Directorate General Office Buildings and Residential quarters for its staff at Islamabad.

134. During the year 1977-78, 600 new Post Offices, 525 in rural and 75 in urban areas will be opened. The number of post offices at the end of 1978 will rise to 10243.

9. National Transport Research Centre

135. An allocation of Rs. 1.30 million has been made to the NTRC for 1977-78 to enable it to continue its basic transport research work and undertake studies in the field of transportation.

10. Science & Technology Division

136. An allocation of Rs. 0.20 million have been provided in the ADP 1977-78 for establishment of Road Research Laboratories at Tandojam.

PROVINCIAL PROGRAMME

137. The allocation for Provincial Programme for 1977-78 amounts to Rs. 741.62 million and Rs. 30.000 million in the public and semi-public sectors, respectively. The situation regarding the average allocation per scheme has improved in N.W.F.P. and Baluchistan provinces while it further deteriorated in Punjab and Sind. Province-wise details are as follow :—

1. Baluchistan :

138. *Roads.*—An allocation of Rs. 74.316 million has been made during 1977-78 for important on-going works namely RCD high way, Loralai-D. G. Khan road, Belpat-Lehri road, Liar-Lakhra road, improvement of Bela-Awaran road, completion of remaining work on Harnai-Singjevi road, completion of Kanak-Sammangli road and Khanpur bridge. Adequate provision has been made for meeting the rupee cost on procurement of earth moving machinery under Italian Loan.

139. In spite of large number of pressing demands from various quarters only a modest programme of new roads has been proposed for 1977-78. Thus the allocation for individual scheme has risen from Rs. 2.752 million in 1976-77 to Rs. 4.371 million in 1977-78. This programme includes construction of 55 miles of black top roads, 34 miles of shingle roads (RCD Highway Wadh-Kanar Section) in addition to improvement of 10 miles of existing roads.

2. N. W. F. P.

140. *Roads.*—An allocation of Rs. 105.304 million has been made for 1977-78 for construction of 34 miles of black top roads, 71 miles of shingle roads, 149 miles of improvement, and completion of work on 13 bridges. In order to achieve maximum benefits from investment in this sector, the allocation for schemes has risen from Rs. 0.887 million in 1976-77 to Rs. 1.032 million in 1977-78.

141. *Road Transport*.—Rs. 4.000 million has been provided in the provincial ADP for 1977-78. In addition Rs. 17.00 million are provided in the semi-public sector. The programme envisages purchase of 60 buses as replacement, improvement of workshop facilities and procurement of spare parts.

3. Sind

142. *Roads*.—ADP 1977-78 provides Rs. 238.90 million for construction of 200 miles of new roads and improvement of 280 miles of existing roads. The provision includes Rs. 30.10 million for road making machinery and restoration of flood damages. No new schemes have been included in the programme due to resource constraint thereby ensuring adequate provision for high priority roads. However, the position further deteriorated as the average allocation per scheme could not exceed Rs. 0.853 million during 1977-78 as compared to Rs. 1.319 million during 1976-77.

4. Punjab

143. *Roads*.—An allocation of Rs. 320.00 million has been made for 1977-78 for construction of 200 miles of new roads and widening/improvement of 150 miles of existing roads. Flood restoration work will also be undertaken. However, due to resource constraint the average allocation per scheme was less i.e. Rs. 1.261 million during 1977-78 compared to Rs. 1.560 million during 1976-77.

144. *Road Transport*.—Rs. 2.60 million has been provided in the provincial ADP for 1977-78. In addition, Rs. 13.00 million are provided in the semi-public sector. The programme envisages continuation of work on on-going schemes viz construction of depots at Sahiwal, Bahawalpur, etc..

TABLE 7
Financial Allocation During 1976-77 & 1977-78

Sector/Sub-Sector	(Rs. in million)					
	1976-77			1977-78		
	Original Allocation	Utilization	Performance%	Allocation	Percent of total T & C Sector	Acceleration/Deceleration 1976-77/1977-78%
1	2	3	4	5	6	7
PUBLIC SECTOR						
A. Federal						
1. Pakistan Railway ..	682.00	620.000	90	935.70	24.30	+37
2. Ports & Shipping :						
(i) D.G.P.&S. ..	11.550	11.1700	97	23.50	0.61	+104
(ii) Port Qasim ..	260.000	297.000	114	530.000	13.76	+104
(iii) Napier Mole Bridge	15.000	15.000	100	22.00	0.57	+47
Sub-total (P&S)	286.550	323.170	113	575.50	14.94	+101

	1	2	3	4	5	6	7
3. Civil Aviation ..	93.000	88.126	95	92.43	2.40	-0.061	
4. Roads :							
(a) Azad Kashmir ..	35.011	30.325	87	35.128	0.91	+0.33	
(b) Northern Areas ..	8.850	17.183	194	10.100	0.26	+14.10	
(c) FATA ..	74.377	58.825	79	50.00	1.30	-32.77	
(d) Other Roads ..	350.229	410.00	117	310.00	8.05	-11.40	
(e) M/O. Comm. Road & Bridges	135.771	197.05	145	199.70	5.18	+47.00	
Sub-Total (Roads)	604.238	713.383	118	604.928	15.70	+0.10	
5. Road Transport :							
(a) Federal Urban Transport Corp.	—	63.300	—	25.000	0.65	—	
(b) Northern Areas Transport Corp.	9.000	9.000	100	8.000	0.21	-11.1	
6. N.T.R.C. ..	3.000	0.381	19	1.300	0.03	-56.66	
7. Telegraph & Telephone	380.600	470.60	124	415.000	11.16	+30.00	
8. S.C.O.				15.000			
9. Post Offices ..	8.000	8.000	100	15.000	0.39	+87.50	
10. Science & Technology Div.	—	—	—	0.200	—	—	
Sub-Total (Federal)	2,066.388	2,295.960	111	2,688.058	69.77	+30.00	
B. Provincial							
1. Roads in Punjab ..	408.811	450.842	110	320.000	8.31	-21.72	
2. Punjab Road Trans- port Board ..	6.461	6.861	106	2.600	0.07	-59.76	
3. Roads in Sind ..	269.200	285.30	105	238.90	6.04	-11.20	
4. Roads in NWFP ..	122.428	119.674	98	105.304	2.73	-14.00	
5. NWFP Road Trans- port Corporation ..	5.686	5.686	100	4.00	0.10	-29.60	
6. Roads in Baluchistan	93.600	109.44	116	74.316	1.93	-20.60	
Sub-Total (Provincial)	906.186	977.803	108	745.12	19.32	-17.70	
Total Public Sector	2,972.574	3,273.763	110	3,433.178	89.04	+15.40	

	1	2	3	4	5	6	7
SEMI PUBLIC SECTOR							
A. Federal							
1. Karachi Port ..	200.00	132.50	66	200.00	5.19	—	—
2. National Shipping Corporation ..	257.000	114.00	44	*	—	—	—
3. Pakistan Shipping Corporation ..	—	—	—	*	—	—	—
4. P.I.A.C. ..	380.000	164.22	43	192.80	5.00	—49.20	—
Sub-Total (Federal)	837.00	410.72	49	392.80	10.20	—53.10	—
B. Provincial							
1. P.R.T.B. ..	100.00	0.600	0.6	13.00	0.34	—87.00	—
2. S.R.T.C. ..	25.00	12.300	49	—	—	—	—
3. NWFP R.T.C. ..	25.00	18.746	75	17.00	0.44	—32.00	—
Sub-Total (Provincial)	150.00	31.646	21	30.00	0.78	—80.00	—
Total Semi-Public Sector	987.00	442.366	45	422.800	10.96	—57.20	—
GRAND TOTAL T&C	3,959.574	3,716.129	94	3,855.978	100.000	—2.60	—

*This will depend on the availability of foreign loan and the final approval of the programme 1977-78 by the Planning Commission.

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CHAPTER 10

MASS MEDIA

The financial resources made available to radio, T.V., APP, and other public sector media agencies for development programme went up from Rs. 12.60 million in 1970-71 to Rs. 135.89 million in 1973-74 and further to Rs. 211 million in 1976-77. The main purpose of this rapid expansion was to make information and entertainment available to the maximum number of people in all parts of the country and to use the media for socio-economic development. The radio and T.V. Corporations have thus been able to extend the broadcasting facilities to the far flung areas of the country. The coverage of T.V. at present is 72 per cent and of radio 88 per cent of the population.

2. In the field of films, a National Film Policy was announced by the Government in July, 1974 and a State Film Authority set up to implement this policy. The State Film Authority produced some short films for children's education. The State Film Authority also appointed special committees for pre-scrutiny of film scripts, with the objective of eliminating plagiarism and obscenity from the commercial films. A National Film Development Corporation (NAFDEC) was also established in 1973 to regulate import and distribution of film raw stock, produce quality films, set up studios and provide other technical facilities for film making. A National Academy for Film, Radio and T.V. is being set up to impart in-service training to the programme and engineering staff of radio and T.V. corporations and employees of the public and private film enterprises.

REVIEW OF 1976-77

3. The total ADP of various Mass Media agencies for 1976-77 amounted to Rs. 210.893 million, of which Rs. 100 million were to be financed by debentures for T.V. programme. The revised estimates place the total expenditure at Rs. 229.866 million as shown in the following table :

TABLE I

Mass Media ADP Allocations and utilization, 1976-77

Sub-Sector	Total Allocation	Budgetary Allocation	Extra Budgetary Financing	Revised Estimates 1976-77
1. Television	165.000	65.000	100.000	174.063
2. Broadcasting	41.000	41.000	—	46.300
3. Economic Publicity	0.600	0.600	—	0.600
4. A.P.P.	2.893	2.893	—	7.153
5. National Academy for TV, Radio and Films	1.000	1.000	—	0.750
6. State Film Authority	0.400	0.400	—	—
Total ..	210.893	110.893	100.000	229.866

4. The main reasons for higher expenditure are that the Government directed the radio, T.V. and A.P.P. to create extra facilities during the second half of the financial year. A review of the performance of each agency during 1976-77 is as follows :

Pakistan Television Corporation

5. *Financial Allocation and Utilization.*—The Pakistan Television Corporation was allocated Rs. 165.00 million in the A.D.P. 1976-77 (debentures Rs. 100 million and development loan Rs. 65.00 million). The revised estimates are placed at Rs. 174.063 million, due to additional development undertaken at Government instance like the colourization of Rawalpindi-Islamabad

T.V. Centre and setting up of filming units at various T.V. centres and lab. facilities at Quetta T.V. station. During the year, the Pakistan Television Corporation was able to increase the population coverage by an additional 7.44 million and extend the area coverage by about 12 per cent, compared to 11.3 million and 18 per cent respectively as envisaged in the Annual Plan. The shortfall in achievement was due to the late release of funds, especially foreign exchange, and difficult working conditions encountered in areas like Lak-Pass (Baluchistan) and Thandiani-Naran (N.W.F.P.). The scheme-wise physical progress is as follows :

Physical Progress

(i) *Islamabad T.V. Complex.*—Construction work of the complex costing Rs. 214.6 million was started during the year. The physical progress by June, 1977 was 26 per cent compared to 38 per cent envisaged earlier. Orders for colour equipment could not be placed due to non-release of funds.

(ii) *Lahore and Karachi T.V. Stations.*—The civil works in Phase-II were completed during the year. Colour equipment has been installed at both these stations and colour broadcasts started from December 1976, by making interim arrangements. The overall physical progress achieved was 49 per cent in each case, compared to 52 per cent and 57 per cent envisaged in the Annual Plan, 1976-77.

(iii) *Quetta and Peshawar T.V. Stations.*—Work on the construction of Peshawar station building continued at a slow pace and 31 per cent physical progress could be achieved as compared to 45 per cent envisaged earlier. At Quetta, construction was started late due to delay in the formalities involved in land acquisition and scrutiny of tender documents. On an overall basis, the physical progress was 21 per cent.

(iv) *Rebroadcast Centres, Shujabad, Sahiwal, Shikarpur, Chishtian.*—The centres at Shujabad, Sahiwal and Shikarpur were completed except for minor works and transmission of programmes started from all these units. A temporary T.V. Transmitter has been installed at Chishtian-Burewala in a rented premises during the year to benefit a population of about one million. Meanwhile, the building and other civil works were started on the permanent rebroadcast centre and the expenditure incurred so far was Rs. 29.83 million, the physical progress being 37 per cent. The following table shows the area-wise coverage of population by the newly commissioned rebroadcast centres.

TABLE II

Additional Areas and Population covered by T.V. Boosters / Links

T. V. Boosters	Link from	Areas to be covered	Population to be covered (million)
Shikarpur	Karachi/Lahore.	Larkana, Shikarpur, Rohri, Jacobabad, Garhi Yaseen, Khairpur, Zar Khan.	2.763
Sahiwal	Do.	Pak Pattan, Okara, Arifwala, Chicha Watni, Kassowal, Toba Tek Singh, Kamalia, Mian Channu, Renala Khurd.	3.676
Chistian	Do.	Bahawalnagar, Haroonabad, Fort Abbas, Minchinabad, Takht Mahal, Donga Bonga.	1.000
Total			7.439

On Rojhan Rebroadcast Centre, work was started during the year and 75 per cent of the work was completed. At Naran, however, only 25 per cent progress was achieved during the year because of difficult working conditions.

(v) *T.V. Links at Thandiani, Lak-Pass.*—Civil works were completed at Thandiani. The works at Lak Pass were nearing completion. Both transmitters have started test transmission. The Murree-Balakot, Thandiani link covers a population of 0.4 million in Mansehra, Balakot, Garhi Habibullah areas (N.W.F.P.) while the Lak Pass provides coverage to 0.13 million people in Mastung, Kalat, Johan, Manguchar and Schikh areas of Baluchistan.

(vi) *T.V. Link Thandiani-Naran.*—Work on extension of T.V. link from Tandiani to Naran was started during the year at a cost of Rs. 34.33 million. A sum of Rs. 12.67 million was spent up to June, 1977. The physical progress recorded was only 25 per cent due to difficult working conditions in the area.

(vii) *Thana Bulla Khan, Sakeser and Cherat Rebroadcast Centres.*—With the addition of technical facilities required for colour transmission these centres have been fully completed.

Programme Performance

6. The Television Corporation telecast general purpose and public service programmes for 13,200 hours during 1976-77 from all stations or 254 hours weekly. This showed an increase of 378 hours over 1975-76. The average weekly duration of various categories of programmes is : news and current affairs 30 hours ; education, motivation and information 104 hours ; music-entertainment 1.0 hours ; commercial spot advertising 9 hours ; miscellaneous programme 1 hour. The ratio of imported programmes to indigenous programmes is 1 : 5. The Corporation completed the colourization programme at Lahore and Karachi T.V. Stations. Also, one colour studio was added at the Rawalpindi-Islamabad T.V. Centre. For special audiences, adult functional literacy programmes on a daily basis and rural programmes (one a week) were telecast. Important programmes were beamed from all the stations on the microwave system.

7. *Programme Cost.*—The Pakistan Television Corporation operated 3 main T.V. stations, Rawalpindi-Islamabad, Lahore and Karachi and two pilot T.V. Centres at Quetta and Peshawar. Other Boosters/Rebroadcast centres were at Murree, Cherat, Sakesar, Thana Bulla Khan, Shikarpur, Shujabad, Sahiwal and T.V. links at Murree-Thandiani and Lak-Pass. The cost of 13,200 hours of programmes was Rs. 184.23 million. The unit cost was Rs. 233.20 per minute in 1976-77, against Rs. 175.74 per minute in 1975-76. This was mainly due to increase in production and management expenses related to generally inflationary trend. The following table shows the trend :

TABLE III

PTV Programme Cost and Unit Cost

Year	Recurring Expenditure * (Rs. million)	Total yearly programme hours transmitted (Thousand)	Unit Cost per minute (Rs.)
1972-73	31.10	5.56	92.30
1973-74	49.90	7.17	116.00
1974-75	81.43	9.54	142.85
1975-76	136.20	12.92	175.74
1976-77	184.23	13.20	233.20

*Including depreciation on equipment.

8. The pace of expansion in the television services over the last few years was very rapid. The cost of running T.V. services, therefore, increased from Rs. 49.90 million in 1973-74 to Rs. 136.20 million in 1975-76 and is estimated at Rs. 184.23 million in 1976-77.

Pakistan Broadcasting Corporation

9. *Financial Allocation and Utilization.*—The revised estimates of ADP, 1976-77 of Pakistan Broadcasting Corporation amount to Rs. 46.30 million as against the ADP allocation of Rs. 41.00 million. The area and population coverage has increased to 62 per cent and 88 per cent, respectively by the end of June, 1977 compared to 60 per cent and 87 per cent, respectively in 1975-76.

10. *Physical Targets and Achievements.*—The physical implementation of major projects was as follows :

(i) *1000 KW MW Transmitter, Islamabad.*—The progress achieved was 75 per cent during the year and the transmitter is operational. Work on the construction of the residential colony was started. The design of an additional aerial was finalised. Besides, orders were placed for a power generator.

(ii) *Broadcasting House, Islamabad.*—Major portion of the civil works was completed by June, 1977. Air-conditioning work was also completed to a considerable extent. Roughly 77 per cent of the work on the project was completed compared to 85 per cent estimated earlier.

(iii) *300 KW MW Transmitter, Peshawar.*—The transmitter was made operational and the remaining civil works were also completed to a considerable extent. In quantitative terms, 70 per cent of work was completed compared to 80 per cent estimated earlier.

(iv) *Broadcasting House, Peshawar.*—Thirty per cent work on the project was completed during 1976-77. The work on pile foundation was completed and tenders were floated for the construction of the main building.

(v) *100 KW MW Transmitter, Karachi.*—The transmitter became operational and the remaining civil works were also finished by June 1977, completing 90 per cent of the project.

(vi) *100 KW MW Transmitter and Broadcasting House, Khairpur.*—The progress of the work was 22 per cent as compared to 50 per cent indicated earlier. Work on the construction of the boundary walls was over and orders were placed for various components of the equipment for the fabrication of the transmitter. The transmitter, it may be stated, is being assembled by the Corporation in their own production unit and would result in substantial saving of foreign exchange.

(vii) *300 KW MW Transmitter and Broadcasting House, Khuzdar.*—Six per cent work on the project was completed by the end of June. The site was acquired. The Government allocated Rs. 4.6 million out of French Commodity Loan for import of some equipment, but international tenders showed certain pricing differences which will be sorted out during 1977-78.

(viii) *10 KW MW Transmitter, Bahawalpur.*—The project was fully completed.

(ix) *10 KW MW Transmitter, D.I. Khan.*—The progress was 23 per cent. The transmitter was in hand and the site for the transmitter was acquired.

(x) *Security Works.*—Security works at Pakistan Broadcasting Corporation installations at Quetta, Hyderabad, Lahore, Rewat, Multan and Karachi were completed to the extent of 60 per cent, compared to 100 per cent indicated in the Annual Plan, 1976-77.

(xi) *Low Cost Housing Scheme.*—Only five per cent work on the project was completed.

(xii) *Studio Transmitter Links (3 Nos).*—Fabrication of the required number of Studio Transmitter Links (STLs) was taken in hand.

(xiii) *Modernization of Equipment (Phase-II).*—Civil works at Broadcasting House, Karachi, were completed and the required equipment i.e. radio tape-recorders, vehicles etc. were procured.

(xiv) *100 KW MW Transmitter, Muzaffarabad.*—Work on approach road was almost completed by the close of the year. The estimates of civil works were received from the Pak. P.W.D. Only 15 per cent work was completed on the project.

(xv) *Village Broadcasters*.—Sites for all the Village Broadcasters were acquired and estimates for the construction of buildings finalised. The estimated physical implementation of the scheme was 15 per cent, compared to 50 per cent indicated in the Annual Plan, 1976-77.

11. The overall physical progress indicates that the targets set for 1976-77 were not met. This was mainly due to slow progress of civil works and delay in the procurement of equipment from abroad. The inflation effect, particularly on civil works, was mainly responsible for showing a comparatively higher financial utilization as compared to the expected physical progress.

Transmission Cost

12. The cost of radio programmes transmitted was estimated at Rs. 16.83 per minute during 1976-77 compared to Rs. 13.44 per minute in 1975-76 and Rs. 6.93 in 1972-73. The increase was due to higher costs of programme management and programme transmission. The following table shows the details :

TABLE IV
P.B.C. Programme Cost and Unit Cost

Year	Recurring Expenditure* (Rs. million)	Total Transmission hours (Thousand)	Unit cost per minute (Rs.)
1972-73	41.50	99.8	6.93
1973-74	68.80	116.6	9.88
1974-75	85.70	127.3	11.22
1975-76	105.00	130.2	13.44
1976-77	133.80	132.5	16.83

*Includes Depreciation on equipment.

Associated Press of Pakistan (APP)

13. The Associated Press of Pakistan was allocated Rs. 2.893 million in the A.D.P. 1976-77. An additional Rs. 4.26 million was provided to the agency for immediate expansion of its transmission network in the country. The agency has added one more channel to the existing single channel network. The volume of news transmission, therefore, increased by 100 per cent from 40,000 words a day to 80,000 words a day. Arrangements were made for the purchase of R.T.T. equipment and most of the equipment will be received by December, 1977. All the equipment for the expansion of APP photo service was received and the project was completed as a whole by the end of June, 1977.

Economic Publicity

14. Rs. 0.600 million were allocated in the ADP, 1976-77 for Economic Publicity. The amount was utilized in full by the end of the year.

15. A number of brochures and booklets were produced in various languages by the Economic Publicity Wing of the Ministry of Information and Broadcasting during the course of the year, depicting economic development of the country. Some of the publications were (i) Agricultural Development in Pakistan (English/Urdu), (ii) Industrial Development in Pakistan (English/Urdu), (iii) Economic Development in the Punjab (English/Urdu), (iv) Economic Development in Sind (English/Urdu/Sindhi), (v) Economic Development in Baluchistan, (English/Urdu/Pushto).

16. Another illustrated publication was being produced on Pakistan in German language for foreign publicity. Besides, a post-budget Seminar was arranged for the benefit of the Media.

National Academy for Films, T.V. and Radio

17. A sum of Rs. 1.00 million was allocated in the ADP, 1976-77 for the National Academy for Films, Television and Radio. Of this, Rs. 0.750 million was spent on the required spade work and preparation of PC-I form.

State Film Authority

18. A sum of Rs. 0.400 million was allocated in the ADP, 1976-77 for the State Film Authority. This amount, allocated for the purchase of equipment of the project of National Motion Pictures and Archives, was not released to them, up to the 30th June, 1977.

PROGRAMME FOR 1977-78

19. The A.D.P. for Mass Media agencies for 1977-78 has been formulated keeping in view the essential needs of the sector, the difficult financial conditions during the year, and re-ordering of priorities for different sectors. Consequently, the financial allocations at Rs. 180.400 million (F.E.C. Rs. 55.42 million) for Mass Media Sector are nearly 17 per cent lower than the A.D.P. of Rs. 211 million (gross) for 1976-77. Rupee cover had to be provided for projects like the National Academy for Film, Radio and T.V. and Development Support Communication Centre, which are aided projects and where work has to start in the year. These allocations will, however, mean slow pace of development on the on-going projects in this sector. The agency wise allocations are :

TABLE V

A.D.P. 1977-78 for Mass Media Sector

		(Rs. million)	
S. No.	Name of Agency	Total	F.E.C.
I. Ministry of Information and Broadcasting :			
1.	Pakistan Television Corporation	98.600	34.000
2.	Pakistan Broadcasting Corporation	56.400	9.750
3.	Development Support Communication Centre	2.000	1.000
4.	Associated Press of Pakistan (APP)	3.600	—
	Total I	160.600	44.750
II. Ministry of Culture, Archaeology, Sports and Tourism :			
1.	State Film Authority	1.000	0.670
2.	National Academy for Film T. V. and Radio	18.800	10.000
	Total II	19.800	10.670
	Grand Total (I, II)	180.400	55.420

20. The agency-wise programme for 1977-78 is given in the following paragraphs.

Pakistan Television Corporation

21. The total size of A.D.P. is Rs. 98.600 million (details in Annexure I) as compared to Rs. 165.00 million for 1976-77. The lower size will allow continuation of on-going schemes at a slower pace. The financing pattern of the development programme of P.T.V. has undergone a

major change this year. Till last year, nearly one-third of the funds were provided from ADP resources and the balance from issue of debentures under Government guarantee. For 1977-78, the total allocation is from ADP sources as a development loan. The change was necessary to keep the debt servicing burden on the Corporation within acceptable financial limits.

22. The rebroadcast centres at Rojhan, Shikarpur, Shujabad, and T.V. links at Naran-Thandiani will be completed. This will result in extension of T.V. coverage by 4.66 million in terms of population and 8 per cent in terms of area. The physical programme for 1977-78 is given below:

(i) *Islamabad T. V. Complex.*—Against the total cost of Rs. 214.650 million, Rs. 81.320 million have been spent upto 30 June, 1977. Rs. 20.00 million have been provided for 1977-78. The construction work will reach an advanced stage during the year, about 47 per cent in quantitative terms. The studio equipment and airconditioning plants will be imported.

(ii) *Lahore and Karachi T.V. Stations.*—Against the total cost of Rs. 235.390 million for the two projects, Rs. 127.757 million were spent on these schemes by the end of 1976-77. During 1977-78, Rs. 39.500 million will be spent on these projects. The balance of work at the two stations will be completed. Sixty-eight and 75 per cent of progress will be attained at Lahore and Karachi Stations, respectively.

(iii) *Quetta and Peshawar T.V. Stations.*—Rs. 102.105 million were spent on the two schemes upto June 30, 1977, as against the total cost of Rs. 221.34 million. During 1977-78, Rs. 16.990 million have been provided for on-going works. The civil works at Peshawar will be largely completed during the year and equipment brought at site for installation. The entire work will be completed by June, 1978. In case of Quetta T.V. Station, the civil works will continue on an accelerated pace. Fifty-four per cent of progress is expected to be achieved on both schemes by the end of the financial year.

(iv) *Rebroadcast Centres, Dadu, Shikarpur, Rojhan, Shujabad.*—Work on all these centres will be finally completed.

(v) *T.V. Links at Naran, Thandiani, Lak-Pass.*—These T.V. links will also be completed during the year as most of the work has already been carried out during 1976-77. The Thandiani-Naran Link will extend T.V. coverage to Azad Kashmir and certain occupied Kashmir areas.

(vi) *Karachi-Gwadar T.V. Link.*—Work will start on the Karachi-Gwadar T.V. Link with a view to taking the T.V. signal to Baluchistan coastal areas. A provision of Rs. 5.00 million has been made for initiating survey and design work etc. for the project.

Pakistan Broadcasting Corporation

23. Rs. 56.400 million have been provided for the Pakistan Broadcasting Corporation in the ADP, 1977-78 as against the revised estimates of Rs. 46.300 million, an increase of about 22 per cent mainly due to larger commitment in case of 300 KW MW transmitter, Khuzdar (Baluchistan). The project-wise allocations appear in Annexure II. The funds will be utilized for completion of on-going schemes like Broadcasting House, Islamabad, 100 KW MW transmitter, Karachi and two units of village broadcasters. The major physical targets of the Corporation are :

(i) *1000 KW MW Transmitter, Islamabad.*—Against the total cost of Rs. 52.656 million, Rs. 39.225 million were spent on this project upto June 30, 1977. During 1977-78, Rs. 5.300 million have been provided for the residential colony and other remaining civil works. An additional aerial will be fabricated and installed. Power generator will also be installed. The project is expected to be completed by 85 per cent by the end of 1977-78.

(ii) *Broadcasting House, Islamabad.*—The total cost of the project is Rs. 76.132 million, of which Rs. 58.132 million were spent up to June, 1977. Rs. 18.000 million have been provided for 1977-78. Civil works and air-conditioning will be completed. Lifts for the building will be procured. The entire project will be finally completed by June, 1978.

- (iii) 300 KW MW Transmitter, Peshawar.—Against the total cost of Rs. 38.752 million, Rs. 29.064 million were spent upto 1976-77. It is already operational. Rs. 0.500 million have been provided for 1977-78 for the remaining civil works etc. Seventy-five per cent of the scheme will be implemented during the year.
- (iv) Broadcasting House, Peshawar.—The total cost of the project is Rs. 20.023 million against which Rs. 6.007 million were spent upto 1976-77. In the ADP, 1977-78, Rs. 5.000 million have been allocated for the project. Construction work of the main building will be started and studio equipment fabricated. The progress of the project will be about 55 per cent by end of June, 1978.
- (v) 100 KW MW Transmitter, Karachi.—The total cost of the scheme is Rs. 14.62 million, against which Rs. 13.226 million were spent upto 1976-77. During 1977-78, Rs. 0.800 million have been earmarked for the project. Air-conditioning plant and power generator will be installed. The implementation of scheme already operational is expected to be 96 per cent by June, 1978.
- (vi) 100 KW MW Transmitter and Broadcasting House, Khairpur.—Against the total cost of Rs. 17.846 million, Rs. 3.919 million were spent upto 1976-77. Rs. 10.400 million have been provided for the project in the ADP. Civil works will be completed and transmitter fabricated. Eighty per cent of the project will be completed by the close of the year.
- (vii) 300 KW MW Transmitter and Broadcasting House, Khuzdar.—The total cost of the project is Rs. 81.265 million against which Rs. 5.000 million had been spent upto 1976-77. Rs. 10.000 million have been allocated for the project. Equipment ordered during 1976-77 will be received and orders placed for the import of the balance of equipment. The expected physical progress in quantitative terms by the end of 1977-78 is 18 per cent.
- (viii) 10 KW MW Transmitter, D.I. Khan.—The total cost of the project is Rs. 14.131 million of which Rs. 3.339 million had been spent upto June, 1977. During 1977-78, Rs. 1.700 million have been allocated for the project. Construction work will be started. Thirty-five per cent physical progress on the project is expected during the year.
- (ix) Security Works.—Against the total cost of Rs. 4.237 million, Rs. 2.566 million have been spent upto 1976-77. The remaining security works at various radio stations will be completed. Physical progress by the end of June, 1978 will be 63 per cent.
- (x) 100 KW MW Transmitter, Muza ffarabad.—The total cost of the project is Rs. 18.093 million of which Rs. 2.926 million were spent by the end of June, 1977. Rs. 0.900 million will be spent during 1977-78. Part of the equipment will be ordered. Only 21 per cent physical progress is expected during the year.
- (xi) Village Broadcasters.—Against the total cost of Rs. 12.000 million, Rs. 1.711 million have been spent on the project upto 1976-77. During 1977-78, Rs. 2.00 million will be spent. Building will be constructed for at least two units and the transmitters installed. The project is expected to be completed by 31 per cent by June, 1978.

Associated Press of Pakistan (APP)

24. Rs. 3.600 million have been allocated to the Ministry of Information and Broadcasting for the development programme of Associated Press of Pakistan. The amount will be utilised for the establishment of Radio Teleprinter Transmitter (R.T.T.) which will enable the news agency to undertake speedy transmission of national news to the outside world. Eighty per cent of the project will be completed.

Development Support Communication Centre (D.S.C.C.)

25. A Development Support Communication Centre (D.S.C.C.) is being established under Pakistan Broadcasting Corporation. The project is aimed at creating a highly skilled manpower pool of subject matter specialists and professional communicators to produce specially designed

development support radio and T. V. messages (duly supported by publications) for rural audiences. These messages, besides seeking to improve technical know-how and skills of the audiences, will motivate people to participate in development activities in agriculture, nutrition, health and population planning etc.

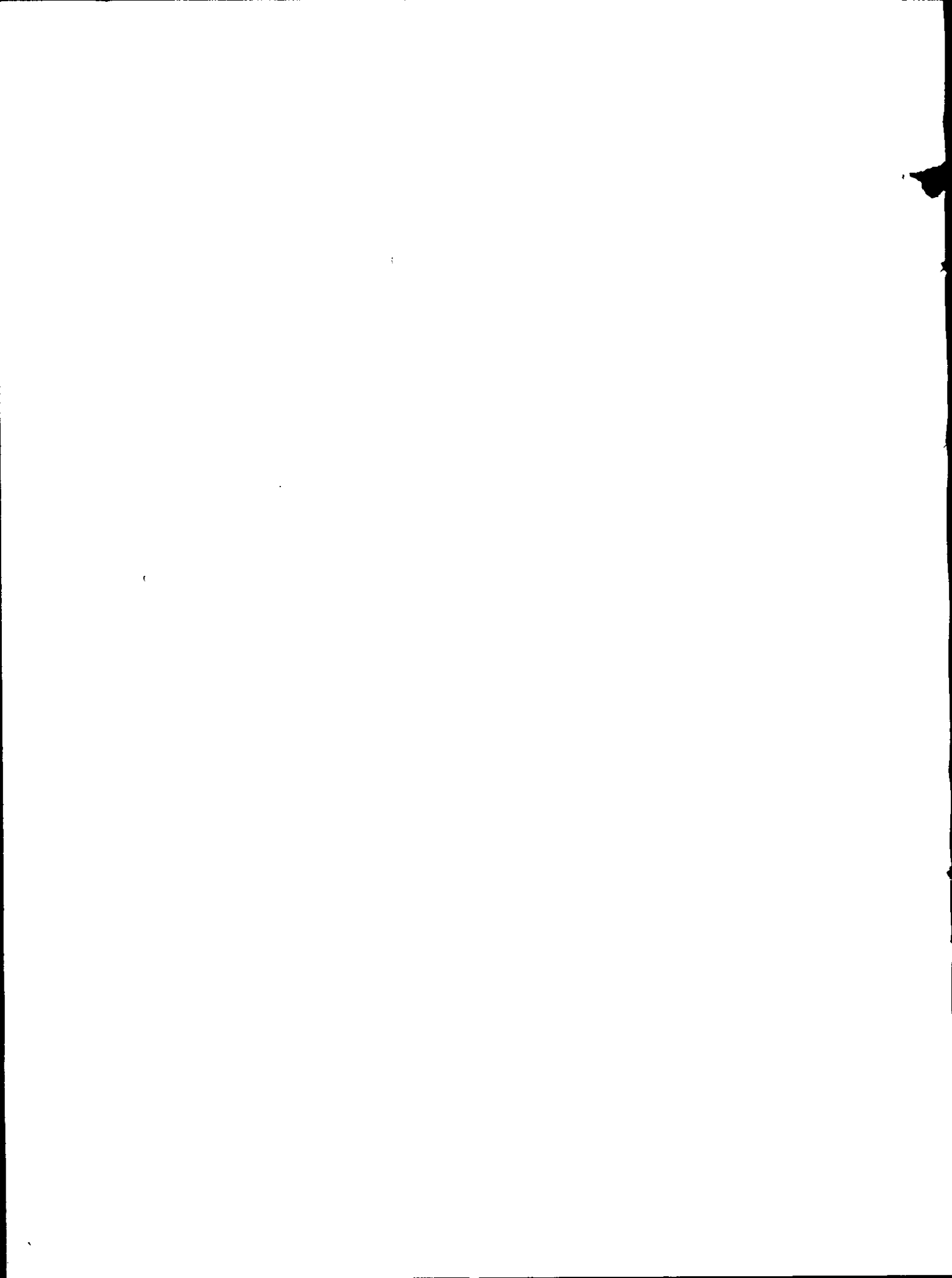
26. Rs. 2.0 million have been allocated to D.S.C.C. in the ADP, 1977-78. The amount will be spent on the establishment of the Centre.

National Academy for Film, Radio and Television

27. Because of an urgent national need of filling in the training gap of personnel employed in radio, television and films, the Government decided to establish an academy to provide in-service training to the engineering and programme staff of the media agencies. The Academy will be located at Islamabad and will offer general courses on historical, cultural, economic and development subjects on the one hand and specialised courses on radio, T.V. and film production covering all aspects of arts, techniques and engineering involved in these on the other. The Academy will train 100-150 students from T.V. and film. Under the scheme the training facilities for radio personnel will also be expanded. One studio each for Film, and T.V. with ancillary facilities will be constructed in the first phase at an estimated cost of Rs. 120.00 million. An agreement has been signed with a French Consortium (Sponsored by the French Government) for technical and financial assistance of Rs. 70 million. A sum of Rs. 18.800 million (F.E.C. Rs. 10.000 million) has been allocated in the A.D.P 1977-78 to the Academy. The amount will be spent on the purchase of land, detailed planning and design of the building and its construction. Some essential equipment will be procured to start partial training immediately.

State Film Authority

28. A sum of Rs. 1.00 million with F.E.C. Rs. 0.67 million, has been allocated in the A.D.P. 1977-78, for the State Film Authority. Of this, Rs. 0.50 million will be spent on the national motion pictures and library scheme, whereas the remaining Rs. 0.50 million will be spent on the purchase of film equipment.



PHYSICAL PLANNING AND HOUSING

REVIEW OF 1976-77

The Annual Plan for 1976-77 provided for an increase of 13% in expenditures on the Physical Planning and Housing Sector, as compared to 1975-76. An effort was made to concentrate resources on key objectives. Water supply and sewerage was given 29% of the total funds. Plot development and slum clearance received 21%. The balance of 50% was divided between six other programmes. Overall, the sector received 7.9% of the public sector development programme.

2. The implementation, in financial terms was as follows :—

	<i>Million Rupees</i>
1975-76 (Actual)	1209.000
1976-77 (Original)	1374.534
1976-77 (Revised)	1276.673
% implementation in 1976-77	93.00

3. The implementation, with 93% utilisation, may be regarded as satisfactory. The increase over 1975-76 amounted to 5% as against 13% originally planned. Agency-wise figures are given in Annexure-I. Subsector-wise details are given in Annexure II.

4. The principal physical targets and achievements are noted below :—

Physical Targets and Achievements

Sub-Sector	Units	Targets	Achievements	% achievements
Development of plots				
(i) Urban Residential plots	Nos.	102,000	60,000	58.80
(ii) Rural Residential plots	Nos.	192,000	62,000	32.9
(iii) Urban Water supply and drainage..	Additional population served in million.	3.200	3.34	104.00
(iv) Rural Water supply and sanitation.	Do.	1.313	1.057	81.00
(v) Housing units for Govt. Servants..	Nos.	1,152	1,200	104.16
(vi) Office space	sq. ft.	8,97,000	5,00,000	56.00

It is encouraging that targets for urban and rural water supply were achieved to a substantial extent. In the case of Government offices and buildings, the physical achievements were out of line with expenditures because substantial funds were diverted to flood rehabilitation and reconstruction. The shortfall in the allotment of 5 marla plots was due to lack of eligible applicants. The shortfall in the development of urban residential plots was due to delay in acquisition of sites and organizational constraints.

5. The performance in 1976-77, while short of targets for that year, represents a considerable acceleration over the physical progress of the previous 6 years, as is evident from the table below :

		1970—76	<i>Average per annum</i>	1976-77
(i) Water supply and sewerage facilities in urban areas.	Additional population served. in million	4.45	0.742	3.340
(ii) Rural Water Supply	Do.	2.500	0.417	1.057
(iii) Urban residential plots	Nos	122,550	20,425	60,000

6. Private investment in housing during 1976-77 is estimated at Rs. 1,480 million as against a target of Rs. 1,100 million. The number of houses constructed is approximately 40,000. A comparison of 1976-77 with previous 6 years is given below :

	1970—76 (Annual Average)	1976-77	Increase
Houses constructed	19,720	40,000	103.0%

The investment in houses and other real estate continued to be buoyant.

7. A detailed description of the physical achievements during 1976-77 by executing agencies in various sub-sectors is given in the subsequent paragraphs.

Low Income Housing

8. Against the target of development of 1,02,000 plots in urban areas, the actual physical achievement is expected to be 60,000 plots, as follows :—

Baluchistan	2,000
Sind (i) K.D.A.	20,000
(ii) Others	5,000
Punjab (i) L.D.A.	3,000
(ii) Housing Deptt.	20,000
Industrial workers	8,000
C.D.A.	2,000

In the case of NWFP, preliminary work was undertaken on the Hyatabad Township scheme but no plots could be developed during 1976-77. It is expected that with the new organizational arrangements the progress in the next few years will show a marked improvement.

Urban Water Supply, Sewerage and Drainage

9. For Baluchistan, information is available for two schemes only. Work on water supply at Ormara was completed to the extent of 75%. The water supply in the Irrigation Colony at Quetta was renovated.

10. In NWFP, work on 18 schemes progressed satisfactorily. Through the partial completion of these schemes an additional population of 1.3 lakh was served.

11. In Sind, outside Karachi, two schemes of water supply at Khairpur and Larkana and three schemes of sewerage and drainage at Larkana, Thatta and Shikarpur were completed. As a result, an additional population of 3.70 lakh was served with water supply and 2.40 lakh with sewerage facilities in areas excluding Karachi.

12. In Karachi, an expenditure of Rs. 180 million was incurred on the 3rd Phase of Greater Karachi/Bulk Water Supply Project which is expected to cost about Rs. 750 million. On the completion of this Phase, 70 MGD of water will be added to the existing availability of about 148 MGD. The project will supply 26 MGD for the Steel Mills and 4 MGD for Port Qasim. During 1976-77, work progressed on the 70 MGD pumping station at Dhabeji, filter plants at Pipri and North-East Karachi, and 10 MGD reservoirs at three locations.

13. Work was also continued on the Karachi Water Supply and Sewerage renovation scheme by KMC on which about 94% progress was achieved. Similarly Lyari water supply and sewerage scheme also remained under execution. It is estimated that in Karachi, about 4.75 lakh additional population was served with water supply.

14. In Punjab, with the completion of 11 schemes of water supply at Jhelum (Phase III), Gujrat, Bhakhar, Daska, Gujranwala, Shah Kot, Jalalpur, Pirwala, D.G. Khan, Mohajir Colony, Dera Nawab Sahib and Model Town Khanpur, an additional population of 12.6 lakh was served. In addition two schemes of sewerage and drainage at Gujrat and Mohajir Colony were completed to serve an additional population of 0.61 lakh.

15. In Lahore, work on the Greater Lahore Water Supply, Sewerage and Drainage Project, Phase II, was continued. An amount of Rs. 118.5 million was spent during 1976-77 with which work on the installation of 5 tubewells, 2.27 lakh running feet of distribution lines, 5,738 Rft. of trunk sewers and 8,800 Rft. of drains were completed. In addition, work on the comprehensive water supply and sewerage scheme, Multan and Short-term plan for Greater Lyallpur Water Supply Project was continued and expenditures of Rs. 12.5 million and Rs. 10.5 million respectively, were incurred, on completion of various facilities. It is estimated that an additional population of about 6.8 lakh was served with water supply and sewerage facilities in the cities of Lahore, Lyallpur and Multan.

Rural Areas

16. The achievements in this sub-sector in various provinces were as under :—

- (i) In Baluchistan, 6 rural water supply schemes would be completed during 1976-77 by the Irrigation Deptt. serving an additional population of 11,000.
- (ii) In N.W.F.P., about 187 schemes were under implementation with the Public Health Engineering Department. It is expected that about half of these schemes would be completed by the end of 1976-77 resulting in water supply facilities to about 2 lakh additional population.
- (iii) In Sind, 53 schemes of water supply and sanitation were taken up by the Public Health Engineering Department and it is expected that about 21 schemes will be completed, which will provide water supply facilities to an additional population of about 2.66 lakh and drainage to 45,000 persons.
- (iv) In Punjab, a total number of 161 schemes of water supply and sewerage were included for implementation during 1976-77 by the Public Health Engineering Deptt. It is expected that by the end of 1976-77, 68 schemes (including 5 schemes of drainage) would be completed resulting in additional supply of 10.44 mgd of water to serve additional population of about 5.0 lakh with water supply and 35,000 with sanitation facilities.

Other Programmes

17. *Urban and Regional Planning.*—In Punjab, during 1976-77, 40% progress was made on the outline development plans for Sargodha, Mianwali, Khushab, Muzaffargarh, D.G. Khan, Leiah and Bhukhar and Master Plan for Murree Region. In Sind, the work on Regional Plan for Sind was initiated and pre-planning studies were finalized with the help of UNCRD participants. Under the Federal programme, the Environment and Urban Affairs Division have completed a number of feasibility studies of proposed agrovilles and some sites have been finally selected for detailed planning. These sites include Pir Mahal and Pattoki in Punjab, Mirokhan and Garhi Khairo in Sind, Dhudial and Baffa in N.W.F.P., Kohlu and Maiwand in Baluchistan and Athmuqam and Rawlakot in Azad Kashmir. Physical work on the agrovilles at Badin in Sind and Temple Dara in Baluchistan was in advanced stages of implementation.

18. *Government Servants Housing, Offices and Buildings.*—In the ADP, 1976-77, within the modest allocations provided, about 1200 houses were proposed to be constructed at various places in the country. The physical achievement is expected to be more than 1200 units, including the barrack type accommodation. However, against the target of construction of 8.97 lakh sq. ft. office area, it is estimated that only about 5.00 lakh sq ft office space was constructed. The shortfall in the target was mainly due to a reduction in the allocation from about Rs. 123 million to Rs. 70 million, as provincial governments allocated larger funds to other priority programmes.

19. *Islamabad.*—Work on various schemes in Islamabad progressed satisfactorily except for two projects namely, construction of Simily Dam and Parliament Building. In the case of Simily Dam, the work continued to suffer delays due to difficulties of the contractor over rates of payment and availability of machinery. Similarly, the work on the Parliament Building could not

proceed as envisaged originally because of the modification in the design of the building. Substantial progress was, however, made on the Presidential Estate Complex which is nearing completion.

20. *Tourism*.—An allocation of Rs. 61.9 million was made in ADP 1976-77 for implementing the on-going schemes of tourism as well as for the development of tourist infrastructure in the Northern Areas and other schemes of touristic importance. The physical progress of the work on these schemes was not entirely satisfactory because of delay in the preparation of detailed projects. The renovation of existing buildings at Keenjhar lake was completed and opened to Tourists. The design work of Keenjhar lake complex, hotels and chalets in Northern Areas, Tourist Resort at Kalam and some of the Tourist villages been completed.

21. The designing of Gadani Beach Resort, 4 AHP hotels and the hotel at Sandspit was also taken in hand. The tourist complex at Wagha has been completed whereas conceptual designs for Tourist complex at Koh-e-Taftan and Chaman have been finalized. The work on Malam Jabba Skiing resort was in initial stages and construction of roads and other infrastructural services was in hand.

22. *Northern Areas, Azad Kashmir and Tribal Areas*.—It is expected that by the end of 1976-77, 100 residential units and 25 water supply schemes would be completed.

23. *Civil Armed Forces and Constabularies*.—Modest allocations were provided for the construction of office and residential accommodation for Civil Armed Forces and Constabularies which were mostly utilized for acquisition of land, preparation of plans, development of land and construction of barracks, kotes, and magazines.

Annual Plan 1977-78

24. The Annual Plan for 1977-78 marks a significant step forward in allocating larger resources for development of social services. The provision for Physical Planning and Housing is being increased by 27%, from Rs. 1,268 million in 1976-77 (revised) to Rs. 1,626 million in 1977-78. The increase has been accommodated within a static annual development programme of Rs. 17,000 million. Accordingly, the share of the sector in annual development programme has increased from 7.8% in 1976-77 to 9.5% in 1977-78.

25. In 1976-77 the emphasis was on two key programmes, namely water supply and sewerage and urban plot development. The trend has been maintained and accentuated in 1977-78, as would be evident from the following :—

	1976-77	1977-78
Water supply and sewerage	29.4%	31.7%
Housing and slum improvement	21.4%	24.5%
	50.8	56.2

A significant development in 1977-78 will be the substantial amount allocated to improvement of katchi abadies. The slum improvement programme accounts for Rs. 161.100 million or 10.0% of sectoral allocation in 1977-78.

26. It might be useful to recapitulate briefly the strategy which is being followed in respect of housing and environment.

Firstly in view of shortage of resources, effort is being concentrated on a few key objectives. The highest priority is being given to water supply (particularly in rural areas) and extension of sewerage. The water supply programme is conceived as part of the integrated effort to improve health and living conditions in rural areas.

Secondly, in the field of urban housing, public sector resources will be utilized almost exclusively for development of serviced plots. The construction of houses will be left to private initiative assisted by some financing from banks and specialised credit agencies.

Thirdly, better rural housing would be promoted through distribution of plots.

Fourthly, the conditions in slums will be ameliorated through improvement. Expensive slum clearance and redevelopment projects will be avoided.

Fifthly, self-financing would be encouraged in all subsectors. Plot development will be financed to the extent of 70% from recoveries. The charges for water and sewerage would be readjusted to make the utilities more self-supporting.

Sixthly, Urban and Regional Planning would be encouraged but on a scale commensurate with resources available in the near future.

Seventhly, a beginning would be made with essential urban development schemes not included in above programme.

Eightly, in respect of government offices and housing, the emphasis would be on economy and functional utility.

27. The physical targets for 1977-78 alongwith a comparison with targets in medium term perspective is given below :—

	1977-78	1977-83	% of 1 to 2
	1	2	3
1. Urban Residential Plots (No)	100,000	800,000	12.5
2. Environmental improvement (population to be served in million)	0.900	3.000	30.0
3. Urban Water Supply (population to be served in million)	2.576	10.230	25.1
4. Urban Sewerage and Drainage (population to be served in million)	1.947	11.410	17.1
5. Rural Water Supply (population to be served in million)	2.350	15.360	17.6
6. Rural Sanitation (population to be served in million)	0.440	5.180	8.5
7. Govt. servants housing (No)	2,805	20,000	14.0
8. Government Offices (Million sq. ft.)	1.178	5.600	21.0

Executing agency-wise physical targets for 1977-78 for various sub-sectors are given in Annexure III.

28. The allocation of funds, by programmes, is given below :—

Sub-Sector-wise Allocations, during 1976-77 and 1977-78

S. No.	Sub-Sector	(Rs. Million)			
		Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1	2	3	4	5	6
1.	Water Supply and Sewerage	404.324	29.4	518.016	31.7
	(a) Urban	278.597	20.3	339.439	20.9
	(b) Rural	125.727	9.1	178.557	10.8
2.	Low Income Housing	293.700	21.4	397.700	24.5
	(a) Plot development	183.700	13.4	141.600	8.7
	(b) House Construction	110.000	8.0	95.000	5.8
	(c) Katchi Abadies	—	—	161.100	10.0
3.	Government Servants Housing	82.674	6.0	108.194	6.7
4.	Government Offices and Buildings	141.942	10.3	112.493	6.9
5.	Other Urban Development Projects	62.391	4.6	164.463	10.2
6.	Tourism	53.150	3.8	66.000	4.1
7.	Capital at Islamabad	174.300	12.7	146.500	9.00
8.	Others	163.102	11.8	112.429	6.9
	Total	1374.534	100.00	1625.775	100.0

29. The allocation by administrative agencies will be as follows :—

Sectoral Allocation 1977-78

Executing Agencies	1976-77 Allocation	1976-77 utilization	Allocation 1977-78	Percentage increase over 1976-77 allocation
1. Baluchistan	31.269	16.123	35.675	14.09
2. N.W.F.P.	149.990	128.604	155.882	3.93
3. Sind	184.330	146.400	166.644	(—)9.60
4. Punjab	534.610	495.969	794.800	48.68
5. Federal Government	474.335	489.577	472.774	(—) 0.33
Total ..	1374.534	1276.676	1625.775	18.27

Financial allocations by executing agencies and by sub-sectors are given in Annexure IV while the details of major sub-sectoral allocations by various provinces and Federal Government agencies are given in Annexures V to IX. In addition, Rs. 335 million is being provided from the credit budget. Also expenditures from own resources of CDA, KDA, LDA and other local bodies will amount to Rs. 1000 million.

30. The allocation of funds for important programmes, province-wise is given below :

%age of total allocation

Sub-sector	Punjab	Sind	NWFP	Baluchistan	Federal
Water supply and Sewerage	45	48	45	29	—
(i) Urban	(34)	(27)	(12)	(13)	—
(ii) Rural	(11)	(21)	(33)	(16)	—
Low income housing	35	3	13	—	20
Government Housing	3	6	14	21	9
Govt. offices and Buildings	6	10	14	36	4
Other Urban development	11	28	13	14	—

31. The expenditure on urban housing in Sind is understated as the bulk of the work is undertaken by KDA outside the ADP. In the case of the Federal Government, the analysis of expenditures excludes Islamabad and the allocation for tourism.

32. The provision for private sector investment in housing, compared to medium term perspective is given below :—

	1977-78	1977-83	%age of 1 to 2
	1	2	3
Investment (Rs. million)	1,840	15,170	12.1
No. of houses (Thousands).. .. .	50	410	12.2

33. The details of various programmes and physical targets for 1977-78 in respect of various Federal Divisions and Provincial Governments under various sub-sectors are described in the subsequent paragraphs.

FEDERAL PROGRAMMES

34. In the Physical Planning and Housing Sector, the Federal programmes consist mainly of the development of the Capital at Islamabad, programme of provision of housing and offices for Federal Government employees and Civil Armed Forces, development programme of tourism, housing and water supplies programme in Azad Kashmir, Northern and Federally Administered Tribal Areas and provision of credit facilities for construction of houses. Although the demands of the Federal Divisions were very large but due to resource constraints modest allocations have been made and major on-going priority projects have been protected to a great extent.

35. *Housing Finance*.—The Annual Plan target for private investment for house building is Rs. 1,840 million (against Rs. 1,100 million during 1976-77), a major portion of which would be financed through credit facilities. The total requirements for institutional credit for house building during 1977-78 work out to Rs. 750 million. It is anticipated that the House Building Finance Corporation would disburse about Rs. 600.00 million during 1977-78. An allocation of Rs. 65 million has been made for House Building Finance Corporation in the ADP 1977-78, for reloaning in the housing sector. About Rs. 50 million have also been allocated in the Federal and Provincial Programmes for advancing loans to Government Servants. The balance of credit requirements would be met by commercial banks to the extent of Rs. 100 million and the remaining would be covered by State Bank Loan to the House Building Finance Corporation and their own recoveries, and private savings of the house builders to the extent of about 60%. It is anticipated that about 50,000 houses would be constructed during 1977-78 against about 40,000 constructed during 1976-77.

Regional and Urban Planning

36. In the Annual Plan 1977-78, it is proposed to complete the on-going regional studies for Bahawalpur-Multan and Lesbela-Makran regions. Rs. 1.00 million have been earmarked for feasibility studies for new agrovilles sites to be indicated by the Provincial Governments. In the case of Joint Research Project No. IV at Karachi for 'Slum Improvement and Urban Development', the first phase has been completed and the second phase has been initiated.

Islamabad

37. The total allocation for CDA in ADP 1977-78 is Rs. 146.5 million. The major emphasis is being placed on the provision of housing for which an allocation of Rs. 50.00 million has been made. Out of the above allocation, a major allocation of Rs. 40 million has been made for the construction of housing for the low paid staff. Construction of 1,024 "A" and "B" type houses which is already in progress will be fully completed during 1977-78. Work will also be undertaken on the remaining 1,840 A to D type houses (out of the on-going scheme of 3,008 houses) and substantial progress will be made. Other housing programmes include staff quarters for the President's staff, AGPR, and construction of bachelors' hostel. CDA will also develop about 13,000 plots for low income housing in model villages outside Islamabad through their own resources.

38. Under the programme of buildings of national importance, an allocation of Rs. 37 million has been made. Work on the Presidential Estate Complex will be completed while work on the National Assembly Building would continue.

39. As regards office accommodation, work will be undertaken on the construction of office building for AGPR, Police Posts/Stations etc. with an allocation of about Rs. 4 million.

40. In the case of water supply, sewerage and drainage, an allocation of Rs. 26.5 million has been made. The major allocation of Rs. 15.5 million has been made for continuation of work on the construction of Simly Dam, which on completion will supply 24 MGD of water to Islamabad. Work on the feasibility study of supplying water to Islamabad from Khanpur Dam will also be undertaken in addition to regular programmes of laying of water supply, drainage and sewerage distribution systems.

41. For the construction of roads an allocation of Rs. 6 million has been made. Work on the construction of 2nd carriageway of Shahrah-e-Islamabad from Faizabad Chowk to Airport link road which started during 1976-77, would be continued during 1977-78, with an allocation of Rs. 5 million.

42. Under their self-financing programmes, CDA will undertake development of infrastructure in the Blue Area of Islamabad and development of various residential sectors.

Tourism

43. A long term Master Plan for development of tourism in Pakistan prepared by UN Consultants is under implementation in phases. The schemes to be undertaken in 1977-78 are based on the recommendations contained in the Master Plan.

44. During 1977-78, it is expected that tourists arrivals will increase by at least 15% over the 1.97 lakh foreign tourists that arrived during 1976. Similarly, the earnings from foreign tourists are expected to increase by about 25% over the earnings of Rs. 40.0 million during 1976. To achieve these targets, tourism promotion and publicity, at home and abroad, will be accelerated. The PTDC will initiate work on construction of accommodation units in Swat, Kaghan and Northern Areas. Work on the establishment of a skiing resort at Malam Jabba will continue for which an allocation of Rs. 10 million including Austrian Aid of Rs. 9.0 million has been made. During 1977-78, construction work on 80 room hotel and ski lift would be taken in hand. Similarly, the work on Gadani Beach and Keenjhar Lake Complex will be started whereas the on-going work on the renovation and expansion of 4 AHP hotels will be continued. In the case of hotel at Sandspit, land has been acquired and designs are being prepared. Besides, a number of small scale schemes for tourism development will be completed. It may, however, be mentioned that the cost of the tourism projects is generally coming up on the highside due to remote locations of many of the projects.

Government Office Buildings and Government Servants' Housing

45. The Works Division has initiated a number of schemes for the construction of residential accommodation for Government Servants at Karachi, Quetta, Rawalpindi and Peshawar. The schemes are in various stages of implementation and it is expected that during 1977-78, 500 houses will be completed. Provision has also been made for starting and completing about 70% work on the rest houses for government servants at Karachi, Lahore, Peshawar and Rawalpindi. In the case of office buildings, besides initiating work on the construction of new Customs House at Karachi and office accommodation at Quetta, the Works Division will also complete a number of small schemes for construction of office buildings and provision of additional facilities in the existing office buildings. It is expected that about 50,000 sq. ft. of office space would be added during 1977-78.

Civil Armed Forces

46. A number of schemes have been initiated for the construction of residential and office accommodation for Frontier Corps, Frontier Constabulary, Baluchistan Constabulary in Marri Bugti and Mengal Area of Baluchistan, Tribal Areas of NWFP and Baluchistan and Indus Kohistan and Allied Areas. Provision has also been made for the construction of most essential office and residential accommodation for F.S.F., Rangers and F.I.A. at various locations.

Special Areas

47. The Special Areas which comprise Azad Kashmir, Northern Regions, and Federally Administered Tribal Areas, have a range of acute problems including poor housing conditions, shortages of drinking water and lack of office and residential accommodation for employees of various government departments. The population in these regions is very sparse and the settlements are scattered, making the provision of essential facilities like water supply difficult.

48. In order to improve the environmental conditions of these areas, major emphasis during 1977-78 will be on the provision of water supply and sanitation facilities in these areas followed by construction of residential and non-residential accommodation for government employees and development of tourism. For the purpose of provision of water supply and construction of residential and non-residential accommodation, allocations of Rs. 17.081 million for Azad Kashmir, Rs. 16.00 million for Northern Regions and Rs. 22.0 million for FATA have been provided in the

ADP 1977-78. With these allocations it would be possible to meet the following targets in each region.

Targets for Special Areas, 1977-78

Sub-Sector	Unit	Targets		
		Azad Kashmir	Northern Areas	FATA
1. Water supply :				
(a) Rural	Additional population to be served.	71,000	1,06,000	1,33,000
(b) Urban	Do.	26,000	—	—
2. Government Servant's Housing ...	Nos.	100	100	100
3. Government Offices and Buildings ..	Areas to be constructed (sft).	48,500	37,500	62,500

49. The Northern Regions and Azad Kashmir also have great potential for tourism development. Appropriate measures are being taken by the Federal Tourism Division to develop tourism facilities in these areas. In Northern areas, work will be initiated on construction of hotels at Chitral and Hunza and Chalets at two other places, and development of Kunjerab Park.

PROVINCIAL PROGRAMMES

Baluchistan

50. The total allocation for Baluchistan during 1977-78 is Rs. 35.675 million. Out of this allocation, Rs. 10.335 million is meant for water supply and sewerage, Rs. 7.657 million for government servants housing, Rs. 12.853 million for government offices and Rs. 4.830 million for Urban Development. The physical targets in various sub-sectors are as follows :—

51. *Water Supply and Sanitation.*—In the case of water supply and sanitation facilities, an additional population of 0.5 lakh will be served with completion of 8 on-going schemes.

52. *Government Servants Housing, Offices and Buildings.*—Four schemes of Government Servants' housing will be under-taken during 1977-78 and about 100 houses will be completed. Similarly, ten schemes of Government Offices and Buildings would be implemented during 1977-78, resulting in addition of about 1 lakh square feet of office space. This includes construction of Provincial Assembly Building and Hostel and Office block at Quetta, Baluchistan House at Islamabad and construction of Jail and Lock-ups at Quetta and Turbat.

53. *Urban Development.*—Work on the construction of Baluchistan Development Authority Complex, new bus and truck stand and fruit and vegetable market at Quetta will be accelerated.

N. W. F. P.

54. The total allocation for NWFP during 1977-78 is Rs. 155.882 million. Out of this allocation, Rs. 21.000 million are meant for low income housing, Rs. 69.629 million for water supply and sewerage, Rs. 21.587 million for Government Servants Housing, Rs. 21.662 million for Govt. Offices and Buildings and Rs. 20.478 million for Urban Development.

55. The major targets include the provision of 5,000 residential plots for low income urban families, water supply and sanitation facilities for 6.0 lakh rural and 1.75 lakh urban population, 200 housing units for Government Servants and construction of 1.72 lakh sq. ft. of office space in Government Offices in various areas of the province. Various programmes proposed in the NWFP ADP 1977-78 to achieve the above targets are as follows :—

56. *Basic Development and Urban and Regional Planning.*—The on-going project of Regional Development Plan for NWFP will continue. Provincial Urban Development Board, Peshawar Development Authority and Mardan Development Authority will be provided with essential staff. Work on the Master Plans for Abbottabad and Mardan will be completed. Provision has also been made for construction of office and residential accommodation for Public Health Engineering Divisions at D.I. Khan, Abbottabad and Malakand.

57. *Low Income Housing.*—The work on first phase of Hyatabad Town in Peshawar will be stepped up where, besides acquisition of land, 2,000 plots will be developed during 1977-78. In addition other small scale schemes for development of plots in other urban areas of the province will yield about 3,000 plots, including 1,600 plots for industrial workers.

58. *Urban Water Supply and Sewerage.*—Ten on-going schemes and 4 new schemes would be undertaken, out of which 5 schemes will be completed during 1977-78, providing safe water supply and sanitation facilities to 1.75 lakh urban population. The schemes proposed to be completed during 1977-78 include Greater Peshawar Water Supply Scheme Phase-I and II and Water Supply Schemes at Mardan, Abbottabad and Tank, etc.

59. *Rural Water Supply and Sanitation.*—A total of 162 schemes for rural water supply will be undertaken during 1977-78. Out of these, 106 schemes are expected to be completed during 1977-78 providing water supply and sanitation facilities to 6.00 lakh rural population.

60. *Government Servants Housing and Government Offices.*—The on-going scheme for the construction of residential accommodation for Government Servants at Jamrud Road, Peshawar, will be continued and 100 residential units will be completed during 1977-78. About 100 units will also be completed in other small schemes in various areas of the province. Besides, design and feasibility studies of new Secretariat Complex and residential flats for officers at Peshawar will be taken in hand.

61. It is proposed to construct 1.72 lakh sq. ft. of office space in the province during 1977-78. This includes space for police headquarters at Peshawar and at a number of other places in the province. The work on the construction of Frontier House at Islamabad, High Court Building at Peshawar and extension of Assembly Building at Peshawar, which has already been initiated will be stepped up.

62. *Urban Development.*—Under the programme of Urban Development, allocations have been made for the construction of a bus stand (Rs. 8.087 million) and shops (Rs. 2.391 million) at Peshawar and improvement of small cities and towns (Rs. 10.000 million).

Sind

63. The total allocation of Sind during 1977-78 is Rs. 166.644 million. Out of this allocation, Rs. 7.535 million are meant for urban and regional planning, Rs. 5.500 million for low income housing, Rs. 80.652 million for water supply and sanitation, Rs. 10.750 million for Govt. Servants' Housing, Rs. 15.985 million for Govt. Offices and Buildings, Rs. 38.500 million for Urban Development and Rs. 7.22 million for special projects.

64. The major targets for 1977-78 include the development of 25,000 plots for low income families and Industrial Workers, provision of water supply and sewerage facilities to an additional urban population of 20.92 lakh and rural population of 9.95 lakh, environmental improvement to benefit 5.5 lakh persons, construction of 105 housing units for Government Servants and 1.38 lakh sq. ft. office space. The programmes to achieve these targets are as follows :—

65. *Basic Development and Regional Planning.*—Under the programme for mapping 14 selected towns, it is proposed to complete work on 3 towns during 1977-78 as a prelude to their detailed physical planning. Similarly outline development plans for 6 towns would be continued and work on Larkana and Nawabshah plans would remain in progress. 9 additional Centres of Sind Regional Plan Organization would be established in the province during 1977-78 which will collect and analyse data on regional resource endowment in the various sectors of the provincial economy.

66. *Low Income Housing.*—The work on the low income housing schemes at Hyderabad, Tando Adam, Nawabshah and Sukkur will be continued and 5,000 plots would be developed in these towns. Outside the ADP, an additional 10,000 plots will be developed in the metroville scheme at Karachi and 8,000 plots for industrial workers in various industrial centres. Besides some plots will also be developed in agrovillage scheme, special projects and by local bodies and other executing agencies.

67. *Urban Water Supply and drainage.*—Outside Karachi, work would be continued on 17 on-going schemes (7 water supply and 10 drainage) at Mirpurkhas, Sukkur, Jacobabad, Nawabshah, Thatta, Khairpur, Rohri, Dadu, Tando Adam, Larkana, and Shikarpur, and it is expected that 5.7 lakh additional persons would receive drinking water facilities in 1977-78. Similarly in the case of drainage, 6.22 lakh additional persons would be covered.

68. Karachi Water Supply and Sewerage Renovation Scheme has been completed to the extent of 94%. During 1977-78, work on the scheme would be continued and it is hoped that the scheme would be fully completed. Under Lyari Water Supply and Sewerage scheme, the water supply component would be completed covering 5.5 lakh persons while under the drainage component, 0.5 lakh persons would receive drainage facilities. The 3rd Phase of Greater Karachi Bulk Water Supply scheme would also be continued and finances (Rs. 280.000 million) would be provided through the National Credit Budget. The scheme would be nearing completion by the end of 1977-78. With the completion of this scheme, an additional supply of 70 MGD would be added to make available an overall supply of 230 MGD to the city of Karachi. This will still be short of the total demand for the city and therefore during 1977-78, a feasibility study for obtaining water from Hub Dam, would be carried out.

69. Hyderabad Water Supply and Drainage scheme has been transferred to the Hyderabad Development Authority (H.D.A.) and during 1977-78, work on underground reservoirs and 48" mains will be completed. Pumping machinery and the existing filter plants would also be improved. It is expected that about 3 lakh additional persons would receive piped water supply besides mitigating shortage of drinking water during peak summer months.

70. *Rural Water Supply and Drainage.*—Work would continue on 44 on-going and 8 new schemes this year. It is proposed to cover an additional population of 7.60 lakh persons (inclusive of 0.60 lakh persons covered through completion of PWP schemes and 3.50 lakh persons through installation of 5,000 handpumps). Under the rural drainage it is expected that 2.35 lakh additional persons would be benefitted.

71. *Agrovilles.*—Work would be continued on construction of internal roads of Mirokhan and Garhi-Khairo. Similarly, work on water supply scheme, 50 bedded hospital and Town Hall at Badin would continue and would be completed.

72. *Govt. Servants Housing and Govt. Offices and Buildings.*—Work on 39 schemes of Government Servants housing and 31 schemes of Government offices and buildings would be continued during the next year. It is estimated that 105 housing units would be constructed for Government Servants and 1.38 lakh sq. ft. of space in respect of Government offices and buildings.

73. *Special Projects.*—During 1977-78, special projects in the Physical Planning and Housing Sector such as Development Complex, Sehwan, Development Complex Bhit Shah and Shah Jahan Mosque, Thatta, will be continued. Substantial allocations have been made for the above projects and at the end of 1977-78, the above projects will be nearing completion. Similarly work on the Sind House at Islamabad will be further accelerated and completed.

74. *Urban Development.*—Under the programme of urban development, a lump sum allocation of Rs. 30 million has been made for the development needs of various towns. In addition, Rs. 8.5 million have been earmarked for the on-going scheme of construction of Lyari General Hospital being executed by K.M.C. Slum improvement for 5.5 lakh persons will be carried out under the Lyari Early Action Project.

Punjab

75. The total allocation for Punjab during 1977-78 is Rs. 794.800 million. This allocation includes an amount of Rs. 2.200 million for town planning and research, Rs. 115.100 million for low income housing, Rs. 357.400 million for water supply and sewerage, Rs. 24.240 million for Government Servants Housing, Rs. 45.500 million for Govt. Offices and Buildings and Rs. 250.400 million for urban development.

76. The physical targets for 1977-78 include development of 57,000 plots for low income families in urban areas and distribution of 50,000 plots of five marlas in rural areas for construction of houses. A population of about 3.5 lakh will benefit from the programme of improvement of slums and Katchi Abadies. In the case of water supply and sanitation facilities, an additional population of 22.0 lakh will be served in urban areas and 8.65 lakh in the rural areas with potable water and sanitation. Various programmes to be undertaken in the Annual Plan 1977-78 to achieve these targets are as follows :—

77. *Town Planning and Research.*—The on-going projects relating to preparation of outline and regional plans for Sargodha region, Bahawalpur region, Murree region, Mianwali, Khushab,

Muzaffargarh, D.G. Khan area and for Pattoki, Nankana and Muridke would be continued. In addition, work on regional development plan for Rawalpindi would also be undertaken during 1977-78.

78. *Low Income-Housing.*—In order to provide cheaper housing facilities to the poor people, adequate funds have been provided in the ADP 1977-78. About 25 schemes are expected to be completed with the development of 20,000 residential plots. In addition it is expected that about 20,000 plots will be developed by the Development Authorities at Lahore, Lyallpur and Multan, in addition to development of 10,000 plots for the Industrial Workers through the Workers Welfare Fund and 7,000 plots by other local bodies.

79. *Urban Water Supply Schemes.*—For all urban areas other than Lahore, Lyallpur and Multan, the Public Health Engineering Department would execute 55 on-going (24 water supply and 31 sewerage/drainage) schemes and one new urban water supply scheme during 1977-78. With the completion of 12 urban water supply schemes during 1977-78, about 14.03 mgd of water shall be added which will serve a population of 7 lakh. In addition 13 schemes of sewerage and drainage shall be completed during 1977-78 which will serve an additional population of 10.23 lakh.

80. In the case of Lahore, an amount of Rs. 130.0 million will be utilized by WASA of Lahore for the II phase of Greater Lahore Water Supply, Sewerage and Drainage project. The agency will complete drilling and installation of 12 tubewells and lay 2,89,643 feet of water supply distribution lines, 71,900 feet of water supply main grid, 12,000 feet of trunk sewer and 450,560 feet of lateral sewers.

81. A major allocation of Rs. 34.5 million has been made for the Lyallpur Water Supply Sewerage and Drainage projects. This includes an amount of Rs. 4.5 million for the short term plan under which work on installation of tubewells, underground reservoir and storm channels will be completed. In addition, an allocation of Rs. 30 million has been made for initiating work on the comprehensive water supply, sewerage and drainage project which is being partly aided by the Asian Development Bank.

82. In the case of Multan, allocations of Rs. 18.50 million and Rs. 5.00 million respectively have been made for sewerage and drainage and water supply projects respectively. Under the sewerage scheme, two disposal works and one intermediary pumping station will be installed which will enable the Multan Development Authority to commission 14.5 miles of sewer lines already laid.

83. *Rural Water Supply and Sanitation Schemes.*—This sector has been allocated Rs. 86.0 million. Out of the 119 on-going and new schemes to be undertaken during 1977-78, it is expected that 47 rural water supply schemes shall be completed, which will provide an additional 3.36 mgd of water serving an additional population of 3.34 lakh persons. Similarly about 13 sewerage/drainage schemes shall be completed during 1977-78 which will benefit an additional population of 1.05 lakh persons. About Rs. 17.0 million have been provided for installation of 8500 handpumps in rural areas during 1977-78. This programme shall be executed through PWP and would provide potable water to about 4.25 lakh additional population.

84. *Government Servants Housing, Offices and Buildings.*—During 1977-78, it is planned to construct about 600 houses and 5.68 lakh sq. ft. of office space. Major schemes include construction of residential and office accommodation for the officers at newly created districts of Vehari and Kasur, construction of MPA's hostel at Egerton Road and construction of Punjab House.

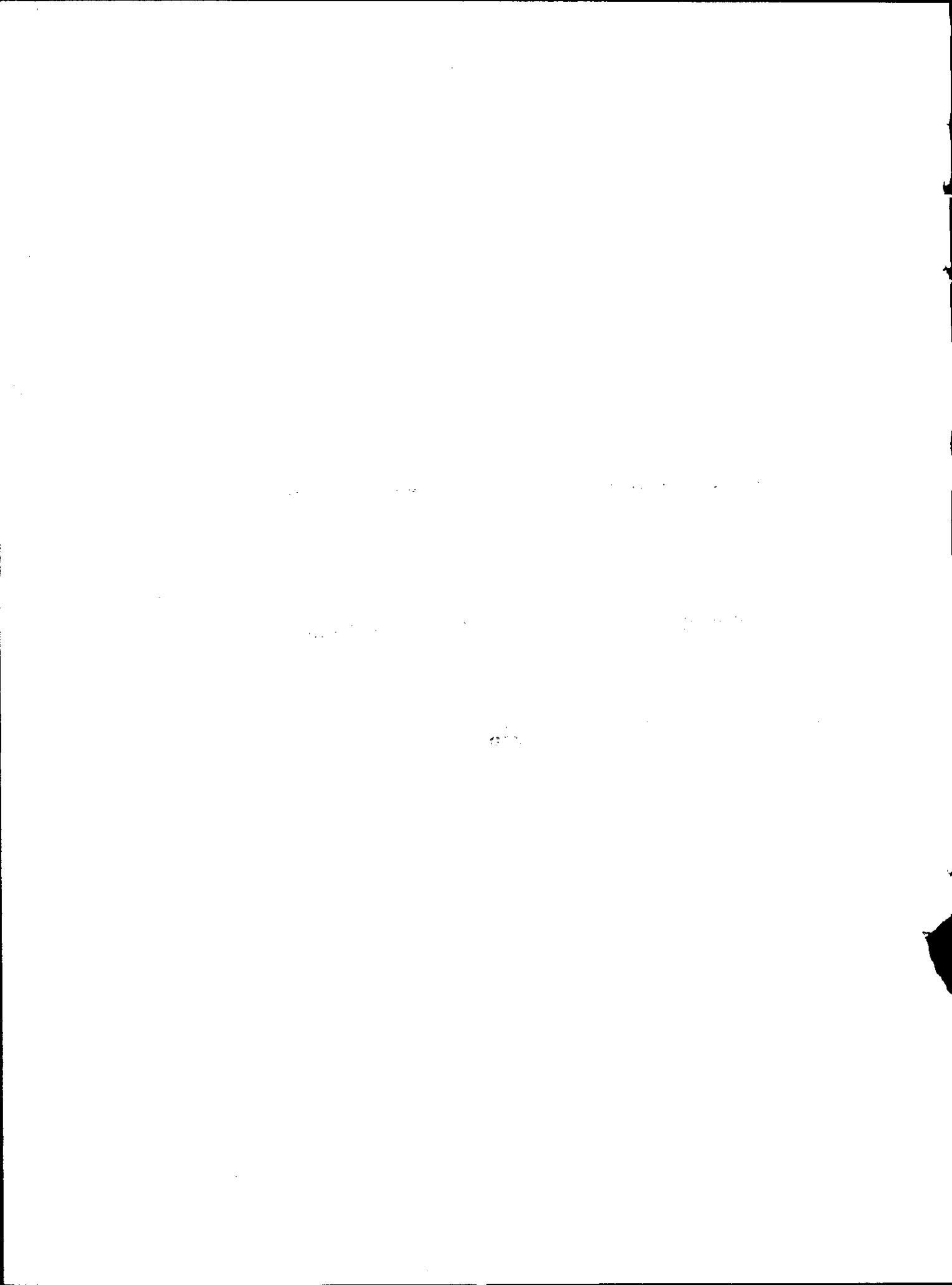
85. *Urban Development.*—An amount of Rs. 161.1 million has been provided in the Punjab ADP for the development of Katchi Abadies and conferment of proprietary rights of land on the residents of Katchi Abadies in different cities and towns of the province. It is anticipated that a population of 3.5 lakh will benefit from the programmes of environmental improvement of various Katchi Abadies.

86. A major programme of construction and improvement of roads and bridges within the urban areas will be undertaken with an allocation of Rs. 85.3 million. This includes twelve schemes in Lahore (allocation of Rs. 60.7 million) and five in Multan allocation Rs. (20.0 million).

87. An allocation of Rs. 4.0 million has also been made for carrying out Lahore Urban Development and Traffic Study.

PART III
HUMAN RESOURCES AND SOCIAL DEVELOPMENT

(153—154)



CHAPTER 12

EDUCATION AND TRAINING

REVIEW OF ACHIEVEMENT OF 1976-77

Financial Achievements

A sum of Rs. 730.296 million was allocated in the ADP of 1976-77 for development in the Sector of Education and Training. This allocation also included development funds earmarked for Culture Programmes, Archaeology and Museum and Games and Sports which have been transferred from Ministry of Education to the newly created Ministry of Culture, Archaeology, Sports and Tourism. The revised estimate of expenditure incurred on all programmes amounts to Rs. 565.871 million which, in over all terms, gives a utilization percentage of 77.5. The position of utilization for various executing agencies compared to ADP allocation is given in Table-1.

TABLE 1

							(Rs. in million)		
Executing Agency							A.D.P. allocation	Revised estimate of dev. exp.	Exp. as % of ADP Allocation
(A) Federal							370.381	299.987	81.0
a. Ministry of Education							184.885	151.366	81.9
b. Ministry of Culture, Archaeology, Sports and Tourism.							134.785	108.424	80.4
c. Planning and Development Division							2.200	1.507	68.5
d. Establishment Division							2.650	2.250	84.9
e. States & Frontier Regions Division (FATA)							22.761	25.016	109.9
f. Kashmir Affairs							13.100	11.424	87.2
g. Religious Affairs Division							10.000	—	—
(B) Provinces							359.915	264.691	73.5
a. Baluchistan							25.744	20.820	80.9
b. N.W.F.P.							83.124	80.647	97.0
c. Sind							68.097	58.630	86.1
d. Punjab							182.950	104.594	57.2
Total—(A + B)							730.296	564.678	77.5

2. The combined utilization rate for Federal Divisions/Agencies is 81.0% whereas for Provinces it is 73.5%. The rates of utilization by different Divisions/Agencies, range between 68.5% for Planning Division and 109.9% for FATA. Individually, the rates of performance for the Provinces of

Baluchistan, N.W.F.P., Sind and Punjab are 80.9, 97.0, 86.1 and 57.2 percent respectively. The position of utilization of ADP allocation for different sub-sectors of education is summarized in the Table 2.

TABLE 2

(Rs. in million)

Sub-Sector	A.D.P. allocation	Revised estimate of expenditure	Exp. as % of ADP allocation
Primary Education	89.583	48.473	54.1
Secondary Education	118.976	86.164	72.4
Teacher Education	20.350	15.528	76.3
Technical Education	61.452	50.510	82.2
College Education	73.603	59.136	80.3
University Education	61.206	68.671	112.2
Scholarships	61.940	52.237	84.3
Curriculum, Examinations, Books and Libraries	25.270	23.936	94.7
Federal hostels	29.500	29.500	100.0
Miscellaneous programme of Education Division and Department of Education	23.941	13.936	58.2
Sports, Museums, Archaeology & Culture and I.S.C.	26.065 } 112.500 }	21.936 } 90.292 }	58.2 } 80.3 }
Planning Research and Statistics	13.260	2.649	20
Establishment Division	2.650	2.250	84.9
Religious Affairs Division	10.000	—	—
Total	730.296	564.678	77.3

3. In overall terms 77.3% of ADP allocation has been utilized with highest rate of 112.2% for universities and with lowest rate of 54.1% for primary education. Sub-sector-wise details of utilization of ADP allocation for various executing agencies is given in Annexure I & II.

PHYSICAL ACHIEVEMENTS

Primary Education

4. During the year 552 new primary schools have been opened against a target of 470. In addition 250 schools have been opened in FATA against an undefined target. Major programmes which have been implemented by various executing agencies are summarized in Table 3.

TABLE 3

	Federal* programmes	Baluchistan	NWFP	Sind	Punjab	Total
Number of new schools opened ..	250 (FATA)	131	121	100	200	802
Number of new buildings completed ..	274	—	72	46	—	392
Number of schools buildings in progress/nearing completion	8	69	77	214	81 (for war damaged schools)	449
Number of schools provided with equipment ..	46	55	202	247	200	751
Number of schools provided with teaching kits ..	1100	600	1700	4000	7900	15300

(A) FEDERAL PROGRAMME

5. (i) *Education Division*.—On-going construction programme on 19 primary school buildings have been completed and on another 11 continued. Equipment, books and furniture have been provided to 46 existing cantonment primary schools and some schools received new furniture. Under the programme of Education Division 15,300 teaching kits were supplied to primary schools all over the country.

6. (ii) *Northern Areas*.—Construction of 5 primary school buildings have been completed.

7. (iii) *F.A.T.A.*—250 new primary schools have been opened in temporary accommodation. Consolidation and improvement programme includes completion of buildings of 254 primary schools and provision of additional rooms to another 6 existing schools.

(B) PROVINCIAL PROGRAMME

8. (i) *Baluchistan*.—131 new primary schools have been opened against the target of 56. Buildings have been constructed and equipment have been provided for 56 schools, 75 new schools have been housed in temporary accommodation and construction work of 69 school buildings was taken up. Improvements have been made in 200 existing primary schools in respect of buildings and equipment.

9. (ii) *NWFP*.—121 new schools have been opened. Seventy two new school buildings have been constructed against the target of 132. On-going work of construction of 71 buildings reached completion stage and building of 49 existing primary schools have been expanded by addition of class rooms. Equipment was provided to 81 existing and 121 new schools.

10. (iii) *Sind*.—The target of opening 100 new schools was fully achieved. Sixty four new buildings have been completed and 214 school buildings remained in progress. Equipment was provided to 247 primary schools.

11. (iv) *Punjab*.—The target of opening 200 school has been fully achieved by housing the new schools in temporary accommodation. Construction of 81 buildings for schools damaged during the war in 1971 was taken up. Equipment, furniture etc. was provided to all new schools.

*Federal programmes include Schools in Islamabad, Federal Areas, Cantonments, North Areas FATA and Azad Kashmir.

Secondary Education

12. 329 primary schools were raised to middle standard against the target of 169 and 10 middle schools were raised to high standard against the target of 69. Twenty four new middle school buildings and 17 high school buildings were completed. Construction of buildings of 166 middle schools and 62 high schools remained in progress. Additional class rooms were constructed at 40 middle and 123 high schools. Miscellaneous equipment was supplied to 130 middle and 112 high schools. Science equipment was provided to 93 middle and 166 high schools, furniture to 18 middle and 60 high schools, library books to 12 middle and 64 high schools. Thirty one workshops, 10 science laboratories and 13 hostels were constructed for high schools. In FATA construction of 50 teachers residences was undertaken. In Secondary Schools, agro-technical equipment was provided for 700 middle stage units and 100 high stage units. Executing agency-wise details are given below :—

	Schools under Federal Govt.	Baluchistan	NWFP	Sind	Punjab	Total
Agro. Tech. equipment for middle stage units.	63	28	84	175	350	700
Agro-Tech. equipment for high stage units.	9	4	12	25	50	100

(A) FEDERAL PROGRAMME

13. (i) *Education Division*.—Construction of 6 secondary schools was completed and work has been started on construction of 4 new school buildings. Equipment and library books have been provided to 4 high and 12 middle schools, furniture to 54 high schools and science equipment to 63 high schools in different cantonment areas. Agro-technical equipment has been supplied to 700 middle stage units and 100 high stage units all over the country.

14. (ii) *Northern Areas*.—Seven primary schools were upgraded to middle standard, and one middle school was raised to high standard. Buildings of 2 high schools reached near completion stage. Equipment, books and furniture worth Rs. 1.8 million. were also provided to existing educational institutions.

15. (iii) *FATA*.—Thirty primary schools were upgraded to middle standard and 10 middle schools were upgraded to high standard. Buildings of 51 upgraded high schools, one hostel and 50 teacher residences were completed. Agro-technical equipment was supplied for 81 units each at middle and high stage and teaching of these subjects was introduced in 13 middle schools and 18 high schools. Twenty existing high schools and 93 existing middle schools were improved in respect of science and other equipment.

16. (iv) *Azad Kashmir*.—Additional rooms were constructed at 94 high schools of which 2 were also provided with halls. Equipment for drawing rooms and library books were provided to 60 high schools. Sports material and *Mujahid* equipment was also provided to 60 high schools and 195 middle schools. Agro-technical equipment was provided to 30 middle and 5 high schools and 4 workshops were constructed. Provision has also been made for 2 jeeps under the scheme of Agro-technical courses.

(B) PROVINCIAL PROGRAMMES

17. (i) *Baluchistan*.—Development at the secondary school level included upgradation of 30 primary schools to middle standard. Construction of buildings for 25 middle schools and consolidation of 40 middle and 16 high schools started in the previous year was completed.

18. (ii) *NWFP*.—Two primary schools were raised to middle standard and new buildings were constructed for 4 middle schools against the target of 5. Construction of 27 workshops, 10 science laboratories and one hostel was completed. Agro-technical courses were introduced in 352 middle and high schools. Science equipment was provided to 73 high schools. Play grounds were developed at high schools located at Peshawar and Haripur.

19. (iii) *Sind*.—Fifteen primary schools were upgraded to middle standard and 11 middle schools were raised to high standard. On-going construction of building of one comprehensive high school and one middle school was completed. New buildings were completed for one middle school raised to high standard and 7 primary schools raised to middle standard. Work remained in progress on 9 buildings of middle schools raised to high schools and 11 primary schools raised to middle schools and on the construction of 5 additional rooms each with 7 high schools. Equipment was provided to 55 middle schools and 52 high schools. Construction of compound wall at 24 middle schools, development of 138 play grounds, construction of 17 gymnasias, construction of building for Rato Dero high school and hostel at Badeh was completed. Agro-technical courses were started at 27 schools.

20. (iv) *Punjab*.—245 primary schools were upgraded to middle standard against the target of 125, and 81 middle schools were raised to high standard. Construction of buildings of 120 middle schools and 40 high schools was started. Six existing high schools were improved in respect of class rooms, library etc. Two hostel buildings were constructed with the existing high schools. Buildings of one comprehensive high school and one junior Model School were completed. The on-going construction programme of buildings of 6 single/double section high schools and 3 comprehensive high schools and a school building at Khangah Dogran made good progress.

Teacher Education

(A) FEDERAL PROGRAMME

21. (i) *Education Division*.—The academic block of the Federal College of Education was completed and construction of the auditorium remained in progress. Furniture and equipment was made available for Federal Project Unit established for implementation of Third Education Project. A number of in-service training programmes/workshops were organized for instructors of primary teacher training institutions and teachers of Agro-technical courses. To provide training facilities for agro-technical teachers six centres were set up at Lyallpur, Hyderabad, Abbottabad, Quetta, Islamabad and Muzaffarabad.

22. (ii) *FATA*.—Additional rooms were constructed at teacher training institute Jamrud and equipment was provided. About 240 primary and 70 secondary school teachers received training in teaching the new curricula and another batch of 550 teachers participated in in-service training programmes.

23. (iii) *Azad Kashmir*.—Hostels were constructed at 2 primary teacher training units attached with high schools. Work on the upgradation of training college Afzalpur remained in progress and some in-service training programmes were also organized.

(B.) PROVINCIAL PROGRAMMES

24. (i) *Baluchistan*.—During the year 100 graduates (B. Ed.), 47 under-graduates (C.T.) and 300 primary teachers (PTC) were trained.

25. (ii) *N. W. F. P.*—The programme included in-service training of 92 primary school teachers, 1418 secondary school teachers, 160 teacher trainers of normal schools and other teacher training institutions. A total of 212 secondary school teachers were given special training in teaching of agro-technical subjects at middle and high stages.

26. (iii) *Sind*.—College of Physical Education was provided with equipment for gymnasium, books and play grounds. Some preliminary work was undertaken for implementation of the Third Education Project during 1976-77.

27. (iv) *Punjab*.—Equipment and Audio-visual aids were supplied to 8 colleges of elementary teachers for the introduction of agro-technical teaching and other general improvements. The on-going programme of construction of buildings of three elementary colleges for in-service and pre-service training of teachers was completed. About 45,000 teachers which include 17,000 primary teachers, 14,000 middle school teachers, 12,000 high school teachers and 200 colleges teachers were provided exposure in new teaching techniques. Some improvements in the physical facilities of the teacher training institutions was also affected in building and equipment.

Technical Education

A. FEDERAL PROGRAMME

28. (i) *Education Division*.—Construction of girls hostel at National College of Arts, Lahore was undertaken and the structure of Academic Block, was completed. Equipment was provided to National College of Engineering and Technology, Karachi.

B. PROVINCIAL PROGRAMMES

29. (i) *Baluchistan*.—On-going programme of consolidation of Polytechnic Institute and Commercial Institute, Quetta was completed.

30. (ii) *N. W. F. P.*—Equipment was supplied to the Engineering College, Peshawar. Work on the addition of facilities to teach new technologies of air-conditioning and refrigeration, chemical technology and electronics at the Polytechnic Institute, Peshawar was continued. Progress was also made on the on-going construction programme of buildings of 2 vocational institutes at Peshawar and D. I. Khan and 5 Commercial Institutes.

31. (iii) *Sind*.—The building programme provided under Phase I of the scheme of NED Engineering College reached near completion stage, furniture and equipment costing US \$ 1,07,290 has been provided at the site. The programme of upgradation of Sind University Engineering College to the level of University of Engineering and Technology at Nawab Shah also made progress. Sixty per cent of work on the construction of two hostels and on 40 residential quarters is at finishing stage. The programme of upgradation of Polytechnic Institutes at Karachi and Khairpur continued and construction of their buildings was completed. Improvement programme was completed in respect of four nationalized Polytechnics. Construction of building of 3 commercial institutes and 4 vocational institutes made progress and construction of more buildings was started.

32. (iv) *Punjab*.—Consolidation of facilities of the University of Engineering and Technology, establishment of computer section, development of research facilities and improvement of instruction through introduction of semester system was continued. Under the project of the Second Campus of the University at Taxila land measuring 908 kanals was acquired and work on the development of site, construction of a hostel for 200 students, lecture theatres block and laboratory block made good progress. Residential units for junior and lower staff have been fully completed. On-going programmes for the establishment of Polytechnic Institutes at Sahiwal, Lyallpur, expansion of Government Polytechnic Institute at Lahore and Bahawalpur registered good progress. The programme of development of Technical Colleges through upgradation of Polytechnic Institute at Multan, Lahore, Rasul and Rawalpindi was further strengthened by providing necessary equipment for B. Tech. courses. Equipment was also supplied for the newly introduced technologies at four Polytechnic and to the teacher training wings of the polytechnics at Rawalpindi and Gujrat. Work was started on the re-organization of 5 existing vocational institutes.

College Education

A. FEDERAL PROGRAMMES

33. (i) *Education Division*.—The on-going construction work at the Federal Government Women's College was completed. At the Federal Government College for Men construction of one block was completed and structure of the five remaining blocks reached final stage. Work was also continued at the Degree College, Kharian. Project units were set up for Cadet College at Pallandari, Mastung and Larkana which undertook, work on feasibility studies, soil testing exercise, and designing and project formulation.

34. (ii) *Northern Areas*.—Work was continued on the up-gradation of Boys Intermediate College, Gilgit and construction of building for the college at Sakardu was started.

35. (iii) *F. A. T. A.*—Construction of buildings of newly established intermediate colleges was completed. Laboratories science equipment and furniture was provided to all the newly established intermediate colleges. A hostel has been constructed for students and 34 residential units for staff.

36. (iv) *Azad Kashmir*.—Expansion of the Government College, Pallandari reached near completion stage. A transformer was provided in Government College, Bhimber. Work on the buildings of three degree colleges made progress and construction of two hostels for colleges was completed. Land has been acquired for the Cadet College, Pallandari.

B. PROVINCIAL PROGRAMMES

37. (i) *Baluchistan*.—Construction of buildings of 2 Intermediate Colleges was completed and of 3 colleges remained in progress. Additional accommodation was provided to the newly upgraded Intermediate College for boys at Mastung. Science equipment was supplied to 5 colleges.

38. (ii) *N. W. F. P.*—The on-going programme of the establishment of 2 Intermediate Colleges was completed and construction work was continued on the buildings of other 19 Intermediate colleges. The work on the construction of biology block at degree college D.I. Khan and post-graduate physics laboratory at degree college Mardan and on hostels was continued. Hostels with capacity of 800 each were provided to Mens' Degree College at Charsadda and Nowshera. Construction of teachers' hostels was completed at Dir and Mardan. Provision of equipment and furniture was made for 44 intermediate and degree colleges all over the province.

39. (iii) *Sind*.—B. Sc. classes were added in 6 existing intermediate colleges. On-going work on the construction of buildings of 9 intermediate and three degree colleges started in preceding years remained in progress. Seven nationalized colleges were provided with laboratories, lecture rooms, science equipment and books. Work was started on the establishment of 9 new intermediate colleges and two degree colleges. Equipment was supplied to Cadet College, Petaro.

40. (iv) *Punjab*.—Additional class rooms, laboratories, libraries, hostels, science and library equipment was supplied to 60 existing colleges and construction on 20 college buildings was started. Land was acquired for the two colleges and 14 colleges were supplied equipment and furniture to introduce semester system. Scientific equipment was also supplied to 30 existing colleges destroyed during floods.

University Education

A. FEDERAL PROGRAMME

41. (i) *Education Division*.—At the Quaid-e-Azam University work was completed on the on-going construction programme of 6 science buildings, basement of Central Library, Cafeteria, mosque and 70 staff residences. Provision of equipment, furniture, books and scholarships was made in university's different departments. Vehicles costing Rs. 0.361 million were also purchased. At the Peoples Open University provision was made for the audio-tape equipment, furniture, printing of correspondence text-books for in-service training of elementary teachers and the production of broadcasting lessons of these courses. Construction of buildings of Centres of Excellence was continued. Provision was made for equipment, furniture and award of fellowships was made for the Area Study Centres, Pakistan Study centres and for the Centres of Excellence at the various universities. Equipment, books and journals were also purchased for the National Institute of Psychology. 135 research grants for Ph. D. programme were awarded to teachers of colleges and universities and other scholars through University Grants Commission. Work was also started on the construction of building of Pakistan Institute of Development Economics.

B. PROVINCIAL PROGRAMMES

42. (i) *Baluchistan*.—At Baluchistan University laboratory equipment was supplied to the department of Physics, Chemistry and Geology. Work remained in progress on 43 residential units for faculty and other staff members.

43. (ii) *N. W. F. P.*—At the University of Peshawar the construction of building of University College for Women was completed. Equipment was provided to the department of psychology and the University College for Women. The on-going development programme of Pashto Academy was continued. Construction of staff quarters and University Model School remained in progress. At the Gomal University, construction of buildings of Humanities block and hostels have reached completion stage. Equipment and furniture was also procured.

44. (iii) *Sind*.—At the University of Karachi, the construction of buildings for departments of Physiology, Statistics and Pharmacy and hostel for Centre of Applied Economics was completed. At the University of Sind, the programme of Institute of Chemistry, and the sections of nuclear chemistry, natural products chemistry, fresh water biology and micro biology and natural herbarium made progress. Fellowships for M. Phil. and Ph. D. were awarded to those enrolled in these courses in Micro-Biology. A hostel for 100 students and 52 residences of A, B, C, and D. categories were constructed. Shah Abdul Latif Bhatai Residential Campus of Sind University is being developed by utilizing Mumtaz College as the nucleus. During 1976-77, first floor of southern wings of Mumtaz College was completed and 70 students were admitted.

45. (iv) *Punjab*.—At the University of the Punjab, work was continued on the construction of buildings of Institute of Chemical Technology, Law College, Commerce College and a few other Departments. Construction work at the swimming pool and one boys hostel was completed. Equipment was supplied to the Institute of Chemical Engineering and Technology for strengthening existing programmes. Developments at the universities of Multan and Bahawalpur received limited amount for the purchase of land and its development and acquisition of urgently required equipment for students enrolled at the University of Multan in post-graduate courses. At the University of Bahawalpur also post-graduate courses have been started, and the present enrolment of the university is 391.

Scholarships

46. Under the Federal Programmes scholarships were awarded as given below :—

S. No.	Name of the Programme	No. of persons who benefited		
1.	Central Overseas Training Scheme	260		
2.	Quaid-e-Azam Scholarships Scheme	57		
3.	Merit Scholarship Scheme	60		
4.	Nishan-i-Haider Scholarship Scheme	50		
5.	President's Thousand Scholarship Scheme	3500		
6.	Scholarships to Foreign Students	250		
7.	Scholarships/Stipends to Indigents Students	3000		
8.	Scholarships for Talented Students from Rural/under-developed areas for studies in Cadet Colleges/Public Schools	40		
9.	Scholarships for Displaced East Pakistani Students	500		
10.	Supplementing Air passage of students to go abroad for higher studies	100		
11.	Loans to needy students	3000		
The scholarships awarded by other agencies are given below :—				
	<i>F.A.T.A.</i>	<i>N.W.F.P.</i>	<i>Sind</i>	<i>Punjab</i>
	3,338	10,316	9,000	32,000

47. Under each of the above four executing agencies these scholarships were awarded to enable students to continue their studies in secondary schools, colleges and institutions of general and professional education, polytechnics and technical, commercial and teacher training institutes. Expenditure on similar scholarships awarded in Northern Areas, Azad Kashmir and Baluchistan is met out of non-development budget.

Curriculum Development and Examination Reforms

48. Work was continued on the revision and modernization of curricula of primary and secondary schools, teacher training institutions and polytechnics. Work on preparation of curricula for classes XI & XII reached final stage. New curricula were introduced in Classes V, VI & IX. Evaluation of programmes of introduction of curricula introduced earlier in classes I—IV was initiated. The on-going programme of preparation of new type tests was continued. Cumulative record forms have been developed for use in primary and secondary schools.

Books and Libraries

49. Supply of text-books to university/college students was continued through the scheme of Book Banks, local production of foreign text-books and import of foreign books. Under the programme of local production of foreign text-books, 75 new titles with 1500 volumes per title have been printed. Under the programme of import of foreign text-books total of 1430 new titles with 16,220 volumes have been imported. Multiple titles of important text-books were supplied to 346 book banks established in various institutions of post-matric education. National Book Foundation published 30 new titles on children stories and 13 titles of general books of adults. Land was procured for construction of National Library of Pakistan at Islamabad. Planning and designing of the library building was undertaken.

Programme of Culture, Archives, Museums and Sports

50. (i) *Cultural Activities*.—Under the programme of National Commission of Historical and Cultural Research, 3 research books were published and 15 remained at various stages of preparation. Under the programme of PNCA renovation of auditorium of Liaquat Memorial Hall was continued and light and sound equipment was installed and construction of a hostel was started. The construction of building of Folklore Archives reached near completion stage and various programmes were undertaken to disseminate information on Pakistani art and culture. Preparation of books and research were continued at the Institute of Sindhiology. Establishment of a College of Fine Arts and Sir Shahnawaz Bhutto Memorial has been started.

51. (ii) *Archaeology, Museums and Archives*.—Programmes of preservation of Shalimar Garden, Lahore and Lahore Fort were continued. Farudgah-e-Shahan-e-Mughlia Gardens at Wah were acquired. At the site of Moenjodaro some experimental work of river training was undertaken and two tubewells were installed. At Harappa staff quarters were constructed. Some offices were constructed at Hyderabad Museum. Land was procured for the construction of building of National Archives of Pakistan. Programmes of training coaches and sportsmen were undertaken under the various programmes of Pakistan Sports Board. Programmes for training and coaching of young boys in different games and sports were arranged at the Sports Nursery, Islamabad. The programme of the Institute of Sports and Culture which is being constructed with the assistance of the People's Republic of China made progress and a programme of Mass Gymnastic Displays, for which about 12,000 students were trained by Korean experts, was also organized.

52. (iii) *Research and Statistics*.—Studies and researches on various issues and subjects of significance to planning and development were continued under the programme of Planning Division and Provincial Departments of Planning and Development. Under the programme of Planning Division 27 research studies have been completed and 17 studies are at various stages of preparation.

53. (iv) *Establishment Division*.—The on-going programme for the award of scholarships for children of non-gazetted employees of Federal Government was continued. Some development work was also undertaken at the Pakistan Academy for Rural Development, Peshawar.

Developments Since 1970

54. During the period 1970—77 about 3,334 privately managed institutions were nationalized, free education was introduced from classes I to X, tuition fees in nationalized colleges were scaled down to bring them at par with the rates in government colleges, and teacher salaries were improved twice, once in 1970 and later in 1972. Due to these changes in the educational system major portion of the increase in educational expenditures during this period, particularly, non-developmental* has been utilized on the existing educational institutions and teachers. Consequently only limited funds could be made available for creating new educational facilities required to achieve the set targets which were planned to increase the proportion of children of primary school age attending schools from 45% in 1970 to 85% in 1980. For the same period the enrolment at the middle stage was planned to increase from 21% of the relevant age group to 55%. Against these targets the corresponding percentages clearly indicate that attainment of the set targets for 1980 is no longer feasible. The progress in respect of the proposed programme of adult education is negligible. Due to the failure in the implementation of primary and adult education programmes the rate of literacy did not register any significant improvement and it is still about 19 per cent of total population. The increase in the number of institutions, at various levels, enrolments and other developments which have been made in different sub-sectors of education are summarised below:—

	1970-71		1976-77	
	No. of Institutions	Enrolment (in lacs)	No. of Institutions	Enrolment (in lacs)
Primary Schools	43710	40.66	53869	56.19
Middle Schools	3822	9.74	4727	2.62
High Schools	2063	3.52	3043	4.87
Colleges	314	1.99	419	2.48
General Universities	5	12.00	10	25.00

*The Non-Developmental expenditures increased from Rs. 401 Million in 1969—70 to Rs. 1870 million in 1976-77.

55. In order to bring the educational programmes more in line with the needs of students and manpower requirements of the country, curricula of educational programmes of all stages have been revised. These curricula place special emphasis on teaching of science, technical and occupational/professional subjects in schools, colleges and universities. To make general education more functional, a new scheme of agro-technical subjects has been introduced in secondary schools.

56. Special programmes have been set up to promote research work in the universities and Centres of Excellence in scientific and technological disciplines have been established at general and professional universities. Area Study Centres have been established at the universities to provide facilities of study of various contemporary societies, and Pakistan Study Centres have been established to enable students of Province/Region of the country to study language, literature, art and culture of other regions.

57. Special measures which have been taken to bring about qualitative improvements in educational programmes of colleges and universities of general and professional education include special arrangements for the procurement, printing and supply of books at moderate cost. Provision has also been made for the training and professional growth of college and universities teachers and the system of annual examination has been replaced by semester system of evaluation. Examination system of primary and secondary schools has also been reformed. At the primary level a system of automatic progression has been introduced and at the secondary level a system of maintaining cumulative record of students is being gradually introduced to supplement results of periodical examinations.

58. Establishment of technical colleges is an important development in the field of technical education. These colleges have been set up by upgrading existing polytechnics and provide B. Tech. courses in addition to continuing the 3 year diploma level programme. Measures have also been adopted to make diploma level training programmes more effective and practical oriented.

59. A number of measures have been adopted to remove disparities in the availability of educational facilities to various sections of the society. Under the programme of One Thousand Scholarship Scheme, talented students from low income families receive financial assistance to cover the expenditure of higher education. A scheme of Interest Free Loans for students has also been introduced. A Peoples Open University has been established to provide programmes of functional professional and higher education using distant teaching methods in order to reach all groups interested to receive education and training. During the 7 year period a large number of new schools of all categories, colleges and universities have been established and substantial increase has taken place in the enrolment at different levels of education.

60. Despite the developments summarized in the foregoing paragraphs the education system is faced with serious problems. Expenditure on education is only about 167 per cent of the GNP. Available financial resources are generally distributed thinly over a large number of programmes. At the primary level only about 53 per cent of school going population is enrolled in schools. Half the children who are admitted in Class I drop out before completing 5 year course. Less than 20 per cent of secondary school going population is receiving education and literacy rate is 22.8 per cent. The enrolment in the fields of vocational, technical and professional education is still very low at all levels. Quality of education is generally poor and failure rates are high at all public examinations. Within the sector of education low priority is given to primary education. Due to limited enrolment and high drop out rate of the primary level it does not provide sufficient scope of identification of adequate number of talented students to be channelized to different educational programmes.

ANNUAL DEVELOPMENT PROGRAMME 1977-78

61. The Annual Development Programme for the year 1977-78 has been drawn up to correct the existing imbalances in the educational programmes of various levels and to improve the quality of education. A re-adjustment of priorities has therefore been proposed. Special emphasis has been placed on the development of primary education and in all sub-sectors of education higher emphasis is placed on qualitative improvement than on expansion. Proposed programmes have also been specially designed to remove disparities of availability of educational facilities between different regions of the country and between various sections of the society.

Financial Programmes

62. In the ADP of 1977-78 a sum of Rs. 767.647 million has been earmarked for development in the sector of Education and Training. In absolute terms this allocation represents a minor improvement over the position of last year as it is about 4.1 per cent of the total ADP alle-

cation against 3.9 per cent allocation during 1976-77. In real terms, however, it is much smaller. In review of the serious resource limitations the developments in most sub-sectors of education have been confined mostly to the work on on-going programmes which have claimed Rs. 515.688 million or 67.2% of the total ADP allocation (details in Annexures IV and V). Allocations for primary education and teacher education have however been increased. The total allocation for on-going and new programmes of primary education, is Rs. 205.57 million which is about 26.7% of the total ADP allocation. Higher allocation for teacher education is essential to bring about qualitative improvements and quantitative expansion necessary to improve the out-put of elementary schools teachers required for the proposed programme at the primary and middle stage.

PHYSICAL PROGRAMMES 1977-78

A. Primary Education

63. For the expansion of primary education 1,218 new primary schools shall be established and construction of 1,654 school buildings including work on 457 buildings in progress will be completed. Buildings of 1,874 existing primary schools will be improved and equipment and furniture will be supplied to 4,322 primary schools (including 1,218 new). About 20,000 teaching kits shall be distributed to primary schools all over the country. Major programmes according to executing agencies are given in Table 4 :—

TABLE 4

	Federal programme	Baluchistan	N.W. F.P.	Sind	Punjab	All Pakistan
1. Opening of new primary schools ..	102	80	386	150	500	1,218
2. Construction of primary school buildings :						
(a) Completion of on-going work ..	28	69	65	214	81	457
(b) Construction of new buildings ..	133	28	386	150	500	1,197
(c) Improvement of existing primary school buildings	20	100	124	130	1,500	1,874
3. Supply of furniture equipment and teaching aids	252	100	510	315	3,145	4,322
4. Supply of teaching kits	1,400	1,000	3,200	4,400	10,000	20,000

(A) FEDERAL PROGRAMME

64. (i) *Education Division*.—20,000 teaching kits shall be produced and distributed in the primary schools all over the country. Work on the on-going construction of buildings for 18 primary schools will be completed, furniture and equipment shall be supplied to 11 primary schools. Provision has also been made to undertake research studies in different fields, specially survey of unused and under utilized resources and on the development of primary education in the rural areas.

65. (ii) *Northern Areas*.—102 new primary schools shall be opened. Equipment and teaching aids will be supplied to all new schools and buildings will be constructed for the 22 existing and 22 newly established schools and miscellaneous improvements will be made in school buildings.

66. (iii) *F. A. T. A.*—The on-going programme for the construction of 20 primary schools buildings shall be completed and 89 newly established primary schools shall be provided with buildings and equipment. Twenty primary school buildings shall be improved and equipment shall be supplied to 50 existing primary schools.

(B) PROVINCIAL PROGRAMMES

67. (i) *Baluchistan*.—On-going programme on the construction of 69 primary schools buildings will be completed, 100 existing schools will be improved in respect of buildings and equipment. Eighty new primary schools shall be opened. Equipment and teaching aids will be provided to all. Twenty Eight school buildings will be constructed for new schools.

68. (ii) *N. W. F. P.*—The on-going work on the construction/reconstruction of the buildings of 65 primary schools will be completed. 386 new primary schools shall be opened and provided with buildings, equipment and teaching aids. Twentyfour existing primary schools will be provided with equipment, teaching aids and additional class rooms.

69. (iii) *Sind*.—The on-going programme for the construction of 214 buildings of the primary schools shall be completed. 150 new primary schools shall be opened which shall be provided with new buildings and equipment. Additional rooms will be constructed at 130 schools (including 40 nationalized). Equipment, furniture and teaching aids will be supplied to 165 existing primary schools. Special repairs will also be taken up on 250 primary school buildings. Construction of 14 primary school buildings in the Nara area will make further progress.

70. (vi) *Punjab*.—Equipment and teaching aids will be provided for opening of 500 new primary schools in temporary buildings. Equipment and teaching aids will also be supplied to 2,645 existing primary schools and additional class rooms shall be constructed with 1,500 schools. Eighty one primary school buildings under construction for schools damaged during 1971 war in Sialkot will be completed. Teacher guides and cumulative record forms shall be provided to all the primary schools.

71. Total enrolment at the primary level is estimated to increase from 56.19 lac in 1976-77 to 60.64 lac in 1977-78 raising the participation rate from 53% to 56%.

B. Secondary Education

72. Major stress shall be on accelerating the completion of on-going programme which are intended to bring about quantitative improvement. On-going construction programme of 213 secondary schools building will be completed. Work will also be completed in respect of provision of 12 science laboratories and 5 hostels. Books will be supplied to 100 schools and equipment of furniture to 657 schools. Agro-technical courses will be introduced in 719 secondary schools. Workshops will be constructed at 102 schools and in other schools additions and alterations will be made in existing buildings to provide workshop space. In order to meet the demand of additional seats, 68 schools will be provided with additional class rooms, 8 middle schools will be raised to high standard and 59 primary schools will be converted into elementary schools.

(A) FEDERAL PROGRAMME

73. (i) *Education Division*.—Workshops will be constructed for the two newly established trade schools at Pipri and Islamabad and equipment will be supplied. Agro-technical equipment will be supplied to 500 middle schools and 100 high schools located all over the country. Library books will be supplied to 100 Federal Area schools. Scientific equipment, library books and furniture will also be procured for the cantonment institutions.

74. (ii) *Northern Areas*.—On-going construction programmes of buildings of 18 upgraded middle schools shall be completed and equipment and furniture will be provided to these schools. Nine new primary schools shall be up-graded to middle level and buildings of the workshops shall be constructed in three middle level and high schools for the introduction of teaching of agro-technical subjects and audio-visual aids and other equipment will be supplied to the existing middle and high schools.

75. (iii) *F. A. T. A.*—On-going construction of 7 middle school buildings shall be completed and construction of 35 more school buildings for existing schools will be started. Agro-technical courses shall be introduced at middle stage in 29 secondary schools and agro-technical equipment shall be supplied to 78 middle schools.

76. (iv) *Azad Kashmir*.—The on-going programmes for the improvement of buildings, and provision of equipment to newly established high schools shall be completed. The consolidation and improvement programme shall include construction of additional rooms in 48 high schools, hostels with three girls high schools, workshops for the introduction of agro-technical courses and supply of equipment to 57 recently upgraded high schools.

(B) PROVINCIAL PROGRAMME

77. (i) *Baluchistan*.—On-going construction of buildings of upgraded 13 high schools will be completed. Additional class rooms, science laboratories, equipment and furniture will be provided to 40 middle schools and 22 high schools. Two high schools shall be provided with drawing rooms. Under the new programme 30 primary schools shall be upgraded to middle standard and eight middle schools shall be raised to high standard. Equipment will also be supplied to the eight existing schools for the introduction of agro-technical courses. Five teachers residences will also be constructed.

78. (ii) *N. W. F. P.*—On-going construction programme of nine high school buildings will be completed. Science laboratories will be constructed for the 10 existing high schools and science equipment will be provided to 100 secondary schools. Twenty primary schools will be upgraded to middle standard and agro-technical courses will be introduced in 31 secondary schools which will be provided with workshops and equipment. Hostel facilities will be added to two high schools.

79. (iii) *Sind.*—Work will be completed in respect of on-going programmes for the establishment of comprehensive high schools, upgradation of five primary schools to middle standard and improvement of buildings of 6 high schools. Construction work will be continued on the buildings of recently upgraded 16 middle schools and 9 high schools and necessary equipment and furniture supplied. Agro-technical workshops will be constructed for six high schools and furniture will be provided to another 33 high schools.

80. (iv) *Punjab.*—Construction of buildings of the 120 primary schools upgraded to middle standard and 40 middle schools raised to high standard, started during 1976-77 will be completed and equipment and teaching aids will be supplied to these institutions. Programme of establishment of 6 single and double section high schools, 3 comprehensive high schools, construction of buildings of three war damaged secondary schools and construction of hostel for the Central Model School Lahore will be accelerated. Agro-technical workshops will be constructed in 60 existing secondary schools and equipment will be supplied to 288 secondary schools.

81. Enrolment at the secondary stage classes (VI—X) is estimated to increase from 17.49 lac in 1976-77 to 18.36 lac in 1977-78 raising the participation rate from 22% to 23%.

C. Teacher Education

82. Major efforts for improving and expanding facilities of primary and middle school teachers will be made through the implementation of the Third Education Project which is being implemented with the assistance of IDA (IBRD). The project which is estimated to cost Rs. 154.15 million (approx.) covers establishment, re-construction and consolidation of 17 training institutions of which 2 are/will be located in Baluchistan, 4 in N.W.F.P. 5 in Sind and 6 in the Punjab. In overall terms development of the proposed facilities will increase the training capacity from 3,091 to 5,390 (2,450 male and 2,940 female) and the quality of training facilities will be greatly improved. The implementation of development programme in various provinces is the responsibility of respective Provincial Government which will execute this programme with assistance and supervision of Federal Ministry of Education. For this purpose a Federal project unit has been established in the Ministry of Education and Provincial project units have been established in the provinces.

83. During 1977-78 work will be started on the implementation of the programmes provided under the Third Education Project for which following allocations have been earmarked in the ADP of various executing agencies :

(Rs. million).					
Education Division	Baluchistan	N.W.F.P	Sind	Punjab	Total
2.000	3.000	2.650	4.210	10.193	22.053

The physical components of the programme are described along with other teacher training programmes of each executing agency.

(A) FEDERAL PROGRAMME

84. (i) *Education Division.*—Workshops and seminars will be organized by the National Institute of Teacher Education Islamabad and Federal College for Education Islamabad to acquaint the teachers with new curricula and for their in-service training and professional growth. The newly established six National Agro-Technical Teacher Training Centres in the provinces will continue providing training facilities to the teachers in various subjects in order to help the Provincial Government to meet the shortages in this field. Under the Third Education Project workshops and seminars will be organized to bring about the quantitative and qualitative improvement in the existing system of elementary school teachers.

85. (ii) *F.A.T.A.*—In-service training programme will be arranged in improved methods of instructions for teachers working at various levels of education and teacher guides will be distributed among the teachers of different schools. Work will be started on the construction of dormitories at the men's Training Institute at Jamrud for which provision has been made under the Third Education Project.

86. (iii) *Azad Kashmir*.—On-going programme of upgradation of Teacher Training College, Afzal Pur will be completed. In-service training programmes of primary school teachers will be organized and new scheme of studies will be introduced in training institutions.

(B) PROVINCIAL PROGRAMME

87. (i) *Baluchistan*.—On-going work will be completed in respect of development of Education Extension Centre, Quetta, improvement of Teacher Training School at Quetta and on the two recently established teacher training schools at Uthal and Panjgur. Work will be started on the construction of buildings of two teachers training schools under the Third Education Project. Construction work of hostels for teachers training school for men Quetta will be completed to the first floor level. Construction of teachers residences in progress will be completed and construction will be taken up at new sites.

88. (ii) *N.W.F.P.*—Under the Third Education Project (IBRD) three existing primary teacher training institutes will be improved in respect of additional buildings, science and other equipments and teaching aids. Under the in-service teacher training programme, 2,850 teachers working at various levels will be provided in-service training in improved methods of instructions in the teaching of new curricula.

89. (iii) *Sind*.—Under the Third Education Project work will be started on the improvement and consolidation of physical facilities at three existing teacher training institutes and establishment of two new female training institutes for elementary teachers. The College of Physical Education will be supplied equipment to improve its degree and post-graduate programmes.

90. (iv) *Punjab*.—The on-going projects for the establishment of a science teacher training college at Lahore will be completed. Work on the construction of Buildings on the 3 Elementary Teachers Training Colleges will be accelerated. Under the Third Education Project work will be started on the improvement and expansion of 6 existing elementary teachers training colleges in respect of buildings and equipment, teaching aids. Hostel accommodation and staff residence (particularly females) will also be provided. Other teacher training programmes will include construction of dark room with each of the 8 elementary training colleges and supply of audio-visual aids. In-service training facilities will be provided for 51,000 teachers of primary and secondary schools and colleges.

(D) Technical Education

(A) FEDERAL PROGRAMME

91. (i) *Education Division*.—On-going construction of hostels at National College of Arts, Lahore and National College of Engineering and Technology, Karachi will be accelerated. Equipment & furniture will be procured for the two colleges. Scientific and technical equipment, books and furniture will be supplied and construction of buildings contained for the Centre of Excellence in Water Resources Engineering established at the University of Engineering & Technology, Lahore. Preliminary work on the acquisition and development of land for the Khuzdar Engineering College will be taken up.

92. (ii) *F.A.T.A.*—Establishment of a vocational institute at Bara (Khyber Agency) and a commercial institute at Miran Shah (North Waziristan Agency) will be taken up.

(B) PROVINCIAL PROGRAMME

93. (i) *N.W.F.P.*—The on-going construction work will be completed in respect of buildings of two vocational institutes & one commercial institute at D. I. Khan. Work on the construction of additional workshops will be continued and equipment procured for strengthening the training programme in the recently added technologies of airconditioning, refrigeration, chemical technology and electronics at the Peshawar Polytechnic. The work on the construction of additional buildings and workshops of these institutes will be continued.

94. (ii) *Sind*.—On-going programmes on the construction of buildings for vocational institute at Taluqa level will be completed. Construction work of five vocational institutes buildings will be carried further and work will be taken up on another five buildings. Construction work will also be carried further on the buildings of four commercial institutes, two vocational institutes and of polytechnic institute, Khairpur. Equipment will also be supplied to three nationalized Polytechnics. The programme of introduction of B. Tech. courses in polytechnic institutes will make further headway. Construction of buildings at these institutions will be continued and additional equipment will be provided. Construction of building of NED Engineering College will be completed and construction of newly established university of engineering at Nawab Shah shall be continued. Equipment, furniture and library books for various specialization will be procured and supplied to both these institution and also to the college of Arts, Karachi.

95. (iii) *Punjab*.—On-going programme of the construction of buildings of two polytechnics, five vocational institutes and four commercial institutes will be completed. Construction of additional buildings for upgradation of polytechnics at Rawalpindi and Lahore to the level of technical colleges will be accelerated. Expansion programme of polytechnic Sialkot will also be expedited. Equipment will be supplied to 11 existing polytechnics and 26 vocational institutes. The two existing Teachers Training Units for in-service training of polytechnic/vocational institute teachers at Rawalpindi and Gujrat will be strengthened and workshop equipment and science apparatus will be supplied. Research on the improvement of curriculum and system of examination will be continued to bring about improvement in the quality of training programmes and levels of skills of the graduates of technical institutes. The programmes of setting up of Computer Section, Public Health Engineering Institute, Department of Irrigation Engineering will be carried further at the University of Engineering and Technology Lahore. Work on all these projects will be continued and buildings will be constructed, equipment and furniture will be provided to meet the requirements of these programmes. Under the programme of second campus of the University of Engineering and Technology at Taxila, the on-going work of site development, teachers residences, civil engineering hostel, extension of laboratory block and students hostels will be accelerated. Equipment and furniture will be procured. Books worth Rs. 5 lac will be purchased for the Engineering University Book Bank.

(E) College Education

(A) FEDERAL PROGRAMME

96. (i) *Education Divison*.—Physical facilities at the Urdu Science College, Karachi will be improved by constructing additional class rooms and supply of equipment and furniture. Preliminary work on the land development and construction of buildings will be undertaken at the four Cadet Colleges at Larkana, Mastung, Pallandari and Razmak. The on-going programmes for the construction of building of F. G. College for Men Islamabad will make further progress. Additional equipment will be procured and miscellaneous works at Degree College, Kharian will reach near completion stage.

97. (ii) *Northern Areas*.—The on-going programme on the construction of college building Sakardu shall be completed. Work on the programme of up-gradation of Inter Colleges at Gilgit and Sakardu to degree level will be accelerated and equipment shall be supplied to Intermediate Colleges Chilas. Construction of building of the newly established college at Khaplu shall also be taken up.

98. (iii) *FATA*.—The on-going programme for the construction of buildings and provision of equipment to degree colleges at Parachinar and Miran Shah and Intermediate colleges at Landi Kotal and Darra Adam Khel will be completed. A new intermediate college will be opened at Khar.

99. (iv) *Azad Kashmir*.—Construction of academic and hostel buildings and staff quarters at four colleges will reach near completion stage and work will be completed at Garhi Dupkata College. The work on the building of 7 colleges shall be taken up. Land will be acquired and equipment shall be provided to 12 new Intermediate colleges. An amount of Rs. 1.847 million has also been allocated for the supply of science equipment, library books furniture, and provision of residential facilities to the existing colleges.

(B) PROVINCIAL PROGRAMME

100. (i) *Baluchistan*.—The on-going programme for the construction of buildings of the Colleges at Sibi and Turbet will be completed. Science laboratories and library will be completed at Zhob. Construction of buildings for the recently established 6 intermediate colleges will be continued.

101. (ii) *N.W.F.P.*—The on-going programme for the construction of buildings for 13 intermediate colleges will be continued and work on the construction of buildings for a new intermediate college at Hangu will be taken up. Under the programme of consolidation and improvement to existing colleges, additional equipment will be provided to 40 intermediate colleges. Construction of science laboratories, additional class rooms and students and teachers hostels shall be started at five colleges.

102. (iii) *Sind.*—The on-going programme for the introduction of B.Sc. courses at the six intermediate colleges and on the six newly established colleges will be carried further by continuing construction work and supply of equipment and furniture. The work on the supply of equipment and construction of buildings will also be continued on the Cadet College Pataro and ten newly established colleges. Physical facilities at the eight nationalized colleges will be improved further.

103. (iv) *Punjab.*—The on-going programme for the construction of buildings of 18 existing intermediate colleges will be accelerated and work on the buildings of 6 recently established intermediate colleges will be started. Other improvement programmes include supply of equipment, construction of additional lecture rooms, science laboratories etc. in 11 colleges.

(N) University Education

(A) FEDERAL PROGRAMME

104. (i) *Education Division.*—At the Quaid-e-Azam University Islamabad, remaining work on the construction of Central Library, mosque and cafeteria will be completed. Construction of one student hostel and 100 staff residences will be taken up. Equipment, furniture, library books and library equipment will be procured for various departments. Implementation of projects of Centres of Excellence, Area Study Centres and Pakistan Study Centre, established with the various universities in the country will be accelerated and provision will be made for the supply of equipment, furniture and award of fellowships/scholarships to the scholars/teaching faculty for advanced study within the country and abroad. Construction of building of National Institute of Psychology Islamabad and of post-graduate Institute of Chemistry, Peshawar will be taken up, and library books and equipment and furniture will be supplied. At the Institute of Modern Languages Islamabad, the required material and equipment for the development of French Language will be installed. Second cycle of the People's Open University orientation course for working primary school teachers through distant teaching methods will be launched. The on-going master level course in educational planning and managements shall be continued. Under the integrated functional education, programme of Peoples' Open University training of the local staff in evaluation, data processing will be continued and necessary equipment will be procured. The working university teachers will be provided grants for obtaining research materials to conduct research in the fields of Economics, Chemistry, Mineralogy and Social Science. More transport buses shall be supplied to various Universities.

(E) PROVINCIAL PROGRAMME

105. (i) *Baluchistan.*—At the University of Baluchistan, equipment will be provided to the Departments of Physics, Chemistry and Geology. On-going programme of construction of residences and bachelors quarters for University staff will be continued and 28 units will be completed.

106. (ii) *N.W.F.P.*—At the University of Peshawar the on-going work on the construction of building of Pashto Academy, Campus Model School and Staff quarters will be completed. At the Gomal University, work will be completed on the construction of buildings provided under the approved phase-I programme of the Project. Work will also be initiated on the programmes envisaged in Phase-II.

107. (iii) *Sind.*—At the University of Karachi, construction of buildings for various departments shall be continued. Construction of building for the Institute of Chemistry will be started at the University of Karachi and furniture, equipment, books and fellowship will be provided. At the Sind University Campus, the programmes include procurement of equipment and continuation of construction of academic buildings, a hostel and residences for 52 teaching and other staff members. At the Shah Abdul Latif Bhitai Residential Campus of Sind University preliminary work will be continued on the construction of academic and residential buildings.

108. (iv) *Punjab.*—At the University of Punjab, the on-going construction of the buildings will be accelerated. The development activity at the new campuses of Universities of Bahawalpur and Multan will include payment of the instalment towards cost of land, development of land and provision of necessary services to start construction. Equipment and library books will also be supplied to various departments of the three universities.

(G) Scholarships and Loans**(A) FEDERAL PROGRAMME**

109. (i) *Education Division*.—Under the federal programme, scholarships will be awarded as under :—

S. No.	Name of the programme	No. of scholarships to be continued from previous years	Scholarship to be awarded in 1977-78	Total
1.	Central Overseas scheme	260	50	310
2.	Quaid-e-Azam Scholarships scheme	57	30	87
3.	Merit scholarship scheme	60	30	90
4.	Nishan-i-Haider scholarship scheme	50	15	65
5.	President's One Thousand scholarship scheme	3,000	1,000	4,000
6.	Scholarships to Foreign students	194	56	250
7.	Scholarships/Stipend for Indigent students.. .. .	—	3,000	3,000
8.	Scholarships for Displaced Pakistani students	500	—	500
9.	Scholarships for Talented student from rural/Under-developed areas for studies in Cadet colleges/Public/Schools	28	72	100
10.	Supplementing Airpassage of students to go abroad for higher study	—	100	100
11.	Loans to needy students	3,000	—	3,000

110. (ii) *FATA*.—An allocation of Rs. 5.700 million has been made for the award of scholarships on merit-cum-poverty basis to encourage the students to improve their level of education.

(B) PROVINCIAL PROGRAMME

111. Under the internal scholarships schemes of the provincial governments about 58,000 scholarships will be awarded. Province-wise distribution is given below :—

Baluchistan	N.W.F.P.	Sind	Punjab
*	16,000	10,000	32,000

(H) Special Education**A) FEDERAL PROGRAMME**

112. (i) *Education Division*.—In the field of special education, pilot project on the education of blind children will be launched by the establishment of a training institute. Construction of building for the proposed institute will be started and equipment and furniture procured. Installation of Braille Press will be completed and the existing institutes for the blind will be consolidated by providing special equipment.

*In Baluchistan scholarships are provided under non-developmental Recurring Budget.

(B) PROVINCIAL PROGRAMME

113. *Punjab*.—Free books will be distributed among the handi-capped students studying at various institutions and workshops will be constructed to introduce technical courses in the deaf and dumb high school Lahore. Building of the Government Institute of Blind, Bahawalpur will be extended.

(I) Curriculum Development, Books and Examinations Reforms**(A) FEDERAL PROGRAMME**

114. (i) *Education Division*.—The on-going programme for the introduction of new curricula of all subjects and of agro-technical studies at Class V & VII will be extended further, curricula for Class XI & XII will be designed, micro testing and evaluation of new curricula and text books would be continued. Basic vocabulary booklets shall be produced in local dialects. In the area of examination the text books produced by Examination Reforms Section of the Ministry of Education will be published and circulated in the educational institution of the country. Provincial Education Department will be provided grants-in-aid for the organization of seminars, workshops and training courses for the teachers working at school and college levels in the administration of tests, techniques of guidance, counselling and maintenance of cumulative records. The National Book Foundation shall locally reproduce 100 titles of text books and also import important books of higher and professional subjects being used at the institutions of higher learning to meet the requirements of various colleges and universities. The stock of the existing 346 books banks will be further augmented.

115. (iii) *Sind*.—The on-going work on the building, 8 district audio-visual-aids centres will be completed.

116. (iv) *Punjab*.—Audio-visual-aids and equipment worth Rs. 0.200 million will be supplied to the audio-visual Bureau at Lahore.

(J) Development of Libraries**(A) FEDERAL PROGRAMME**

117. (i) *Education Division*.—The construction programme on the building of National Library of Pakistan, Islamabad and development of Liaquat Memorial Library, Karachi shall be taken up and library equipment and books will be purchased for the two libraries. The on-going programme for the construction of building of National Museum of Science and Technology, Lahore will be completed.

(B) PROVINCIAL PROGRAMMES

118. (i) *Sind*.—An amount of Rs. 5 lac will be spent on the procurement of books and equipment of Sir Shah Nawaz Memorial Library, Larkana.

119. (ii) *Punjab*.—The library of D.P.I. office, Lahore will be further developed by providing more books library equipment and furniture.

(K) Education and Policy Planning**(a) FEDERAL PROGRAMMES**

120. (i) *Education Division*.—Construction of building for the Bureau of Educational Planning will be continued and provision has been made to continue with the activities under the programmes of National Education Council, experimental pilot project integrating education in rural development and promotion of Education Policy through press and publication.

(L) Miscellaneous Programme**(A) FEDERAL PROGRAMME**

121. (i) *Education Division*.—Development of buildings of the Amin House Scout Hostel and National Headquarter of Pakistan Girls Guides Association will be taken up. Furniture and equipment will also be procured for the girl guide association headquarter. Pilot Adult Education Centres will be established in the federal area. The under construction of 72 units of federal students hostels located at 43 places will be completed. Work on the foreign aided special projects will also be continued.

(B) PROVINCIAL PROGRAMME

122. (i) *Baluchistan*.—Four jeeps will be purchased for the supervisory staff of the Education Department and grants-in-aid will be awarded to Dini Madrassahs and non-government institutions.

123. (ii) *Punjab*.—The programmes of research/surveye/studies under way in the Bureau of Statistics & Research and Planning Cell of the Provincial Education Department will be continued and new research programme will be undertaken. An amount of Rs. 6.00 million has been provided to carry out minor repairs in the buildings of the existing educational institutions. Transport vehicles will be purchased for the Education Directorate of Punjab.

(M) Programmes of Archaeology and Museums, Culture and Sports

124. A sum of Rs. 109.30 million has been ear-marked in the ADP for the programmes of Archaeology and Museums, Culture and Sports. The distribution of this allocation according to executing agencies is given below :—

(Rs. in million)					
Sports & Culture Division	Baluchistan	NWFP	Sind	Punjab	Total
103.3	0.2	0.5	0.6	4.7	109.3

125. The programmes for which funds have been ear-marked are summarized below for each executing agency :

(A) FEDERAL PROGRAMMES

126. ADP allocations have been made for Master Plan for Preservation of Pre-historical Remains at Moenjodaro, Preservation and Presentation of Lahore Fort and Shalimar Gardens at Lahore, and Farudgah-i-Shahan-i-Mughlia Gardens at Wah. Other items include development of museums and Archaeological Remains at Harappa. Extension and Renovation of Liaquat Memorial Hall, Hostel for Pakistan Council of the National Arts, Children's Art Workshops, Cassette Dubbing Plant and construction of auditorium and residential hall at Larkana. A block allocation of Rs. 1.5 million has been provided for other miscellaneous programmes of art and culture.

127. Programmes of Sports include projects of Z. A. Bhutto Institute of Sports and Culture, Preparation for participation in 8th Asian Games and 21st—22nd Olympic Games, development of National Training and Coaching Centres at Lahore and Karachi, establishment of Sports Training Institute at Islamabad and construction of stadium and main pavellian at Lahore. Funds have also been provided for the programme of National Commission on Historical and Cultural Research under which work on the publication of 13 books will be completed.

(B) PRVINCIAL PROGRAMMES

128. *Baluchistan*.—The programme includes establishment of a Squash Complex at Quetta.

129. *N.W.F.P.*—The programmes of the Government of N.W.F.P. include establishment of a museum and public park at Gorkhatri, Peshawar.

130. *Sind*.—The programmes include development of Institute of Sindhiology, establishment of Sind Archives, Development of Mehran Art Council at Hyderabad and establishment of Sports Complex at Sukkar.

131. *Punjab*.—The programme include development of Lahore and Bahawalpur Museums and development of Sports Complex at Iqbal Park, Lahore.

Miscellaneous

132. (i) *Establishment Division*.—Courses and seminars will continue to be organized at the academy of rural development for the training of Government servants and other groups. Renovation of auditorium of the Pakistan Administrative Staff College shall be taken in hand. An amount of Rs. 1.900 million has been provided for the award of stipend to children of Federal Government Employees.

133. (ii) *Planning Division*.—Under the Economic Research Programmes, 17 studies already under way shall be completed and published and new studies shall be taken up on identified problems relevant to economic problems and social development of various sectors.

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CHAPTER 13

HEALTH

REVIEW OF A. D. P. 1976-77

Financial Utilization

The allocation for development expenditure on health during 1976-77 was Rs. 772.009 million. The revised estimate (Annexure-I) indicate a utilization of 70 per cent of the allocation. The main reason for this was low expenditure on malaria control programme, mainly because of non-availability of malathion in the world market. As against a target of 15,000 M.T. of malathion, 7,000 M.T. was purchased resulting in a saving of Rs. 170 million. The utilization of allocation excluding malaria control programme was 84.5 per cent. The utilization for malaria control programme was 54.3 per cent.

2. The recurring expenditure on health increased by 17 per cent during 1976-77 as compared to the revised estimates on 1975-76. In monetary terms, it has increased from Rs. 375.53 million in 1975-76 to Rs. 439.18 million in 1976-77.

Physical Implementation

3. There was a shift in emphasis towards preventive programmes. An outcome of preventive measures was declaration of Pakistan as a small pox free area by World Health Organization on 18th December, 1976.

4. A beginning in implementing the new strategy for extension of health cover to rural areas was made by establishing basic health services cell in the Federal Health Ministry. This cell would concentrate on programme for training of teachers, curriculum development and inter-provincial coordination. A loan agreement between Government of Pakistan and US AID for a total amount of US \$ 7.5 million was signed for helping in execution of the extended rural health programme.

5. The output of all categories of para-medicals excluding nurses was 1900. The number of rural health centres, basic health units (including other health outlets) established during 1976-77 was 44 and 97 respectively. The targets in respect of basic health units and other health outlets fell considerably short of targets because most of the Rural Health Centres, though on ground, could not be completed during the year. The total number of hospital beds increased by 2,024.

6. The progress of integration of vertical programmes and health related programmes with the health services was very slow. In spite of a decision taken to merge malaria eradication staff with the general health services, there was little progress. To achieve coordination between population planning programme and general health services at district, provincial and federal level, joint Health and Population Planning committees have been set up and terms of reference have been framed.

7. The programme of medical and postgraduate medical education continued to make progress. By end 1976-77, with 15 medical colleges functioning, admission capacity for more than 4,000 students per annum has been created.

8. The number of doctors and nurses produced was 842 and 525 respectively. The number of doctors produced was considerably less than the target as there was only one examination during the year.

9. The programme for training of community health workers except for Northern Areas and Baluchistan could not make any appreciable headway, as a whole range of questions e.g., selection, supervision, mode of compensation, if any, organization of local committees etc. have yet to be resolved.

Achievements measured against physical targets for the year are given at Annexure II. Cumulative effect since 1970-71 of physical achievements and expenditure appears at Annexure III & IV respectively. Some of the major programmes are discussed in the subsequent paragraphs.

11. *Malaria Control Programme.*—The Federal component of the malaria control programme amounted to Rs. 372 million. The revised estimates indicate that there was a saving of Rs. 170 million showing a financial utilization of 54.3 per cent.

12. The spraying coverage during 1976 was on the whole satisfactory with the exception of Sind where only selective spraying was carried out in areas of epidemiological importance. The low coverage of 52.9 per cent in Sind, as compared to the national figure of 97 per cent, was due to lack of operational funds. It is estimated that a total of 9.86 million houses were sprayed. The areas where malaria operation could not be carried out was covered with anti-malaria drugs.

13. The slide positivity rate had fallen from 9.82 in 1974 to 4.36 in 1976. The figures for the provinces are as follows :—

Baluchistan 1.26 ; N.W.F.P. 2.06 ; Sind 1.77 ; Punjab 5.28. Higher slide positivity rate in the provinces of Punjab and N.W.F.P. could be indicative of better surveillance activities than other provinces.

14. The programme remained confined to the rural areas of the four provinces and could not be extended to the urban areas or to Azad Kashmir and Northern Areas.

15. *Bolan Medical College, Quetta.*—The execution of work in respect of Medical College at Quetta was completely taken over by the Federal Health Ministry. The work is in progress for the teaching hospital (18% physical achievement), boys hostel (18%), college building (7%) and site development (60%).

16. *Islamabad Hospital.*—A 250 bedded hospital will be built in the first phase. The project is above the plinth level.

17. *Extension of College of Physicians and Surgeons, Karachi.*—An amount of Rs. 1.0 million was provided for extension facilities at the College of Physicians and Surgeons, Karachi. The work on 1st floor of the building has been started. The proposed extension will provide specialized backup facilities for health care extension in the country.

18. *Basic Health Services Project.*—An amount of Rs. 1.8 million was sanctioned for establishing cells at Federal and Provincial levels. These cells will design curricula for training of health auxiliaries and initiate their training programmes. The Cell at the Federal level will concentrate on programme for training of teachers, curriculum development and inter-provincial coordination.

19. *Improvement and extension of Jinnah Postgraduate Medical Centre, Karachi.*—A sum of Rs. 4.710 million was provided to complete on-going schemes. The revised estimates are Rs. 3.737 million. The Department and School of Paediatrics, J.P.M.C. has been completed. Work on the construction of the structure over combined building block has been completed.

20. *Extension of Central Government Polyclinic, Islamabad.*—A double storeyed ward block with casualty and operation theatre suite have been completed and commissioned. The bed strength of the hospital has increased from 56 to 213. A general nursing training school for 20 students was started in May, 1977.

21. *Improvement of Central Government Hospital, Rawalpindi.*—An additional 25 beds were added for a ward block for orthopaedic and officers ward.

22. *World Food Programme.*—Under the World Food Programme 41,727 m. tons of wheat, 3,000 m. tons of dried skimmed milk and 2,336 m. tons of butter oil have been received. Arrangements for distribution are under way.

23. *Azad Kashmir*.—Allocation for the year 1976-77 amounted to Rs. 9.245 million. The revised estimates are Rs. 9.646 million giving a 104 per cent utilization of funds. During the year there was part construction of 64 dispensaries, 6 hospital wards and 3 dental centres. Preliminary work was carried out on construction of para-medical school at Mirpur.

24. *Northern Areas*.—The Northern Areas were allocated Rs. 6.3 million and utilization was 97.3 per cent. Physical achievements include improvement/alteration of 177 beds and addition of 20 beds at Agency Hospital, Gilgit. Work is nearing completion on construction of hospitals at Chator Khand, Darel and Jaglot. Under the Rural Health Project, 11 new training centres were opened and 314 health guards were trained. Retraining was imparted to 408 health guards. A total of 16,879 youths below 14 were vaccinated against tuberculosis yielding a total of 1,54,300 persons meaning thereby that 71% of the target population has been protected against tuberculosis.

25. *FATA*.—The original allocation for the health sector was Rs. 10.907 million. An additional amount of Rs. 2.946 million was authorized later. Revised estimates indicate that an amount of Rs. 11.316 million has been spent during the year under review. Achievements include completion of one rural health centre, 3 basic health units, 11 dispensaries and 42 rural beds.

26. *Interior Division*.—The project "Rehabilitation of Drug Dependent Persons" was approved for a cost of Rs. 11.965 million. The amount allocated for this project during the year 1976-77 (Rs. 0.50 million) was transferred to Provincial Governments for opening clinics in their hospitals.

27. *Planning and Development Division*.—An amount of Rs. 2 million was allocated for Nutrition Planning and Research, Data Generation Cell for Health Planning and other research studies. The revised estimates are Rs. 1.8 million. A survey titled Micro-Nutrient Survey was carried out by the Nutrition Cell and an interim report of the survey published. The office of the cell for Generation of Data for Health Planning became functional.

28. *Science and Technology Division*.—Pakistan Medical Research Council was allocated an amount of Rs. 3.11 million. It is estimated that an amount of Rs. 1.2 million has been spent. This gives a financial utilization of only 38.6 per cent of the funds.

Provincial Programmes

29. *Baluchistan*.—The total allocation for the development programme 1976-77 was Rs. 11.20 million. The revised estimates are Rs. 10.0 million showing a financial utilization of 89.3 per cent.

30. Work on construction of rural health centres at Musa Khel, Ormara and Lehri has been completed upto plinth level. Major work on the opening of 10 basic health units was completed. Preliminary work on the new schemes of 14 basic health units progressed satisfactorily. Construction of 44 bed Infectious Diseases Hospital, Quetta is at the roof level.

31. Excavation work on construction of a 20-bed hospital in Civil Hospital, Kohlu has been completed. Orders for supply of equipment including X-ray machine for Sandeman Hospital and purchase of equipment for drug testing laboratory at Quetta have been placed.

32. Construction of residential accommodation for District Health Officer and his staff at Temple Dera and Civil Hospital, Mastung remained under progress. The construction of a drugs godown in collaboration with CARE is under progress at Quetta.

33. The training of first batch of 18 health auxiliaries has since been completed. The training of 2nd batch was started with effect from 1st May, 1977.

34. *N. W. F. P.*—The allocation for the development programme 1976-77 was Rs. 81.10 million. Revised estimates are Rs. 72.383 million or 89.2 per cent of the original allocation.

35. Construction work of 51 Basic Health Units was included in the development plan of 1976-77. Completion of 22 units was achieved while six are in various stages of development. Among other on-going projects 45 dispensaries and 11 rural health centres have been completed.

36. Residual work on establishment of a rural hospital and upgradation of District Headquarter Hospitals at D.I. Khan and Kohat have been completed. Provision of X-ray facilities in Civil Hospital, Karak and improvement of 4 other hospitals was achieved. First phase of Hayat Shaheed Hospital has been completed. Lady Reading Hospital, Peshawar consumed Rs. 8.138 million for the construction of Casualty Block and provision of sui gas.

37. *Sind*.—Sind was allocated Rs. 52.30 million whereas the revised estimates are Rs. 50.900 million.

38. Work continued on 32 rural health centres during the year. 19 rural health centres and 16 dispensaries have since been completed.

39. Work on provision of 50 additional beds in the Skin Diseases Hospital, Karachi was completed. Construction of OPD Blocks and residential quarters at Tehsil Headquarters Hospital (THQ) Kotri has been completed while work on THQ Hospitals at Khipro, Ratodero, Matli and Tando Allahyar was in advance stages of completion. Work on provision of residences for lady doctors at Liaquat Medical College Hospital, Hyderabad remained in progress. The OPD blocks of THQ hospital Mithi and Umerkot have been completed. A total of 260 hospital beds were added raising the total number of hospital beds to 9,728.

40. Work continued on Chandka Medical College, Larkana. Three hostels for 892 students were under construction. Work on Animal House, 21 quarters for demonstrators and 2 bungalows have been completed. Work on academic block and kitchen block at People's Medical College, Nawabshah is in advanced stage of completion. One hostel block and flats for married doctors were completed while work on ground floor of second hostel block is nearing completion. Work on hospital wards, demonstrators' bungalows, staff quarters, Hostel building and Bachelor Doctors' flats remained in progress. The roofing and masonry work on academic block of Sind Medical College, Karachi has been completed and finishing work is in progress. Building of hostel blocks for 140 students at LMC, Hyderabad has also been completed, while construction work on a hostel for additional 400 students reached advanced stage of completion.

41. *Punjab*.—The estimated expenditure during the year is Rs. 128.2 million against an allocation of Rs. 166.6 million. This gives a financial utilization of 76.9 per cent.

42. To provide health coverage for the rural areas, 13 rural health centres in Lahore, Rawalpindi, Multan and Sargodha Divisions were completed as targetted. The construction of basic health units in various districts of the province remained in progress.

43. 334,000 persons were immunized against tuberculosis. Surveillance activities continued for maintaining zero level of smallpox.

44. Equipment worth Rs. 29.6 million was procured for various hospitals in the province. A new block for 50 beds was completed at Lady Willingdon Hospital, Lahore. Work on expansion and modernization of Ganga Ram Hospital, Lahore has since been completed. Construction of tuberculosis and orthopaedic block at Nishtar Hospital, Multan have also been completed. Construction of 12 Tehsil Headquarters Hospitals, improvement of one and upgradation of 3 has been accomplished. In addition, improvement and upgradation of district headquarters hospital Sheikhpura and Sialkot was carried out. A 100 bedded T.B. block was completed at District Headquarters Hospital, Sargodha and construction work remained in progress on the T.B. Clinic at Tehsil Headquarters Hospital at Haroonabad and Sadiqabad.

45. An amount of Rs. 7.5 million was spent on scholarships/stipends to medical and paramedical students.

ANNUAL PLAN FOR 1977-78

46. The basic problems of Health Sector have been described in previous Annual Plan documents and need no repetition. However, to reduce the imbalance between urban and rural areas, Rs. 190.853 million have been allocated for rural health scheme during the current year as against Rs. 73.31 million for the last year. This is a step to provide health facilities to

rural population. Some progress has been made towards giving appropriate weightage to preventive programmes and in providing an integration of health services. A substantial step during 1977-78 will be to initiate coordination between population planning programme and general health system at all levels.

47. The Annual Development Programme for health sector for 1977-78 is Rs. 684.34 million. This allocation is at a lower level than that of 1976-77. In real terms, more money would be available for extension of health facilities to the rural population because the malaria control programme, having reached a peak, would need a lesser allocation this year. Moreover, non-development expenditure is expected to increase by 27.2 per cent to Rs. 558.553 million (Annexure V).

48. The policy objectives for the Annual Plan 1977-78 which are in conformity with the "Medium term Perspective" are briefly indicated below :—

- (i) The shift in emphasis from curative to preventive measures will be continued.
- (ii) Imbalance between urban and rural areas will be reduced.
- (iii) Special programmes will be integrated with the health services without jeopardizing the fulfilment of objectives.
- (iv) Coordination between health and population planning programme will be initiated at district, provincial and national levels.
- (v) Linkages with the health and other programmes will be strengthened.
- (vi) Expansion undertaken in higher medical education will be consolidated.

49. The specific quantitative targets (Annexure VI) are briefly listed below :—

- (i) Minimally acceptable health care will be extended from 25 per cent of the population to 35 per cent.
- (ii) The number of new rural institutions will increase by 530 as against 141 in 1976-77.
- (iii) The incidence of communicable diseases including malaria would be brought under control or reduced where ever feasible. To accomplish this, the targets of major programmes are as follows :—
 - (a) Malaria Control Programme will be extended to include the urban population, Azad Kashmir and Northern Areas.
 - (b) Zero level of smallpox will be maintained.
 - (c) 2,618 hospital beds will be added increasing the existing total number from 43,603 to 45,221.
 - (d) The output of the medical personnel during the year will be : doctors—2,659 ; dentists—105 ; nurses—596 ; and health auxiliaries—2,362.

50. The allocation of Rs. 684.34 million between different programmes is given below :—

	<i>Allocation</i> (Million Rs.)
(i) Rural Health Programme	190.853
(ii) Preventive Programme	31.383
(iii) Malaria	213.000
(iv) Hospitals including teaching hospitals	114.662
(v) Health Manpower Development	116.490
(vi) Medical Research	6.600
(vii) Miscellaneous	11.352
Total	684.340

51. Break-up of allocation by sub-sectors and executing agencies is given at Annexure VII. Detailed programme for 1977-78 by executing agencies is discussed below :—

FEDERAL PROGRAMMES

Health Division

52. *Malaria Control Programme.*—An amount of Rs. 213 million has been provided for control of malaria in the country. This includes Rs. 19.466 million for control of urban malaria. The targets in respect of houses to be sprayed, two rounds each, are as follows :—

S. No.	Insecticide	No. of houses
1.	Malathion	64,58,333
2.	B. H. C.	10,21,808
3.	D. D. T.	11,96,266
		86,76,407

53. This will approximately cover 84.3 per cent of the rural houses and protect 70 per cent of the population against malaria during the year 1977-78. About 30 per cent of the population is proposed to be protected by anti-malaria treatment by distributing 90 million anti-malaria tablets. The scheme for inclusion of urban malaria has been drawn-up and all the urban areas, Azad Kashmir and Northern Areas will be brought within the scope of the programme during the year, 1977-78. In case of urban malaria, Federal Government will provide insecticides and equipment to the provinces besides larvacidal and space spray of all municipal areas.

54. Ten per cent of the population would be kept under surveillance activities. The target for active case detection is 497,930.

55. *Bolan Medical College, Quetta.*—An amount of Rs. 40 million has been provided for Bolan Medical College, Quetta. This includes a foreign exchange component of Rs. 5.0 million. Work on all the 3 components of the project (hostel, medical college and hospital) will continue. One hostel out of the two will be completed while work on ground floor of the second hospital will begin. Plinth in respect of the medical college will be completed and work on the ground floor will start. Basement and ground floor of the hospital are also expected to be completed.

56. *Islamabad Hospital.*—The PCI and the detailed designs are under preparation by the Federal Health Ministry. An amount of Rs. 10 million has been provided for during the current year, and it is expected that 60—70 per cent work on the ward block will be completed during the year.

57. *Nuclear Medical Centre at Islamabad.*—Pakistan Atomic Energy Commission will start work on the nuclear medical centre within the boundaries of Islamabad Hospital as this centre has to share facilities with the Islamabad Hospital. The construction work in respect of nuclear medical centre will be synchronised with that of Islamabad Hospital.

58. *Expansion of College of Physicians and Surgeons, Karachi.*—Work on the first floor of the main college building will be completed at a provision of Rs. 1.50 million.

59. *Improvement and extension of J. P. M. C., Karachi.*—Rs. 4.70 million have been provided to complete ongoing scheme. These include construction of hostel for 200 student nurses, construction of half first floor, 2nd and third floor over the combined blood bank building, Department and School of Paediatrics and stand-by generator and airconditioning of treatment room of Institute of Radiotherapy.

60. *Improvement and Extension of National Health Laboratories.*—An amount of Rs. 5.55 million will be utilized for improvement/extension of National Health Laboratories, Islamabad. The improvements include residential accommodation, production of freeze dried smallpox vaccination, addition to laboratories, purchase of transport and construction of a dispensary.

61. *World Food Programme*.—The distribution of wheat, dried skimmed milk and butter oil procured under the world food programme will continue. The impact of this distribution on the nutritional status of infants and expectant mothers will be ascertained. An amount of Rs. 10 million has been provided for this purpose.

Azad Kashmir

62. An allocation of Rs. 8.855 million has been made for 1977-78. This is 7 per cent of the total development programme of Azad Kashmir. The health programme will concentrate on control of epidemic and debilitating diseases. This will be achieved by immunization programme and expansion in the number of rural health institutions. It is expected that the ongoing schemes of construction of 64 dispensaries, 6 wards and 3 dental centres will be completed during the year. Work will be continued on the construction of paramedical school at Mirpur to provide mid-level health workers for expanding the rural physical infrastructure.

Northern Areas

63. The total allocation for the health sector is Rs. 8.50 million. This includes an amount of Rs. 3.0 million for the rural health project. General health will concentrate on the improvement and procurement of equipment for the existing hospitals and dispensaries of Northern Areas. The rural health project would basically concentrate on retraining of health guards. It is proposed to retrain 400 health guards. The retraining of health guards will include an element of nutritional education. It is expected that 100 per cent of the target group of Northern Areas will be protected against tuberculosis.

Federally Administered Tribal Areas

64. The development funds for the health sector are Rs. 15.0 million, against the revised estimates of Rs. 11.316 million for 1976-77, or an increase of 32.5 per cent over the revised estimates of the previous year. The total programme is earmarked for 21 ongoing schemes and no new scheme has been added. The physical targets include completion of 5 basic health units, 4 rural health centres, 50 bedded T. B. hospital at Wana and upgradation of 3 Civil Hospitals at Parachinar, Miranshah and Jandola. Work will continue on 3 basic health units, 5 rural health centres and upgradation of Landikotal Hospital into agency hospital.

Interior Division

65. An amount of Rs. 1.2 million has been allocated for the project "Rehabilitation of drugs dependent persons". The amount will be utilized in Federal and Provincial hospitals for treatment and rehabilitation of drug dependents under the care of medical personnel.

Planning and Development Division

66. The financial utilization and physical targets of the nutrition planning project are described in the consumption and nutrition plan. Generation of Data for Planning and Research of health services will establish at least one field laboratory and will initiate collection of population and clinical based data.

Science and Technology Division

67. Pakistan Medical Research Council will continue on research work pertaining to national health problems. Two new research centres will be established at Medical Colleges at Multan and Hyderabad.

PROVINCIAL PROGRAMMES

Baluchistan

68. The allocation for 1977-78 is Rs. 16.617 million. This shows an increase of Rs. 6.617 million over the revised estimates of 1976-77. The development effort would be made to attain the following targets during the course of the year :—

- (i) Establishment of 34 Basic Health Units and 6 Rural Health Centres.
- (ii) 90 Hospital Beds.
- (iii) 28 Health Auxiliaries.

69. In addition, the remaining work on three Rural Health Centres and 8 Basic Health Units will be completed.

70. The first batch of doctors will graduate from Bolan Medical College during the year.

N. W. F. P.

71. The Health Sector has been allocated Rs. 102.239 million against Rs. 81.1 million in 1976-77, an increase of 27 per cent over the preceding year. The on-going programmes have been fully protected.

72. The Development Programme for expansion of health facilities in rural areas envisaged for the next financial year would make possible the completion of residual work on 24 dispensaries, 6 Basic Health Units and 3 Rural Health Centres. Besides, work on 23 additional Basic Health Units would also be completed during the year by providing dispensary block, 2 residences, equipment and other facilities for each unit. An additional rural health centre would also be made functional by the end of the year.

73. Allocation of Rs. 9.926 million for preventive programmes including Rs. 9.6 million for control of malaria and Rs. 0.226 million for smallpox surveillance has been made.

74. An allocation of Rs. 7.3 million has been made for general hospitals. The ongoing expansion programme consists of 2 District Headquarters Hospitals at Mardan and Saidu Sharif and one Tehsil Headquarter Hospital at Tank. District Headquarter Hospital at Dera Ismail Khan would be completed during the year. Moreover, funds have been provided for improvement of facilities in existing hospitals by provision of equipment, etc.

75. Lady Reading Hospital has been allocated Rs. 8.10 million, the major part of which i.e., Rs. 6.1 million would go towards the acquisition of 35.25 kanals of land adjacent to the hospital in order to cater to its expansion requirements.

76. The first phase of Hayat Shaheed Teaching Hospital has been completed and work is progressing on the 2nd phase. Rs. 13.2 million have been provided for this hospital during the year in order to make it fully operational as soon as possible.

77. The proposed development programme provides Rs. 10.143 million for the expansion and improvement of facilities for medical education. Apart from construction of buildings and purchase of equipment for Khyber Medical College, funds have also been allocated for awarding stipends (Rs. 1.136 million) for training health auxiliaries and community health workers at each District Headquarter Hospital. This would make it possible to provide the required staff for the expanded rural health service programme.

Stat

78. The Health sector has been allocated an amount of Rs. 69.180 million. An amount of Rs. 35.30 million will be utilized for ongoing programmes. The rest has been earmarked for new schemes.

79. More emphasis is being given to Rural Health Centres in 1977-78. It is proposed to complete work on 14 Rural Health Centres (RHCs) raising the existing RHC available from 51 to 65. In addition work on 12 more RHCs would be taken up during the year. Similarly for extending medical facilities in the rural areas 84 Basic Health Units/Dispensaries would be completed.

80. It is proposed to add 800 hospital beds in the urban areas and 500 beds in the rural areas. Lyari General Hospital would start functioning from 1977-78 with 100 beds initially. A hospital is also being set up at Liaquatabad. In addition, remaining works would be completed on THQ hospitals Khipro, Ratodero, Matli, Tando Allahyar, and Hala.

81. Work would continue on buildings of Chaudhka Medical College, People's Medical College, Sind Medical College. Nuclear Medical Centre, Larkana would be completed by June, 1978.

82. 1,000 community health workers, 200 paramedicals staff and 100 nurses would be trained.

Punjab

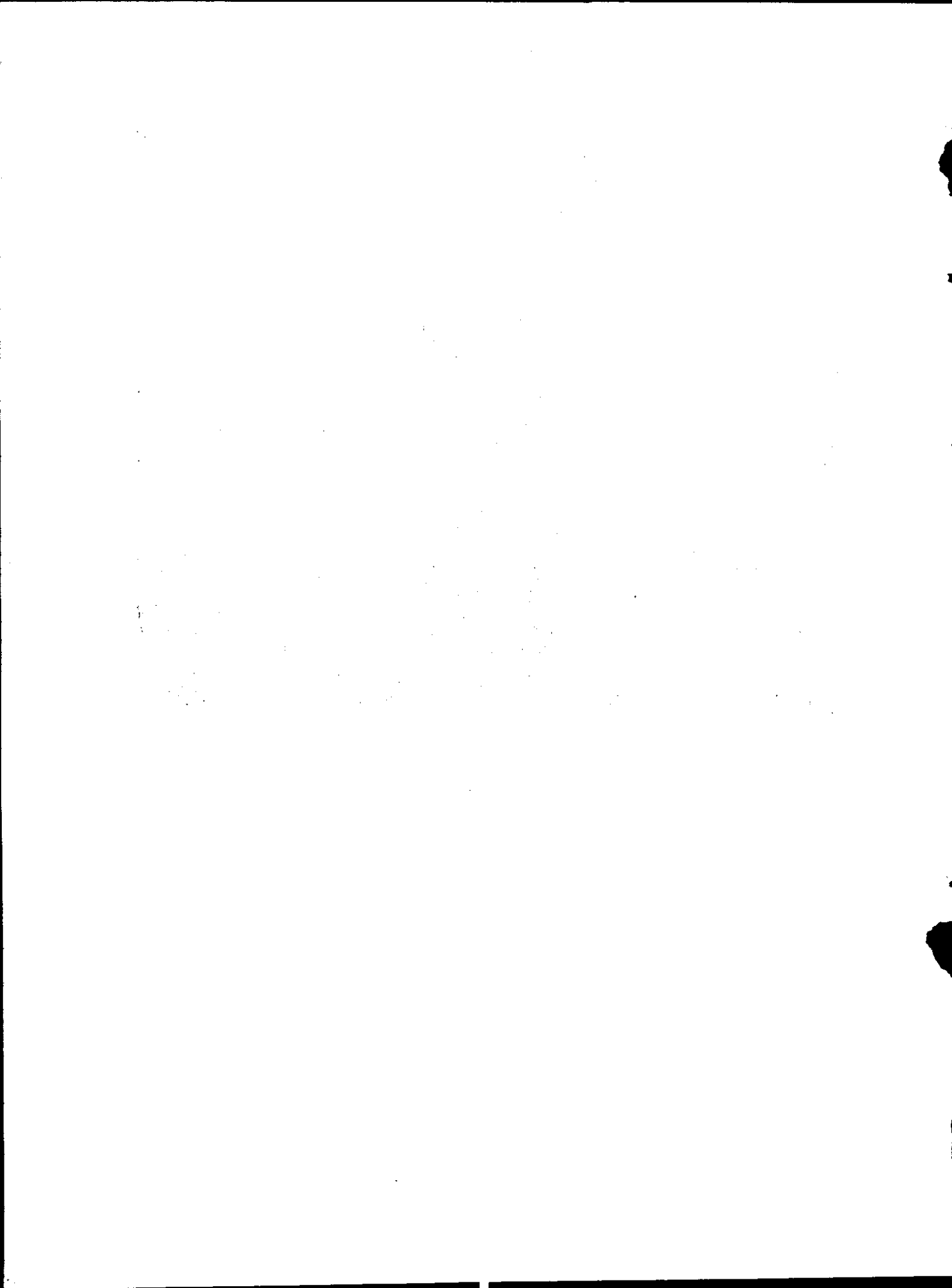
83. The health sector has been provided Rs. 163.669 million during 1977-78. While drawing the physical targets for health sector the following strategy was followed :—

- (i) To continue to provide health coverage to rural population.
- (ii) To reduce incidence of diseases and to maintain zero level of smallpox and to control effectively the spread of tuberculosis.
- (iii) To expand, tehsil and district headquarters hospital and hospitals attached with medical colleges.

84. The physical targets are to consolidate health facilities in rural and urban areas. Provision has been made for the completion of ongoing programme of 3 Rural Health Centres and 37 Basic Health Units. In the rural areas 175 new basic health units would be established during 1977-78. Work will also continue on the ongoing schemes of 100 Basic Health Units. Completion of 14 tehsil headquarters hospitals will result into an addition of 153 beds and 607 new beds in lieu of old. Work will also be initiated on 6 new tehsil headquarters hospitals which on completion would add 360 beds in tehsil hospitals. Construction work will be started and completed on the buildings of District Headquarters Hospitals at Sheikhpura, Sialkot, Kasur and Sahiwal. With their completion, the total beds in these hospitals would increase to 640. Construction work would also continue for the completion of T.B. Hospital, Campbellpur under which 36 T.B. beds would be added.

85. Under the ongoing programme of Teaching Hospitals, construction work would be started on the ongoing schemes of casualty block Mayo Hospital, Eye Department, Mayo Hospital, Lahore, Lady Wellington Hospital, Lahore, General Hospital, Lahore, Nishtar Hospital, Multan and Hospital attached with Punjab Medical College, Lyallpur. The total beds to be added in the Teaching Hospitals would be 571 during 1977-78. Similarly, the construction work will continue and would be completed on various buildings of Quaid-e-Azam Medical College, Bahawalpur. The construction work will also gain momentum during the next financial year on the Punjab Medical College, Lyallpur. In the new programmes, 650 beds have been proposed to be added in D.H.Q. Hospital, Lyallpur, Services Hospital, Lahore and Sir Ganga Ram Hospital, Lahore.

86. Training facilities for para-medical staff will also be undertaken. The existing programme for training of Lady Health Visitors and Nurses would be extended to District Headquarters Hospital level.



POPULATION PLANNING

The growth rate of population in Pakistan, currently estimated to be around 3 per cent per annum*, is amongst the highest in the world. The growth rate has been rising during the last three decades and has diluted the socio-economic gains from the past development efforts. Further, the continuance of high growth rate has created shortages of *per capita* availability of facilities and has resulted in an unfavourable age structure characterised by high dependency ratio and low labour force participation rate.

2. The population of Pakistan has more than doubled itself in the past three decades. The growth rate also doubled but not as a result of increase in the level of fertility. In fact the population of Pakistan has been passing through a stage of demographic transition where mortality falls more rapidly than does fertility. However, the end of this phase is approaching. Mortality rates are down to a level where a further sharp reduction is likely to ensue from such developments as will also radically alter fertility behaviour.

3. The birth rate is estimated to have fallen from 50 per thousand in sixties to about 45 per thousand in mid seventies. The total fertility rate has come down from about 8 in early sixties to less than 7 at present**. The decline, however has been partially offset by an increasing number of women entering the reproductive age group resulting in a slower decline in the birth rate.

4. The crude death rate is estimated at about 15 per thousand with infant mortality rate as high as 110 per thousand live births, which seems one of the strong motives for couples to opt for large families.

5. The Pakistan Fertility Survey (PFS) 1975 revealed the following figures on family planning practices.

(i) Eligible couples having knowledge of contraceptives	75%
(ii) Proportion of eligible couples who are contraceptive users (Ever users) ..	12.9%
(iii) Proportion of eligible couples who are regular users of contraceptives ..	6%
(iv) Proportion of eligible couples who are not using contraceptives but intend to do so in the future	66%

REVIEW OF 1976-77

6. A provision of Rs. 243 million was made in the ADP for 1976-77 which included foreign exchange component of Rs. 158 million. Initial estimates show that a total of Rs. 202.3 million have been utilized (Annexure-I). This figure is likely to go up when the revised estimate of the expenditure is available. The utilization is about 83% of the allocated sum.

7. The physical targets set and the achievement/performance are given below :

Item	Targets	Achievement	Percentage
(i) Conventional Contraceptives	1.2 million gross	0.683 million gross	57
(ii) Oral Pills	5.9 million cycles	4.1 million cycles	70
(iii) IUD insertions	3,71,000	1,76,448	46
(iv) Sterilizations	29,000	14,578]	50

*As a result of intensive expert study the 1961 census was estimated to have 7.5% under reporting a similar study for the 1972 census has yet to be undertaken to detect possible under/over reporting. However, a [group of experts has recommended adoption of 3% growth based on 1961 census adjusted and 1972 census provisional count.

**TFR : A women who completes her reproductive period would typically have 7 live births.

8. Except for oral pills, the achievements in general have been around 50 per cent as against this the financial utilization is more than 80 per cent. The main reason for low achievement is attributed to floods and disturbed conditions which disrupted the field operations.

9. The programme approach being followed is the System of Continuous Motivation (CMS) based on the assumption that house to house visits are more effective than other possible methods of motivation. This system was initially tried in Sialkot district and later on in 1973 was recommended to cover all the programme districts with population more than 300 persons per square mile. The clients were to be approached at home four times a year through a two-member male-female team for motivation and supply of contraceptives. This idea, however, suffered from the disadvantage that insufficient number of females were available and out of the employed many were young and unmarried and thus lacked credibility.

10. In November, 1976 this programme, on the recommendation of PM's review committee was put under the direct and full administrative control of the Federal Government which had already assumed full financial responsibility since 1973. Prior to full federalization, the programme at the Federal level was being administered by Population Planning Division (PPD) and a Population Planning Council (PPC) while at the provincial level Population Planning Boards (PPB) were responsible for the programme. The PPC and PPB functioned as autonomous bodies, the former responsible for Planning and Policy matters while the latter was responsible for implementation of the programme. The federalization was meant to create unity of command, monitoring and supervision to improve the programme efficiency.

11. The communication system did not function as a well-developed system, specifically, it was not varied for special target groups and it failed to reach young and rural couples. It, however, succeeded in creating awareness in the public through extensive use of mass media.

12. An inundation strategy was followed which aimed at making contraceptives available in abundance. The outlets included 34,520 non-salaried agents, 7,258 field motivators, 1,409 dias 1,719 health clinics and 36 hospital motivators. To record the movement of contraceptives from ware house to field and then to the clients the Information System of Contraceptive Movement (ISCM) was further expanded.

13. A National Institute of Advanced Training (NIAT) was established at Hyderabad. This institute, besides training the supervisory staff (FWO's etc.), has been providing training to doctors in Mini-Laparotomy techniques at the Model Family clinic attached to it.

14. The System of Client Record (CRS) to collect information on every contraceptives user in 11 sample districts, which was started in 1974, was further strengthened with the idea of developing a regular feed-back for a more effective follow up.

PROGRAMME FOR 1977-78

Population Planning Strategy

15. The salient features of the programme strategy for 1977-78 will be as follows :—
- (i) The CMS will continue to be the programme approach however, the role of male motivators will be changed to the registration of eligible couples as well as to assist the Population Planning Officers;
 - (ii) Adequate supplies of contraceptives will be ensured and distribution outlets increased. A condom factory, to ensure supply from local sources, will be established;
 - (iii) The linkages between Population Planning and Health programme would be improved through the setting up of committees for co-ordination, collaboration and co-operation at Federal, Provincial and District levels, with the long term objective of integration of the two programmes ;
 - (iv) A differential approach for various geographical regions would be adopted to suit local conditions ;
 - (v) The contraceptive mix will place more emphasis on clinical methods ;
 - (vi) Involvement of Public and volunteer groups in the administration of the programme will be enhanced ;
 - (vii) Training, reporting and evaluation programmes would be expanded and strengthened.

16. A number of innovative experiments would be undertaken and if successful would be incorporated in the programme. The proposed programme changes are described below :—

Training

17. (i) A Population Training Board had been set up both for clinical and non-clinical fields of the programme to ensure proper standard of training. The training period will be enlarged and will be more field oriented. An independent Population Training Centre has been established which will provide training facilities to field functionaries, besides, influential people from other fields will also be trained at different places.
- (ii) The training of FWV's will be done at RTI's. Their 15 month training programme will include, besides, Population Planning, health care to expand their scope of operation and to gain confidence of the people.
- (iii) With the establishment of NIAT, 40 senior FWV's will be trained for 6 months and later on these will be posted as FWO's. Programme doctors as well as doctors from Health Department and private sector will be trained in Mini-Laparotomy techniques. Teaching of Population Planning will be included in Medical Curricula and separate Family Planning Departments will be established.

Communication, Publicity and Motivation

18. For the purpose of Communication and publicity both inter-personal as well as mass-media would be used. The motivational strategy will be a modified approach of CMS and will also include the involvement of voluntary organisations, influential people, other agencies like Railway, P.I.A. etc. would also be involved. Special feature of the new strategy would be adoption of a differential approach for various geographical regions, different age/sex groups.

Clinical Services

19. The shift now will be towards, clinical methods of contraception, as these are more effective. Linkages with health programme will be improved through coordination at all the three levels of operation (three-tier coordination committees will be set up). Four Model Family Clinic will be established for male sterilization and tubeligation. The scope of Family Welfare Clinics will be enlarged to cover MCH care. Long acting injection would be introduced on a significant scale.

Supply and Distribution of Contraceptives

20. In order to ensure adequate supply and distribution of contraceptives its commercial distribution will be introduced through out the country and massive publicity to create demand and awareness, will be done by advertising agencies.

Survey and Statistics

21. Main activities will be improvement in the Client Record System (CRS) and the Information System of Contraceptive Movement (ISCM) started in 1976-77. Work on the registration of eligible couples will continue to up-date the record.

Inspection

22. The inspection will be divided into (a) General Field and (b) Clinical Inspection. The two areas will be regularly monitored by establishing Regional Inspection Offices.

Research

23. Normal research by various programme units will be carried out. The National Research Institute will participate in a world-wide collaborative clinical research under the sponsorship of WHO. A new Research and Development project will be started to experiment with innovative steps to encourage small family norms. This project will extend over a period of 3-4 years.

Financial Allocation

24. An allocation of Rs. 243.0 million has been made which includes a total foreign exchange component of Rs. 99.6 million with Rs. 0.2 million from own resources. Although the total allocation is at par with 1976-77 allocation, the rupee component has changed from Rs. 85 million in 1976-77 to Rs. 143.4 million in 1977-78, an increase of 68.7 per cent. The foreign exchange component on the other hand has declined from Rs. 158 million in 1976-77 to Rs. 99.6 million in 1977-78. The dependence on foreign aid will gradually decrease and the Government will assume total programme responsibility in the coming years.

Physical Targets

25. The physical targets during 1977-78 will be as under :—

Item	Targets
1. Conventional contraceptives.. .. .	0.803 million gross.
2. Oral pills	5.2 million cycles.
3. I.U.D. insertions	300,000
4. Voluntary sterilizations	45,000
5. Injectable	200,000
6. Family Welfare clinics	289
7. Liquid Foam	30,000 bottles.
8. Acceptors.. .. .	2.2 million.

26. The existing Sterilization-cum-training centre (16) and Sterilization Centres (36) will be further strengthened and equipped with more facilities. The 1,205 Family Welfare Clinics will be strengthened staff and facilities-wise. The capacity and quality, of training at Regional Training Institutes will be improved.

CHAPTER 15

SOCIAL WELFARE

REVIEW OF 1976-77

A total expenditure of Rs. 18.27 million (Federal—Rs. 5.64 million, Punjab—Rs. 11.00 million, Sind—Rs. 0.20 million, NWFP—Rs. 0.43 million and Baluchistan—Rs. 1.00 million) had been incurred on Social Welfare Sector during 1976-77, as against the total Annual Plan allocation of Rs. 24.35 million (Federal—Rs. 11.15 million, Punjab—Rs. 11.40 million, Sind—Rs. 0.20 million, NWFP—Rs. 0.60 million and Baluchistan—Rs. 1.00 million).

2. The significant achievements in Social Welfare Sector included establishment of Mothers and Children Homes, Model Orphanages, Abandoned Babies and Destitute Children Homes, Day-Care Centres for Children of Working Mothers, Homes for Women without support (Darul Aman), Child Welfare Training Institute, a Centre for the rehabilitation of the disabled, Community Development Centres and Staff Welfare Centres.

3. The other Physical Targets as achieved during 1976-77 included distribution of grants-in-aid to 600 Voluntary Social Welfare Agencies for standardization and better delivery of social services throughout the country; disbursement of Rs. 0.50 million to 4 Universities and 27 Colleges for Social Work Education.

PROGRAMME FOR 1977-78

4. The Annual Plan provides Rs. 16.90 million (Federal—Rs. 5.00 million, Punjab—Rs. 9.50 million, Sind—Rs. 1.00 million, NWFP—Rs. 0.78 million and Baluchistan—Rs. 0.62 million) for Social Welfare Sector during 1977-78. The development programmes for 1977-78 mostly include on-going projects for paucity of funds.

5. In view of resource constraints which would support only a small Social Welfare Programme, priorities will be fixed methodically. Children and Women will form the main target groups of beneficiaries under various programmes. Grants-in-aid to Voluntary Welfare Agencies will also assign priority to Child Welfare and Women Welfare Organizations. Recognizing the fact that "family" is the basic unit of our social structure and it has a positive and meaningful bearing on Child Development and Women Welfare, Child and Women Welfare projects which include "Family Welfare" components will have priority over those projects which deal individually with children and women and they do not involve "family" as their basic unit for social services. On the basis of the above consideration, the following sub-sectors, stated in order of priorities, will offer the core programmes of Social Welfare Sector :

1. Family and Child Welfare Services.
2. Family and Women Welfare Services.
3. Community Development in Urban and Rural Areas particularly at IRDP Marakaz level (Children, Women and Youth Welfare as its main target groups for social services).
4. Financial, Professional and Technical Assistance to Voluntary Social Welfare Agencies (Child and Women Welfare Agencies to be preferred).

Federal Programmes

6. *Social Welfare Division.*—Social Welfare Division will undertake the works relating to expansion of on-going projects which are as follows :—

- (i) Financial, Technical and Professional Assistance to 600 Voluntary Social Welfare Agencies: 300 in Punjab, 150 in Sind, 100 in NWFP and 50 in Baluchistan.
- (ii) Grants-in-aid to 6 University Departments at Karachi, Hyderabad, Lahore, Peshawar, Quetta and Bahawalpur and 22 Colleges throughout the country for student's field work. Grant will also be given to Pakistan Council of Professional Social Workers.
- (iii) Organization of three training courses for social welfare personnel in Public and Private Sectors.
- (iv) Establishment of a comprehensive community centre in Northern Areas.
- (v) Expansion of Pilot Comprehensive Community Development Project at Islamabad.

7. *Establishment Division.*—The Staff Welfare Programmes during 1977-78 include expansion and construction work relating to Holiday Centres, Industrial Homes for Members of Low-paid Government Employees, Multi-purpose Community Centres in residential areas of Government Employees and establishment of a Day-Care Centre in Islamabad.

Provincial Programmes

8. *Baluchistan.*—The Government of Baluchistan will under-take the work of construction and expansion relating to on-going projects viz. establishment of one Darul Aman at Quetta. New schemes include (a) establishment of 4 Rural Community Development Centres ; 2 at Chaman and one each at Mach and Pasni, and (b) establishment of one Evaluation and Research Cell in the provincial Social Welfare Directorate at Quetta. The Government of Baluchistan will also distribute Rs. 0.12 million as grants-in-aid to 50 Voluntary Social Welfare Agencies during 1977-78.

9. *N.W.F.P.*—The Government of N.W.F.P. will carry-out the work relating to the expansion of on-going projects which include 4 Rural Community Development Projects and 4 Urban Community Development Projects. The Government of NWFP will also distribute Rs. 0.270 million to 50 Voluntary Social Welfare Agencies during 1977-78 for standardization of their social services.

10. *Sind.*—Government of Sind will undertake four new schemes during 1977-78 which include (a) establishment of a Centre for the Physically Handicapped at Sehwan Sharif, (b) establishment of a Model Orphanage at Karachi, (c) 2 Industrial Home-cum-Socio-economic Centres—one each at Sujawal and Moro. The Government of Sind will also distribute Rs. 0.20 million as financial assistance to 50 Voluntary Social Welfare Agencies during 1977-78.

11. *Punjab.*—The Government of Punjab will undertake a new project in co-operation with ILO for skill training of rural women to enhance their family incomes. The rest of the programmes consist of on-going projects such as two Destitute Homes at Rawalpindi and Lahore; one Child Welfare and In-service Training Institute at Lahore; one Model Orphanage at Lahore; one Home for Abandoned Babies and Destitute Children at Rawalpindi; Four Day-Care Centres at Lyallpur, Rawalpindi, Multan and Bahawalpur; one Treatment and Rehabilitation Centre for mentally retarded Children at Lahore; Five Social Services Centres for Lost and Kidnapped Children at Lahore, Multan, Rawalpindi, Lyallpur and Bahawalpur & two Homes for Old and Infirm Persons at Lahore and Rawalpindi; two Hostels for Working Women at Lahore and Rawalpindi; 5 Socio-economic Centres for Women—One each at Divisional Headquarters; 17 Display Centres—one each at District Headquarters; two Mother and Children Homes; Four Rescue Homes—one each at Lyallpur, Gujranwala, Multan and Bahawalpur; Five Industrial Centres of Excellence—one each at Divisional Headquarters and fifteen Medical Social Work Projects in the District Hospitals. The Government of Punjab will also distribute Rs. 1.5 million as Grant-in-aid to about 350 Voluntary Social Welfare Agencies.

Utilization for 1976-77 and Allocation for 1976-77 by Executing Agencies

Sl. No.	Name of Executing Agencies	Allocation 1976-77	Utilization 1976-77	Percentage Achievement	Allocation 1977-78		
					Total	On-going Schemes	New Schemes
1	2	3	4	5	6	7	8
1.	Federal Government :						
	(a) Social Welfare Division	9.00	3.49	38.77%	3.00	3.00	—
	(b) Establishment Division	1.95	1.95	100%	2.00	2.00	—
	(c) Kashmir Affairs Division	0.20	0.20	100%	—	—	—
	Total Federal Government ..	11.15	5.64	50.58%	5.00	5.00	—
2.	Punjab	11.40	11.00	96.48%	9.50	9.20	0.30
3.	Sind	0.20	0.20	100%	1.00	0.20	0.80
4.	N.W.F.P.	0.60	0.43	72%	0.78	0.78	—
5.	Baluchistan	1.00	1.00	100%	0.62	0.31	0.31
	Total Social Welfare ..	24.35	18.27	75.72%	16.90	15.49	1.41

PART IV
ANNEXURES

(191—192)



CHAPTER 2—RECENT ECONOMIC MEASURES

(193—194)

1. IRON AND STEEL INDUSTRIES

Including rolling and re-rolling, metal fabrication castings and forgings and wire drawing etc.

Public Sector

Rolling of M.S. sheets and plates (all types and sizes), plain and coated.

Open to Private Sector

Iron and steel industries of all types and sizes, other than those reserved in public sector including the following :—

- (i) Rolling of sections including prestressed deformed bars.
- (ii) Wire drawing (including high carbon steel wire drawing).
- (iii) Baling hoops re-rolling.
- (iv) Metal structures all sorts.
- (v) Welded pipes, tubes and fittings thereof.
- (vi) Fabrication of storage tanks all types.
- (vii) Castings of cast iron and steel.
- (viii) Foreign all types.
- (ix) Cast iron spun pipes.

2. BASIC METAL INDUSTRIES

Including production of iron and steel and products iron ore, basic production of non-ferrous metals, refining rolling, extrusion of non-ferrous metals, tinning and galvanising.

Public Sector

Manufacture of basic metals and alloys there of such as :—

- (i) Basic production of iron and steel (pig iron cast iron, mild steel etc) based on ore.
- (ii) Alloy steels, special alloy steels (including stainless steel, tool steels and high carbon steels.
- (iii) Basic production of non-ferrous metals.

Open to Private Sector

All down-stream metal products industries including the following :—

- (i) Refining rolling and extrusion of non-ferrous metals.
- (ii) Tinning and galvanising.

3. HEAVY ENGINEERING MECHANICAL INDUSTRIES

Including engines, machine tools and heavy equipment of various types cotton textile machinery, sugar mill machinery, cement machinery plant, chain pulleys and cranes all types road construction machinery and equipment including road rollers steam boilers railways rolling stock, mining machinery and equipment, ship-building and dry-docking repair barges boats and small crafts.

Public Sector

- (i) High speed engines (i.e. above 1,600 RPM), all types including automobile engines).
- (ii) Cotton textile machinery.
- (iii) Sugar Mills machinery.
- (iv) Cement machinery plant.
- (v) Chain pulleys and cranes all types.
- (vi) Railway rolling stocks.
- (vii) Mining machinery and equipment.
- (viii) Ship-building and drydocking repair.

Open to Private Sector

Heavy Engineering (mechanical) industries of all types and sizes, other than those specified in column 3, but including the following :—

- (i) Slow and medium speed engines below, 1,600 RPM range and types.
- (ii) General purpose machine tools and equipment.
- (iii) Components, parts and sub-assemblies of cotton textile sugar and cement plant machinery.
- (iv) Road construction machinery and equipment including road rollers.
- (v) Steam boilers.
- (vi) Components parts and sub-assemblies of mining machinery and equipment.
- (vii) Barges, boats and other small crafts.

4. HEAVY ELECTRICAL INDUSTRIES

(Including power transformers, circuit breakers isolators, current and potential transformers, capacitors, control and relay panels, switch gears insulated and bare cables electric wires and electric motors).

Public Sector

- (i) Power and distribution transformers above 33,000 volts (33 KV).
- (ii) Circuit breakers and insulators above 33 KV.
- (iii) Instrument transformers and capacitors above 33 KV.

Open to Private Sector

Heavy electrical industries of all types all sizes other than those specified in column 3 but including the following :—

- (i) Power and distribution transformers up to 33,000 volts (33 KV).
- (ii) Circuit breakers and insulators up to 33 KV.
- (iii) Instrument transformers and capacitors up to 33 KV.
- (iv) Control and relay panels.
- (v) Switchgears.
- (vi) Insulated and bare cables and electric wire etc.
- (vii) Electric motors.

5. ASSEMBLY AND MANUFACTURE OF MOTOR VEHICLES

(Including assembly and manufacture of automobiles assembly and manufacture of two and three wheelers and components and parts of all types of automotive vehicles).

Public Sector

Assembly and manufacture of automobiles (trucks, buses, cars, pickups, vans and jeeps etc.)

Open to Private Sector

Industries of all types and sizes other than those specified in column 3, but including the following :—

- (i) Assembly and manufacture of two and three wheelers (motorcycles, scooters and auto-rickshaws).
- (ii) Components and parts of all types of automotive vehicles (cars, buses, trucks, jeep, pick-up and motor-cycle/scooters) also buildings of bodies for trucks and buses.

6. ASSEMBLY AND MANUFACTURE OF TRACTORS AND FARM MACHINERY

(Including assembly and manufacture of power tillers, other self-propelled farm machinery and equipment, tracto -drawn agricultural implements, other farm equipment and component parts and sub-assemblies of all types of tractors).

Public Sector

Assembly and manufacture of tractors.

Open to Private Sector

Industries of all types and sizes other than those specified in column 3, but including the followings :—

- (i) Assembly and manufacture of power tillers.
- (ii) Self-propelled farm machinery and equipment other than tractors.
- (iii) Tractors drawn agricultural implements and other farm equipments.
- (iv) Components, parts and sub-assemblies of all types of tractors.

7. HEAVY AND BASIC CHEMICALS

(Including soda ash, caustic soda, sulphuric acid, chlorine, formulation of insecticides and pesticides, fertiliser basic manufacture of dyes, refining and production of sulphur from natural source/deposits and synthetic and cellulosic fibres).

Public Sector

Nil.

Open to Private Sector

Industries of all types and sizes.

8. PETRO-CHEMICAL INDUSTRIES

(Including polyethylene, polypropylene, acetylene, benzene, toluene, ethylene, methanol, aromatics etc.)

Public Sector

Basic manufacture of petro-chemicals.

Open to Private Sector

- (i) Down-stream industries all types and sizes, based on use of building blocks secondary products of petrochemicals as raw material.
- (ii) Private sector investment in basic manufacture of petro-chemicals would be allowed only in collaboration with the public sector.

9. CEMENT INDUSTRY**Public Sector**

Nil.

Open to Private Sector

All types and sizes.

10. PUBLIC UTILITIES

(Including electricity generation transmission and distribution, gas supply and oil refineries etc.)

Public Sector

(Public utilities including the following :—

- (i) Electricity, generation, transmission and distribution.
- (ii) Gas Supply.
- (iii) Oil refineries.

Open to Private Sector

Nil.

11. VEGETABLE GHEE/EDIBLE OILS

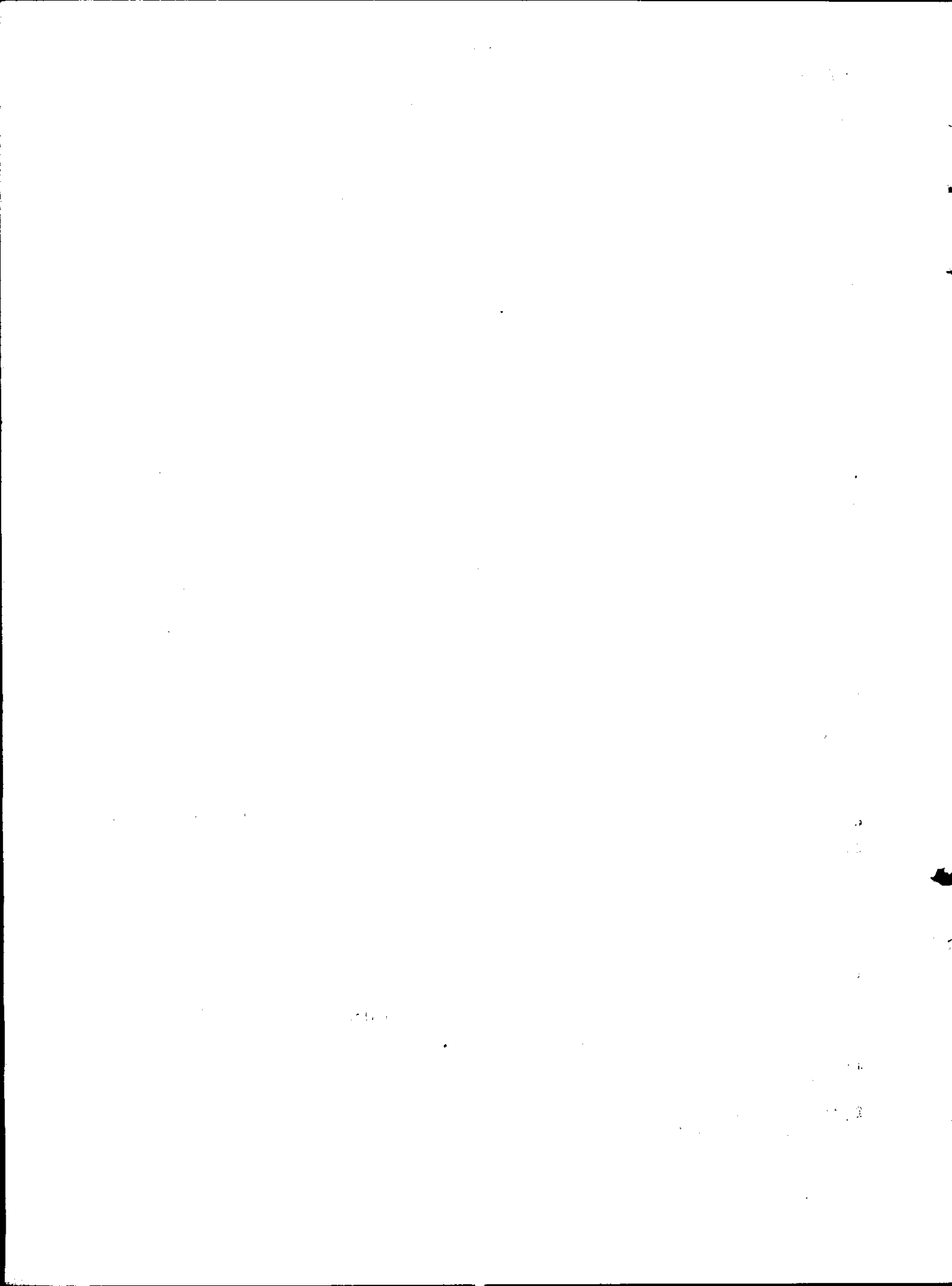
(Hydro genated vegetable ghee and other edible oils).

Public Sector

Nil.

Open to Private Sector

All types and capacities.



CHAPTER 3—CONSUMPTION-NUTRITION PLAN AND BASIC NEEDS

(199—200)

REQUIREMENTS & AVAILABILITY OF WHEAT
(MAY—APRIL)

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Opening Stocks	222	510	541
2. Production*	7,673	8,691	9,154
3. Deduction for seed, feed and wastage ^a at the rate of 10%	767	869	915
4. Imports	1,292	540	1,000
5. Government Procurement	1,237	2,377	1,900
6. Off-take from Government Stocks	2,322	2,806	2,845
7. Closing stocks	510	541	550
8. Available with Private Sector	5,669	5,445	6,339
9. Total domestic consumption	7,910	8,331	9,230
10. Population (Millions)	(71.29)	(73.43)	(75.62)
11. <i>per capita</i> availability (gms/day)	(303.97)	(310.85)	(334.41)
(kgs/annum)	110.95	113.46	122.06

*A one year lag has been assumed between production and consumption.

REQUIREMENT AND AVAILABILITY OF RICE
(JULY—JUNE)

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Opening Stocks	762	676	472
2. Local Production	2,617	2,738	2,877
3. Deduction for seed & wastage @6%	157	164	173
4. International Exports/Procurement by the Government for Export	782	944	864
5. Closing Stocks	676	472	406
6. Net availability	1,764	1,834	1,906
7. Per capita per day. (gms)	(67.78)	(68.44)	(69.04)
8. Per capita availability (kgs/annum)	24.74	24.98	25.20

Appendix III

PER CAPITA AVAILABILITY OF FOODGRAINS

(Per capita kgs/annum)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Wheat	110.95	113.46	122.05
2. Rice	24.74	24.98	25.20
3. Other Foodgrains	17.72	16.59	19.49
Total	153.41	155.03	166.75

Appendix IV

**REQUIREMENTS AND AVAILABILITY OF PULSES
(JULY—JUNE)**

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. PRODUCTION			
1. Gram*	551	601	610
2. Other Pulses	181	183	198
2. DEDUCTION FOR SEEDS, FEED & WASTAGE			
1. Gram at the rate of 31 per cent	171	186	189
2. Other pulses at the rate of 11 per cent	20	20	21
3. NET AVAILABILITY OF GRAM & OTHER PULSES	541	578	598
4. PER CAPITA AVAILABILITY (kgs/annum)	7.59	7.87	7.91

*A period of one year has been taken as time lag between production and consumption.

Appendix V

**REQUIREMENTS & AVAILABILITY OF SUGAR
DECEMBER—NOVEMBER**

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
I. SUGARCANE			
1. Production	25,545	29,379	29,972
2. Deduction for seed, feed & wastage at the rate of 10%	2,554	2,938	2,997
3. Crushed	7,096	8,372	8,542
4. Available for raw sugar production	15,895	18,069	18,433
II. REFINED SUGAR			
1. Opening Stocks	15	29	50
2. Local Production	623	736	710
3. Exports	—	—	—
4. Closing Stocks	29	50	20
5. Net Availability	609	715	740
6. Per capita Availability (kgs/annum)	8.54	9.74	9.79
III. RAW SUGAR			
1. Production @ 10% recovery	1,589	1,807	1,843
2. Deduction for animal feeding	159	181	184
3. Net Availability	1,430	1,626	1,659
4. Per capita availability (kgs/annum)	20.06	22.14	21.94
Total Per capita availability (kgs/annum)	28.60	31.88	31.73

Appendix-VI

**PRODUCTION OF VANASPATI & REQUIREMENTS OF EDIBLE OILS
(JULY—JUNE)**

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
A. EDIBLE OIL AVAILABILITY			
1. Opening Stocks	25	40	51
2. Local Production	242	225	283
3. (i) From Cotton Seeds	123	104	149
(ii) From Other Seeds	119	121	134
4. Imports	203	290	231
Total availability	470	555	565
B. USES			
1. Industrial Use	51	61	61
2. Direct Consumption and Refined Poly-unsaturated oil	76	86	92
3. Required for vanaspati	303 (277)	357 (328)	386 (355)
4. Closing Stocks	40	51	26
Total Uses	470	555	565
C. PER CAPITA AVAILABILITY			
1. Veg. Ghee (Kgs/annum)	3.89	4.47	4.71
Refined Oil, (including direct consumption) (kgs/annum)	1.07	1.17	1.22
Total Per capita availability (kgs/annum)	4.96	5.64	5.93

Appendix VII

**PRODUCTION DATA FOR EDIBLE OILS
(JULY—JUNE)**

(000 Metric tons)

Items	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Cotton	1,028	870	1,245
2. Rape & Mustard	267	267	293
3. Groundnut	62	64	76
4. Sesamum	10	11	12
5. Others	5	7	10

Appendix VIIIREQUIREMENTS AND AVAILABILITY OF MILK
JULY—JUNE

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Targets)
1. Production	7,889	8,014	8,366
2. <i>Per capita</i> production. (kgs/annum)	110.66	109.14	110.63
3. 55% consumed as milk	4,339	4,407	4,601
4. Dry Milk Imported.*	203	203	229
5. Net Availability	4,542	4,610	4,830
6. <i>Per capita</i> availability. (kgs/annum)	63.71	62.78	63.87

*One ten of dry milk is equivalent to 10 tons of liquid milk.

Appendix IX

REQUIREMENT AND AVAILABILITY OF MEAT AND POULTRY MEAT

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Total Production	638	665	717
2. <i>Per capita</i> availability. (Kgs/annum)	8.95	9.06	9.48

Appendix XREQUIREMENTS AND AVAILABILITY OF VEGETABLES
JULY—JUNE

(000 Metric tons)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Total Availability	2,168	2,191	2,301
2. Exports of Onions & Potatoes	4	16	20
3. Net Availability	2,164	2,175	2,281
4. <i>Per capita</i> Availability. (kgs/annum)	30.35	29.62	30.16

Appendix XIREQUIREMENTS AND AVAILABILITY OF TEA
JULY—JUNE

(Million kgs)

	1975-76 (Actual)	1976-77 (Estimate)	1977-78 (Target)
1. Imports	52.62	51.10	58.96
2. <i>Per capita</i> availability (kgs/annum)	0.74	0.70	0.78

AVAILABILITY OF CLOTH

(July—June)

(Million kgs)

	1975-76 (Actuals)	1976-77 (Estimate)	1977-78 (Target)
A. YARN			
1. Opening Stock	27	13	12
2. Production	350	282	386
3. Required for Hosiery	10	39	10
4. Export of Yarn	111	67	113
5. Consumed by mill sector	74	59	79
6. Closing Stocks	13	12	22
7. Available for non-mill sector	169	148	174
			(million sq. meters)
B. COTTON CLOTH			
1. Opening Stock	110	75	82
2. Total Production	1,703	1,448	1,770
(i) Mill sector*	520	412	552
(ii) Non-mill sector.*	1183	1036	1 218
3. Export of cloth	464	417	433
4. Required for export of cotton bags, towels, tents, readymade garments etc.	125	130	217
5. Closing Stocks	75	82	92
6. Available for domestic consumption	1149	894	1,110
7. <i>Per capita</i> availability (sq. meters/annum)	16012	12.17	14.68
C. SYNTHETIC CLOTH			
1. Production of yarn. (in million kgs)	4.98	5.19	5.64
2. Import of yarn. (in million kgs)	10.91	13.05	13.73
3. Total yarn. (in million kgs)	15.89	18.24	19.37
4. Production of cloth** (in million sq. meters)	175.00	201.00	213.00
5. Exports (in million sq. meters)	12.00	7.00	9.00
6. Net availability (in million sq. meters).. .. .	163.00	194.00	204.00
7. <i>Per capita</i> availability (sq. meters/annum)	2.29	2.64	2.70
D. TOTAL CLOTH			
(Cotton & synthetic <i>per capita</i> in sq-meters per annum)	18.41	14.81	17.38

*1 kg of cotton yarn = 7 sq. meters of cotton cloth.

**1 kg of synthetic yarn—11 sq. meters of synthetic cloth.

TABLE 1
GROWTH STATUS OF CHILDREN UNDER FIVE

	Height for Age			Weight for Age			Weight for Age		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Less than 80% of Standard ..	13%	13%	13.2%	52%	61%	56.7%	15%	20%	18.3%
80—99% of Standard ..	78%	79%	78.4%	36%	29%	32.8%	49%	51%	49.4%
100 plus % of standard ..	9%	8%	8.4%	12%	10%	10.5%	36%	29%	32.6%
No. of cases ..	162	464	926	473	474	947	461	463	924

TABLE 2
PER CENT DISTRIBUTION OF SERUM VITAMIN A LEVELS

	Males	Females	Pakistan	Rural	Urban
Above normal (above mcg/100 ml)	43.5	50.1	47.03	44.82	53.31
Normal (20—30 mcg/100 ml)	43.4	37.1	40.04	42.14	34.50
Low marginal (10—19 mcg/100 ml.)	8.3	9.0	8.64	8.64	8.65
Deficient (less than 10 mcg/100 ml)	4.7	3.8	4.28	4.39	3.98
Number of observations Males	385	Urban	..	307	
Number of observations Females	392	Rural	..	470	
Total	777			777	

TABLE 3
PER CENT PREVALENCE OF GOITRE
(WHO CLASSIFICATION)

	Grade I	Grade II	Grade III	All Grades
Males	1.5	0.5	0.1	2.1
Females (NPL)	2.3	1.1	0.4	3.8
Pregnant	3.4	4.4	1.1	8.9
Breast feeding	5.2	0.7	0.4	5.3
Total All Pakistan	2.13	0.8	0.2	3.1
Urban	1.6	0.2	0.4	1.9
Rural	2.2	1.0	0.3	3.6
Number of observations	Urban : 2,839	Rural : 3,449	Pakistan : 6,288	

TABLE 4
PER CENT PREVALENCE OF ANAEMIA AS INDICATED BY HAEMOGLOBIN AND HAEMATOCRIT
LEVELS AND PALE CONJUNCTIVA

Haemoglobin Status								Adequate	Marginal	Deficient	
Males	..	..	..	..	..	..	..	54.3	28.6	17.1
Females NPL*	..	..	..	..	..	..	..	66.8	19.1	14.1
Pregnant	..	..	..	..	..	..	..	42.5	40.5	17.0
Lactating	..	..	..	..	..	..	..	58.6	19.6	21.7
Total								..	59.3	24.5	16.2
Haematocrit Status :											
Males	..	..	..	..	..	..	..	61.3	29.8	8.9
Females NPS*	..	..	..	..	..	..	..	83.8	10.9	5.2
Pregnant	..	..	..	..	..	..	..	79.1	4.9	15.9
Lactating	..	..	..	..	..	..	..	87.0	4.7	8.3
Total								..	72.4	20.2	7.4
Pale Conjunctiva :											
								<i>Absent</i>	<i>Present</i>		
Males	..	..	..	..	..	..	..	85.7	14.3	
Females NPL*	..	..	..	..	..	..	..	86.2	13.0	
Pregnant	..	..	..	..	..	..	..	73.4	26.6	
Lactating	..	..	..	..	..	..	..	73.0	27.0	
Total								..	85.0	15.0	

*Non-pregnant and non-lactating.

FOOD BALANCE SHEET FOR THE YEAR 1977-78

Appendix XIV

Country : PAKISTAN

Population : 75.62 MILLION

(Unit 000 tons)

Commodity	Available Supply	Distribution Losses	Food Net	Per Capita Consumption		
				Gram/day	Calories/day	Proteins (gm)/day
1	2	3	4	5	6	7
Cereals						
Wheat	9000	900	8100	293.45	1038.81	30.81
Rice	1976	193	1783	64.59	228.00	4.84
Maize	1018	255	763	27.64	100.05	2.62
Other Cereals						
Barley }	810	130	680	24.63	89.16	2.34
Jowar }						
Bajra }						
Total Cereals	12804	1478	11326	410.31	1456.02	40.61
Pulses						
Gram	600	186	414	15.0	55.35	3.00
Other Pulses	234	26	208	7.5	25.20	1.73
TOTAL	834	212	622	22.5	80.55	4.73
Oil Seeds						
Rape & Mustard	288	288	—	—	—	—
Cotton seed	1225	1225	—	—	—	—
Sesamum seed	13	13	—	—	—	—
Others	6	6	—	—	—	—
Ground nut	74	65	9	0.3	1.74	0.08
TOTAL	1606	1597	9	0.3	1.74	0.08
Fruit & Vegetables						
Fruit	1490	—	1490	54.00	11.88	0.75
Vegetable	2266	—	2266	82.10	46.80	0.50
TOTAL	3756	—	3756	136.10	58.68	1.25
Sugar						
Refined	735	—	735	26.63	103.06	—
Raw sugar	1565	—	1565	56.70	199.01	—
TOTAL	2300	—	2300	83.33	302.07	—
Meat						
Beef	470	—	470	17.03	40.87	3.18
Mutton	210	—	210	7.61	16.13	1.34
Poultry	30	—	30	1.09	1.62	0.20
TOTAL	710	—	710	25.73	58.62	4.72

	1	2	3	4	5	6	7
Offals							
Edible Offals	..	125	—	125	4.53	6.48	0.73
TOTAL	..	125	—	125	4.53	6.48	0.73
Eggs	..	66	—	66	2.39	3.80	0.30
TOTAL	..	66	—	66	2.39	2.80	0.30
Milk							
Cow	..	1676	—	1676	60.72	38.86	2.13
Buffalow	..	6040	—	6040	218.83	221.02	8.75
Sheep and Goat	..	484	—	484	17.53	12.27	0.58
TOTAL	..	8200	—	8200	297.08	272.15	11.46
Fish	..	185	—	185	6.70	10.0	1.27
TOTAL	..	185	—	185	6.70	10.0	1.27
Fats and Oil	..	460	—	460	16.67	150.03	—
TOTAL	..	460	—	460	16.67	150.03	—

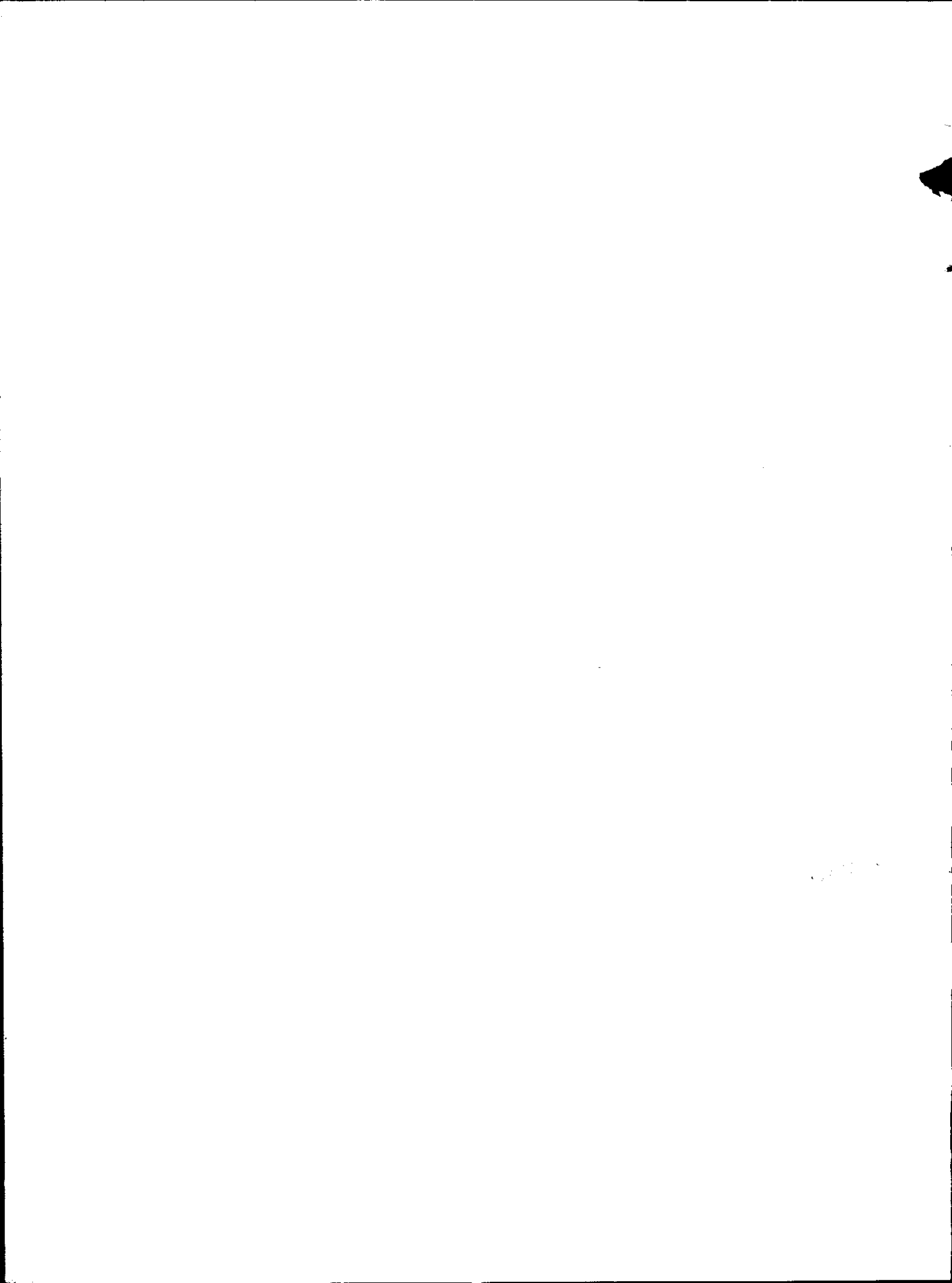
Total calories — 2400.14
 Total Proteins — 65.15 gm.
 Animal Protein — 18.48 gm.

Foot Note

1. *Available supply.*—Available supply includes total production plus imports minus exports, if any.
2. *Distribution losses.*—Distribution losses include animal feed, seed wastage and extraction losses.

CHAPTER 4—AGRICULTURE

(211—212)



ANNUAL DEVELOPMENT PROGRAMME 1977-78, AGRICULTURE
SUMMARY—PAKISTAN

(Million Rupees)

Sub-Sector/Category	1976-77		ADP 1977-78		
	ADP	Revised Estimates	On-Going	New	Total
	2	3	4	5	6
I. Crop Production Sub-sectors					
1. Fertilizers	371.396	381.670	666.220	0.800	667.020
2. Improved Seeds	64.497	35.225	78.989	7.393	84.382
3. Plant Protection	326.788	376.274	230.367	72.500	302.867
4. Soil Surveys	2.217	1.766	2.650	—	2.650
5. Mechanization	47.685(a)	45.191	53.208	1.550	54.758(a)
6. Soil Conservation	3.995	1.130	3.515	0.120	3.635
II. Infra Structure and Institutional Arrangements					
7. Agril. Marketing	2.300	0.993	0.993	0.200	1.100
8. Cooperatives	15.095(a)	4.056	3.561	0.376	3.937(a)
9. Govt. Foodgrain Storages	121.500	206.985	7.368	127.113	134.431
10. Research on Crop Production	54.192	44.370	57.336	4.245	61.581
11. Agril. Education	12.915(b)	7.614	15.287	2.000	17.287(b)
12. Agril. Extension	25.759	13.514	23.118	1.350	24.468
13. IRDP	52.000	30.664	38.170	8.730	46.900(c)
14. Agril. Economics and Statistics	4.793	2.886	2.000	0.400	2.400
15. Consolidation of Agri. Land Holdings	8.200	9.200	—	0.100	0.100
III. Other Sub-sectors					
16. Animal Husbandry	62.403	43.142	102.290	6.081	108.371
17. Range Management	3.004	2.585	3.027	—	3.027
18. Forestry	43.046(d)	33.807	42.569	7.064	49.633(d)
19. Watershed Management	3.016	5.386	8.117	—	8.117
20. Fisheries	16.485(e)	9.277	11.493	1.075	12.568
Total	1241.286	1255.735	1350.185	239.097	1589.282

1	2	3	4	5	6
Commerce Division	30.000	30.000	30.000	2.000	32.000
Science & Tech. Div.	0.400	—	1.300	—	1.300
Finance Division	20.000	20.000	20.000	—	20.000
Planning Division	4.200	0.660	4.000	—	4.000
Kashmir Affairs Div.	22.078	21.732	—	—	34.980
State and Frontier Region Division	17.590	17.590	—	—	14.777
Interior Division	1.000	1.000	1.000	—	1.000
Grand Total ..	1336.544	1346.717			1697.339

(a) Excludes provision made for subsidy on installation of tubewells (including Tubewells on Cooperative Basis) and for minor irrigation schemes which have been reflected under the Water Resources Sector. The relevant provisions are:—

(i) 1976-77: Baluchistan Rs. 5.250 million, NWFP Rs. 2.367 million, Sind Rs. 4.000 million and Punjab Rs. 60.689 million.

(ii) 1977-78 : Baluchistan Rs. 6.238 million, NWFP Rs. 4.090 million, Sind Rs. 7.700 million and Punjab Rs. 31.950 million.

(b) Includes provision for schemes relating to Agril. Education shown under Education and Training Sector in the Provincial Governments ADP documents. These provisions are:—

(i) 1976-77 : Sind Rs. 5.153 million and Punjab Rs. 3.150 million.

(ii) 1977-78 : Sind Rs. 5.153 million.

(c) Includes Rs. 46.900 million shown under PWP/IRDP.

(d) Excludes Rs. 0.048 million for Flood Rehabilitation Work in Punjab both during 1976-77 and 1977-78, reflected under Water Resources Sector.

(e) Excludes Rs. 0.500 million for Gwader Fish Harbour, reflected under Water Resources Sector.

ANNUAL DEVELOPMENT PROGRAMME, 1977-78 AGRICULTURE
SUMMARY—ALL PROVINCIAL PROGRAMMES

Sub-sector/Category	1976-77		1977-78		
	ADP	Revised Estimates	On-going	New	Total
—million rupees—					
I. Crop Production Sub-sectors					
1. Fertilizers	1.588	0.816	1.620	0.800	2.420
2. Improved Seeds	61.897	32.645	76.489	5.393	81.882
3. Plant Protection	142.288	141.799	134.251	70.300	204.551
4. Soil Surveys	1.017	0.566	1.050	—	1.050
5. Mechanization	47.685	45.191	53.208	1.550	54.758(a)
6. Soil Conservation	3.995	1.130	3.515	0.120	3.635
II. Infra Structure and Institutional Arrangements					
7. Agril. Marketing	0.600	—	—	—	—
8. Cooperatives	15.095(a)	4.056	3.561	0.336	3.937(b)
9. Govt. Foodgrain Storages ..	54.200	71.985	7.368	27.113	34.481
10. Research on Crop Production ..	26.742	16.920	21.986	3.745	25.731
11. Agril. Education	12.915(b)	7.614	15.287	2.000	17.287(b)
12. Agril. Extension	17.759	7.514	13.118	1.350	14.468
13. IRDP	44.500	18.965	31.870	6.330	38.200(c)
14. Agril. Economics and Statistics ..	2.293	0.536	1.000	—	1.000
15. Consolidation of Agril. Land holdings	8.200	9.200	—	0.100	0.100
III. Other Sub-sectors					
16. Animal Husbandry	61.803	41.942	100.990	5.381	106.371
17. Range Management	3.004	2.585	3.027	—	3.027
18. Forestry	43.046(d)	33.807	42.569	7.064	49.633(d)
19. Watershed Management	3.016	5.386	8.117	—	8.117
20. Fisheries	14.285(e)	8.535	11.355	1.075	12.430
Total	565.928	451.192	530.381	132.697	663.078

- (a) Excludes provision made for subsidy on installation of tubewells (Including Tubewells on Co-operative basis) and for minor irrigation schemes which have been reflected under the Water Resources Sector. The relevant provisions are :—
- (i) 1976-77 Baluchistan Rs. 5 250 million; NWFP Rs. 2.367 million; Sind Rs. 4.000 million; and Punjab Rs. 60.689 million.
 - (ii) 1977-78 Baluchistan Rs. 6.238 million; NWFP Rs. 4.090 million; Sind Rs. 7.7000 million; and Punjab Rs. 31.950 million.
- (b) Includes provision for schemes relating to Agricultural Education shown under Education and Training Sector in the Provincial Govts. ADP documents. These provisions are :
- (i) 1976-77 Sind Rs. 5.153 million and Punjab Rs. 3.150 million.
 - (ii) 1977-78 Sind Rs. 5.153 million.
- (c) Includes Rs. 38.200 million shown under PWP/IRDP.
- (d) Excludes Rs. 0.048 million for Flood Rehabilitation Works in Punjab both during 1976-77 and 1977-78, reflected under Water Resources Sector.
- (e) Excludes Rs. 0.500 million for Gwadar Fish Harbour, reflected under Water Resources Sector.

**ANNUAL DEVELOPMENT PROGRAMME 1977-78, AGRICULTURE
SUMMARY—BALUCHISTAN**

Sub-sector/Category	1976-77		ADP 1977-78		
	ADP	Revised Estimate	On-going	New	Total
—million rupees—					
I. Crop Production Sub-sectors					
1. Fertilizers	0.260	0.260	—	—	—
2. Improved seeds	7.000	3.553	9.541	0.460	10.001
3. Plant Protection	2.025	2.025	—	6.000	6.000
4. Soil Surveys	—	—	—	—	—
5. Mechanization	2.900(a)	8.578	2.292	—	2.292(b)
6. Soil Conservation	0.857	0.469	0.315	0.120	0.435
II. Infra-Structure and Institutional Arrangements					
7. Agri. Marketing	—	—	—	—	—
8. Cooperatives	1.750	0.583	0.583	—	0.583
9. Govt. Foodgrains Storages ..	1.500	5.200	3.631	0.026	3.657
10. Research on Crop Production ..	1.801	1.801	—	—	—
11. Agriculture Education	—	—	—	—	—
12. Agricultural Extension	—	—	—	—	—
13. IRDP	5.500(c)	1.800	1.500	3.700	5.200(d)
14. Agricultural Economics and Statistics	0.394	—	—	—	—
15. Consolidation of Agriculture Land holdings	—	—	—	—	—
III. Other Sub-sectors					
16. Animal Husbandry	5.335	5.226	6.316	—	6.316
17. Range Management	0.012	—	—	—	—
18. Forestry	4.226	1.749	1.494	0.100	1.594
19. Watershed Management	—	—	—	—	—
20. Fisheries	0.783(e)	0.283	0.702	—	0.702
Total	34.343	31.527	26.374	10.406	36.780

(a) Excludes Rs. 5.25 million for 2 schemes relating to distribution of diesel engines and persian wheels, reflected under Water Resources Sector.

- (b) Excludes Rs. 6.238 million for 2 schemes relating to on Farm Water Management and purchase and distribution of diesel engines reflected under Water Resources Sector.
- (c) Includes Rs. 5.50 million shown under PWP/IRDP.
- (d) Includes Rs. 5.200 million shown under PWP/IRDP.
- (e) Excludes Rs. 0.500 million for the Gwadar Fish Harbour reflected under the Water Resources Sector.

ANNUAL DEVELOPMENT PROGRAMME 1977-78, AGRICULTURE

SUMMARY—NWFP

Sub-sector/Category	1976-77		1977-78		
	ADP	Revised Estimates	On-going	New	Total
million rupees					
I. Crop Production Sub-sector					
1. Fertilizers	0.328	0.328	0.120	—	0.120
2. Improved Seeds	3.984	0.959	0.415	2.417	2.832
3. Plant Protection	11.643	11.300	17.000	—	17.000
4. Soil Surveys	—	—	—	—	—
5. Mechanizations	5.410(a)	5.690	0.820	—	0.820(b)
6. Soil Conservation	0.400	0.400	—	—	—
II. Infra-Structure and Institutional Arrangements.					
7. Agri. Marketing	—	—	—	—	—
8. Cooperatives	2.998	2.987	0.654	0.220	0.854(c)
9. Govt. Foodgrain Storages	5.000(d)	1.840	0.324	0.500	0.824
10. Research on Crop Production	6.816	6.180	4.740	0.100	4.840
11. Agri. Education	0.192	0.278	0.250	2.000	2.250
12. Agri. Extension	0.905	0.792	1.100	—	1.100
13. I.R.D.P.	15.000(e)	—	17.370	2.630	20.000(e)
14. Agriculture Economics and Statistics	—	—	—	—	—
15. Consolidation of Agricultural land Holdings	0.700	0.700	—	0.100	0.100
III. Other Sub-sectors					
16. Animal Husbandry	7.768	3.122	4.718	4.181	8.899
17. Range Management	0.492	0.157	0.257	—	0.257
18. Forestry	9.834	7.976	7.647	2.464	10.111
19. Watershed Management	2.000	4.370	6.065	—	6.065
20. Fisheries	0.402	0.463	0.763	1.075	1.838
Total	73.872	47.542	62.243	15.667	77.910

- (a) Excludes Rs. 2.092 million for 3 schemes relating to subsidy on installation of tubewells reflected under the Water Resources Sector.
- (b) Excludes Rs. 3.450 million relating to schemes of Water Resources Section.
- (c) Excludes Rs. 0.640 million for scheme "Subsidizing installation of tubewells/centrifugal pumps on cooperative basis reflected under the Water Resources Sector.
- (d) In addition, Rs. 6 million were provided through supplementary grant.
- (e) Includes Rs. 15 million during 1976-77 and Rs. 20.000 million during 1977-78 shown under Rural Development under Local Government.

ANNUAL DEVELOPMENT PROGRAMME, 1977-78, AGRICULTURE
SUMMARY—SIND

Sub-sector/Category	1976-77		ADP for 1977-78		
	ADP	Revised	On-going	New	Total
—million rupees—					
I. Crop Production Sub-sectors					
1. Fertilizer	—	—	—	—	—
2. Improved Seed	8.000	0.428	8.500	—	8.500
3. Plant Protection	16.500	19.000	33.000	—	33.000
4. Soil Surveys	—	—	—	—	—
5. Mechanization	18.000 (a)	2.000	29.803	—	29.803(b)
6. Soil Conservation	—	—	—	—	—
II. Infra-Structure and Institutional Arrangement					
7. Agril. Marketing	—	—	—	—	—
8. Cooperatives	0.200	—	—	—	—
9. Govt. Foodgrain Storages ..	7.700(c)	7.700	—	—	—
10. Research on Crop Production ..	5.500	2.214	7.000	0.400	7.400
11. Agril. Education	6.753(d)	4.346	6.653	—	6.653(d)
12. Agril. Extension	—	—	—	0.500	0.500
13. IRDP	14.000(e)	11.080	5.400	—	5.400(e)
14. Agril. Economics and Statistics ..	0.700	0.430	0.800	—	0.800
15. Consolidation of Agri. Land Holdings	—	—	—	—	—
III. Other Sub-sectors					
16. Animal Husbandry	5.400	3.515	4.850	1.200	6.050
17. Range Management	0.500	0.428	0.606	—	0.606
18. Watershed Management	—	—	—	—	—
19. Fisheries	1.100	0.075	2.190	—	2.190
20. Forestry	5.700	4.867	5.553	—	5.553
Total ..	90.053	56.083	104.355	2.100	106.455

- (a) Excludes Rs. 3.000 million and Rs. 1.000 million for installation of 2,000 tubewells under subsidised scheme and for on farm water management project, reflected under Water Resources Sector.
- (b) Excludes provision of Rs. 0.500 million for installation of 2,000 tubewells under subsidised scheme and Rs. 7.200 million for On-farm water management project, reflected under Water Resources Sector.
- (c) In addition, Rs. 17.800 million provided through supplementary grant.
- (d) Includes Rs. 5.153 million both during 1976-77 and 1977-78 for Agricultural Education shown under Education and Training.
- (e) Includes Rs. 4.000 million during 1976-77 and Rs. 5.400 million during 1977-78 shown under Rural Development Department Programme.

ANNUAL DEVELOPMENT PROGRAMME, 1977-78. AGRICULTURE

SUMMARY—PUNJAB

Sub-Sector/Category	1976-77		1977-78		
	ADP	Revised estimates	On-going	New	Total
— Million rupees —					
I. Crop Production Sub-sectors :					
1. Fertilizers	1.000	0.228	1.500	0.800	2.300
2. Improved Seed	42.913	27.705	58.033	2.516	60.549
3. Plant Protection	112.120	109.474	84.251	64.300	148.551
4. Soil Surveys	1.017	0.566	1.050	—	1.050
5. Mechanization	21.375(a)	28.923	20.293	1.550	21.843(b)
6. Soil Conservation	2.738	0.261	3.200	—	3.200
II. Infra-Structure and Institutional Arrangements :					
7. Agricultural Marketing	0.600	—	—	—	—
8. Cooperatives	10.147	0.486	2.324	0.176	2.500
9. Govt. Foodgrain Storages	40.000(c)	57.245	3.413	26.587	30.000
10. Research on Crop Production	12.625	6.725	10.246	3.245	13.491
11. Agricultural Education	5.970	2.990	8.384	—	8.384
12. Agricultural Extension	16.854	6.722	12.018	0.850	12.868
13. I.R.D.P.	10.000(d)	6.085	7.600	—	7.600(e)
14. Agricultural Economics and Statistics	1.199	0.106	0.200	—	0.200
15. Consolidation of Agri. land Holdings	7.500	8.500	—	—	—
III. Other Sub-sectors :					
16. Animal Husbandry	43.300	30.079	85.106	—	85.106
17. Range Management	2.000	2.000	2.164	—	2.164
18. Forestry	23.286(f)	19.215	27.875	4.500	32.375
19. Watershed Management	1.016	1.016	2.052	—	2.052
20. Fisheries	12.000	7.714	7.700	—	7.700
Total	367.600	316.900	337.409	104.524	441.933

(a) Excludes Rs. 60.689 million for subsidy on installation of tubewells and minor irrigation schemes reflected under Water Resources Sector.

(b) Excludes Rs. 31.95 million for schemes of Water Resources Sector.

(c) In addition, Rs. 36.100 million were provided through supplementary grant.

(d) Includes Rs. 10.000 million shown under PWP.

(e) Includes Rs. 7.600 million shown under PWP.

(f) Excludes Rs. 9.048 million both during 1976-77 and 1977-78 for the scheme for Flood restoration work reflected under Water Resources Sector.

ANNUAL DEVELOPMENT PROGRAMME 1977-78, AGRICULTURE
SUMMARY —FEDERAL PROGRAMMES

Sub-Sector/Category	1976-77		1977-78		Total
	ADP Allocation	Estimated utilisation	On-going	New	
— Million rupees—					
I. Crop Production Sub-sectors :					
1. Fertilizers	369.808	380.854	664.600	—	664.600
2. Improved Seeds	2.600	2.580	2.500	—	2.500
3. Plant Protection	184.500	234.475	96.116	2.200	98.316
4. Soil Surveys	1.200	1.200	1.600	—	1.600
5. Mechanization	—	—	—	—	—
6. Soil Conservation	—	—	—	—	—
II. Infra-Structure and Institutional Arrangements :					
7. Agriculture Marketing	1.700	0.993	0.900	0.200	1.100
8. Cooperatives	—	—	—	—	—
9. Govt. Foodgrain Storages	67.300(a)	135.000	—	100.000	100.000
10. Research on Crop Production	27.450	27.450	35.350	0.500	35.850
11. Agricultural Education	—	—	—	—	—
12. Agricultural Extension	8.000	6.000	10.000	—	10.000
13. I.R.D.P.	7.500	11.699	6.300	2.400	8.700
14. Agricultural Economics and Statistics.	2.500	2.350	1.000	0.400	1.400
15. Consolidation of Agriculture Land Holdings	—	—	—	—	—
III. Other Sub-sectors :					
16. Animal Husbandry	0.600	1.200	1.300	0.700	2.000
17. Range Management	—	—	—	—	—
18. Forestry	—	—	—	—	—
19. Watershed Management	—	—	—	—	—
20. Fisheries .. .. .	.200	0.742	0.138	—	0.138
Total	675.958	804.543	819.804	106.400	926.204
1. Commerce Division	30.000	30.000	30.000	2.000	32.000
2. Science and Technology Div.	0.400	—	1.300	—	1.300
3. Finance Division	20.000	20.000	20.000	—	20.000
4. Planning and Development Division	44.200	0.660	4.000	—	4.000
5. Kashmir Affairs Division	22.078	21.732	—	—	34.980
6. States and Frontier Region Division.	17.590	17.590	—	—	14.777
7. Interior Division	1.000	1.000	1.000	—	1.000
GRAND TOTAL	770.626	895.325	819.804	106.400	1034.261

(a) Excludes Rs. 126.600 million as Supplementary grant

Appendix VIII

ESTIMATED CROP-WISE COVERAGE BY GROUND OPERATIONS IN VARIOUS PROVINCES OF PAKISTAN DURING 1976-77

Crops	Punjab		Sind		NWFP		Baluchistan		Total	
	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres
	— 000 acres —									
Cotton	608	2451	122	365	1	1	—	—	731	2817
Paddy	226	452	81	161	22	22	13.5	27	342.5	662
Sugarcane	148	445	57	113	39	78	—	—	244	636
Maize	127	255	—	—	20	20	0.5	0.5	147.5	275.5
Oilseeds	—	—	2	5	4	4	2	4	8	13
Orchards	—	—	8	17	21	41	20	40	49	98
Tobacco	—	—	—	—	39	78	0.5	2	39.5	80
Vegetables	35	105	19	38	19	38	20	48	93	229
Others	1210	1210	91	91	48	48	52	52	1401	1401
Total	2354	4918	380	790	213	330	108.5	173.5	2,654.5	6,211.5

TARGETS CROP-WISE COVERAGE OF AREA BY GROUND OPERATIONS IN VARIOUS PROVINCES OF PAKISTAN DURING
1977-78

Crops	Punjab		Sind		NWFP		Baluchistan		Total	
	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres
	—————000 acres—————									
Cotton	1004	4315	515	1655	3	3	—	—	1522	6073
Paddy	275	550	90	189	40	40	15.6	31	429.6	819
Sugarcane	159	477	77	154	50	100	—	—	286	731
Maize	125	250	25	25	37	75	0.5	0.5	187.5	350.5
Oilseeds	—	—	4	8	10	10	2.5	5	16.5	23
Orchards	—	—	19	38	20	40	22.5	45	61.5	123
Tobacco	—	—	—	—	40	80	0.5	2.3	40.3	82.3
Vegetable	40	120	22	45	20	40	23.8	57	105.8	262
Others	826	1226	37	37	87	87	73	73	1023	1423
Total	2429	7038	798	2160	307	475	138.4	213.8	3672.4	9886.8

Appendix X

ESTIMATED CROP-WISE COVERAGE BY AERIAL OPERATIONS IN VARIOUS PROVINCES OF PAKISTAN DURING 1976-77

Crops	Punjab		Sind		NWFP		Baluchistan		Total	
	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres
	—000acres—									
Cotton	445	1526	200	631	—	—	—	—	645	2157
Paddy	850	1665	400	796	26	26	30	30	1306	2517
Sugarcane	—	—	64	64	350	627	—	—	414	691
Maize	—	—	—	—	—	—	—	—	—	—
Oilseeds	—	—	—	—	—	—	—	—	—	—
Orchards	—	—	—	—	25	25	8	24	33	49
Tobacco	—	—	—	—	43	43	—	—	43	43
Others	—	—	—	—	10	10	—	—	10	10
Total	1295	3191	664	1491	454	731	38	54	2,451	5467

TARGETS OF GROUP-WISE COVERAGE BY AERIAL OPERATION IN VARIOUS PROVINCES OF PAKISTAN DURING 1977-78

Crop	Punjab		Sind		NWFP		Baluchistan		Total	
	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres	Actual acres	Spray acres
	— 000 acres —									
Cotton	200	800	150	600	—	—	—	—	350	1,400
Paddy	600	1,200	300	600	50	50	100	200	1,050	2,050
Sugarcane	—	—	90	270	215	430	—	—	305	700
Mulberry	—	—	—	—	135	135	—	—	135	135
Oilseeds	—	—	—	—	75	150	50	100	125	250
Orchards	—	—	—	—	60	120	15	45	75	165
Tobacco	—	—	—	—	50	100	—	—	50	100
Total	800	2,000	540	1,470	585	985	165	345	2,540	4,800

CHAPTER 5—WATER RECOURCES DEVELOPMENT

(229—230)

ANNUAL DEVELOPMENT PROGRAMME 1976-77

(Million Rupees)

Executing Agency	Allocation	Revised Estimate	Percentage allocation
A. Provincial Government :			
a. Baluchistan	70.10	115.03	164
b. N.W.F.P.	63.11	79.26	126
c. Sind	99.80	290.24	291
d. Punjab	337.74	279.33	83
B. Federal Government :			
a. W.A.P.D.A.	1043.20	1034.37	99
b. Central Government Agencies/Divisions	53.85	54.03	100
c. Tarbela. I.B.P.	530.50	645.56	122
Total ..	2198.38	2497.82	114

ANNUAL DEVELOPMENT PROGRAMME 1977-78

(Rs. in Million)

Sponsoring Agency	Revised Estimates 1976-77	Allocation 1977-1978	Percentage Increase(+) / decrease(-)
Federal Government :			
(a) WAPDA	1034.37	948.40	-8.3
(b) Federal Flood Commission	—	170.00	—
(c) Other Divisions	54.03	50.95	-5.7
	<u>1088.40</u>	<u>1169.35</u>	<u>+7.4</u>
(d) Indus Basin/Tarbela	645.56	350.00	-54.8
	<u>1733.96</u>	<u>1519.35</u>	<u>-12.4</u>
Provincial Governments :			
A. Baluchistan :			
(a) Irrigation and Power Department	113.71	72.71	-36.1
(b) WAPDA	—	—	—
(c) Agriculture Department	1.32	6.24	+372.7
	<u>115.08</u>	<u>78.95</u>	<u>-31.4</u>
Total (Baluchistan) ..			
B. N.W.F.P.			
(a) Irrigation and Power Department	66.68	33.49	-49.8
(b) W.A.P.D.A.	10.76	23.00	+133.8
(c) Agriculture Department	1.82	4.45	+144.5
	<u>79.26</u>	<u>60.94</u>	<u>-23.1</u>
Total (N.W.F.P.) ..			
C. Sind :			
(a) Irrigation and Power Department	288.24	123.10	-54.9
(b) W.A.P.D.A.	—	—	—
(c) Agriculture Department	2.00	7.70	+285.0
	<u>290.24</u>	<u>137.80</u>	<u>-52.5</u>
Total (Sind) ..			
D. Punjab :			
(a) Irrigation and Power Department	226.72	116.30	-48.7
(b) W.A.P.D.A.	9.70	12.50	+28.9
(c) Agriculture Department	42.91	32.00	-25.4
	<u>279.33</u>	<u>160.80</u>	<u>-42.4</u>
Total (Punjab) ..			
GRAND TOTAL ..	2497.82	1957.48	-21.6

**ANNUAL DEVELOPMENT PROGRAMME 1977-78
FEDERAL GOVERNMENT**

(Millien Rs.)

Sponsoring Agency/Department	A.D.P. Allocation 1976-77	Revised Estimated 1976-77	Allocation for 1977-78	% age increase decrease +—
1. Aviation Division :				
Pakistan Meteorological Department	14.00	9.03	18.00	+50
2. Science and Technology Division :				
(a) IDFCR Council	5.70	5.28	5.00	-5
(b) Survey of Pakistan	0.6	0.6	1.01	-68
3. Water and Power Division :				
(a) W.A.P.D.A	1,043.20	1,044.37	948.40	-8
(b) Indus Basin/Tarbela Works	530.50	645.56	350.00	-46
4. Federal Flood Commission	—	—	170.00	—
5. Kashmir Affairs Division :				
(a) Azad Kashmir	0.11	0.11	0.10	-9
(b) Northern Areas	4.58	4.09	3.40	-17
6. States and Frontier Regions Division				
FATA Development Corporation	28.87	34.92	23.44	-32
Total	1,627.55	1,733.96	1,519.35	-12

DISTRIBUTION OF EXPENDITURE FOR 1976-77 AND ALLOCATION FOR 1977-78 SUB-SECTOR AND AGENCY-WISE

Sub-Sector	Federal		Punjab		Sind		N.W.F.P.		Baluchistan		Tottal		% increase (+) / decrease (-)
	Revised Estimate for 1976-77	A.D.P. 1977-78	Revised Estimate for 1976-77	A.D.P. 1977-78	Revised Estimate for 1976-77	A.D.P. 1977-78	Revised Estimate for 1976-77	A.D.P. 1977-78	Revised Estimate for 1976-77	A.D.P. 1977-78	Revised Estimate for 1976-77	A.D.P. 1977-78	
1. Survey and Investigation ..	44.00	49.60	10.78	15.50	7.90	10.93	1.60	1.65	40.30	44.06	104.58	121.74	+16.4
2. Irrigation ..	267.22	176.94	69.46	55.90	56.24	47.58	53.77	47.60	36.35	22.66	483.04	350.80	-27.4
3. Drainage and Reclamation ..	738.67	728.00	14.01	12.89	1.36	2.39	1.49	1.90	—	—	755.53	745.18	-1.4
4. Flood Regulation/Restoration ..	—	170.00	136.26	46.35	223.74	69.70	22.40	8.45	20.60	0.80	430.00	295.28	-31.3
5. Research and Water Management ..	20.88	25.8	2.84	10.00	1.00	7.20	—	1.00	—	5.63	32.72	49.63	+51.7
6. Miscellaneous ..	9.63	19.01	18.98	20.16	—	—	—	—	17.78	5.80	46.39	44.97	-3.1
Total ..	1088.40	1169.35	279.33	160.80	290.24	137.80	79.26	60.58	115.03	78.95	1852.26	1607.48	-13.8
7. Indus Basin/Tarbela ..	645.56	350.00	—	—	—	—	—	—	—	—	645.56	350.00	-45.8
GRAND TOTAL ..	1733.96	1519.35	279.33	160.80	290.24	137.80	79.26	60.58	115.03	78.95	2497.82	1957.48	-21.6

ACCELERATED PROGRAMME OF WATER LOGGING AND SALINITY CONTROL 1977-78

Sl. No.	Name and Status of the Scheme	Estimated Cost	Estimated Expenditure upto 1976-77	Revised Estimate for 1976-77	Provision for 1977-78	% increase (+)/ decrease (-)
1	2	3	4	5	6	7
A. Baluchistan :						
(a) Ongoing Scheme :						
1.	Hairdin Drainage Project (A) ..	32.09	21.500	15.00	15.000	—
	Total (Baluchistan)	—	21.500	15.00	15.000	—
B. N.W.F.P.						
(a) Ongoing Scheme :						
2.	Antiwater Logging Peshawar (N.A.) ..	—	9.430	6.0	5.000	-16.7
3.	Kafur Dheri	41.000	33.400	15.2	7.000	-53.9
4.	Pabbi Pilot Project Phase-II (A) ..	16.110	36.100	17.8	10.000	-43.8
5.	Jui Sheikh Unit (A)	28.360	35.200	24.2	7.000	+71.1
6.	Warsak Unit (NA)	—	2.000	2.00	5.000	+150.0
7.	Mardan SCARP (A)	99.100	15.260	12.9	25.000	+93.8
8.	Bannu SCARP (NA)	93.800	6.890	6.00	10.000	+66.7
9.	SCARP D. I. Khan (NA)	—	0.100	0.10	4.000	—
(b) New Schemes :						
10.	Project Planning of various SCARPS ..	—	17.290	7.00	7.000	—
	Total (N.W.F.P.)	—	155.670	91.2	80.000	-12.3
C. Sind :						
(a) Ongoing Scheme.						
11.	SCARP Rohri North (A)	500.072	771.135	38.8	30.000	-21.1
12.	Sukkur Right Bank (NA)	170.696	53.304	26.773	20.000	-25.3
13.	Left Bank Out fall Drain (A)	111.610	125.700	42.70	50.000	+17.1
14.	Larkana Shikarpur Stage-II (A)	130.980	139.088	40.0	30.000	-25.0
15.	Kotri Surface Drain (NA)	—	32.300	32.30	28.500	-11.8
16.	Khairpur Tile Drain	330.476	10.000	10.0	42.800	+328.0
17.	North Dadu	321.134	20.00	20.0	30.000	+50.0
18.	Khandkot T/Wells	9.890	10.000	10.0	2.000	-80.0
19.	Rohri South T/Wells (A)	708.106	30.000	30.0	20.000	-33.0
20.	Ghotki (F.G.W.)	426.820	50.000	50.0	25.000	-50.0
21.	SCARP Jaccobabad	—	—	—	10.000	—
	Total (On-going Schemes)	—	1,241.527	299.773	288.300	-3.8

1	2	3	4	5	6	7
(b) New Schemes :						
22.	Project Planning of various SCARPS in Sind	—	24.971	3.8	4.000	—5.3
	Total (Sind)		1,266.498	303.773	292.300	— 3.7
D. Punjab :						
(a) On-going Schemes :						
23.	SCARP-II (Chaj Doab) (A)	743.326	820.752	81.7	60.000	—26.6
24.	SCARP-III (Lower Thal) (A)	407.153	435.495	15.8	8.000	—49.4
25.	SCARP-IV (Upper Rachna) (A)	310.980	0.300	0.3	—	—
26.	Pilot Project Shorkot-Kamalia (A)	35.152	57.002	21.5	2.000	—90.7
27.	SCARP Panjnad Abbasia Unit-I (A)	194.500	109.017	65.0	49.000	—24.6
28.	SCARP Shahpur (A)	125.419	72.212	34.7	21.000	—39.5
29.	SCARP Fordwah (A)	60.953	21.368	21.2	20.000	— 5.7
30.	Pilot Project Satiana	28.097	24.47	19.0	7.000	—63.2
31.	Pharang Drain (A)	56.400	26.128	10.0	15.000	+50.0
32.	Replacement of Damaged and deteriorated Tube-wells (NA)	400.000	61.000	40.0	53.000	+32.5
33.	Anti-water logging measures along Chashma Jehlum Link	—	19.700	19.7	43.700	+121.8
	Total (On-going Schemes)		1,657.444	328.9	293.700	—10.7
(b) New Schemes :						
34.	Panjnad Abbasia Unit-II (NA)	—	—	—	10.000	—
35.	D.G. Khan Jampur Pilot Project (NA)	195.400	—	—	10.000	—
36.	Bahawal Qaim Pilot Unit (NA)	454.000	—	—	5.000	—
37.	Sukh Bias (NA)	NA	—	—	2.000	—
	Total (New Schemes)		—	—	27.000	—
38.	(c) Project Planning of various SCARPS Punjab		—	—	20.000	—
	Total (Punjab)		1,657.444	328.9	340.700	+3.6
	Total Accelerated Programme	—	3,101.112	738.673	728.000	— 1.4

ACHIEVEMENT UPTO 1976-77 AND TARGETS FOR 1977-78

	Achievements							Targets
	1970-71	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	for 1977-1978
1. Water Availability at Farmgate (MAF).								
(i) Canal withdrawals (2)	(87.36)	(86.7)	(100.9)	(96.1)	(86.4)	(98.9)	(97.2)	(107.42)
	55.9	55.5	64.6	61.5	55.3	63.3	62.2	68.75
(ii) Groundwater ..	20.8	22.8	24.6	26.7	28.6	30.0	32.2	34.49
Total	76.7	78.3	89.2	88.2	83.9	93.3	94.4	103.24
2. Tubewells (No.) :								
(i) Private Tubewell	7957	9865	8303	8444	8340	6000	7000	7000
(ii) SCARP Tubewell*	641	280	1948	114	520	415	1265	1280
(iii) Deptt. Tubewell ..	29	199	112	63	143	40	150	150
3. Length of Drains (Mcf)/(Miles) :								
				2137	413	319	381	238
				2522	399	316		
4. Area Protected against Water-logging and Salinity (MA) ..								
			upto 5.90	0.74	0.4	0.6	0.88	0.9
5. Tubewell Subsidy (3) Rs. million.								
Punjab			2014	2.54	27.0	12.00	24.40	26.0
Sind					6.93	3.0	3.0	12.0
N.W.F.P.					0.0	1.71	2.37	2.0
Baluchistan			2.54	3.37	2.92	4.42	5.25	2.4
Federal					0.0	21.13	35.02	—
6. Tarbela releases (MAF)								
7. Area benefited								
(i) Existing area			—	—	—	1.7	8.1	9.3
(ii) New Area (4)								

Note :— Figure in bracket indicate canal withdrawal at canal head.

* Excluding tubewells replacement.

RIM STATIONS INFLOWS OF WESTERN RIVERS

(Million Acres feet)

Year	Indus at Kalabagh (Above)			Jhelum Mangla (Above)			Chanab at Marala (Above)			Total		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1965-66	76.36	12.86	89.22	22.23	4.22	26.45	18.57	3.98	22.55	117.16	21.06	138.22
1966-67	77.40	13.91	91.31	17.59	5.52	23.11	21.48	4.35	25.93	116.47	23.78	140.25
1967-68	81.61	14.91	96.52	18.41	5.44	23.85	20.00	5.15	25.15	120.02	25.50	145.52
1968-69	78.71	14.40	93.11	16.40	5.21	21.61	20.37	3.50	23.87	115.48	23.11	130.59
1969-70	74.22	12.97	87.19	20.09	4.09	24.18	19.84	2.63	22.47	114.15	19.69	133.84
1970-71	60.75	10.13	70.88	12.32	3.02	15.34	16.52	2.73	19.25	89.59	15.88	105.47
1971-72	62.12	9.29	71.41	10.05	3.32	13.37	15.77	3.00	18.77	87.94	15.61	103.55
1972-73	66.96	12.61	79.57	17.80	7.20	25.00	16.76	4.77	21.53	101.52	24.58	126.10
1973-74	94.48	11.45	105.93	22.01	4.32	26.33	27.41	3.44	30.85	143.90	19.21	163.11
1974-75	52.32	9.07	61.39	12.74	3.56	16.30	14.40	3.84	18.24	79.46	16.47	95.93
1975-76	98.98	13.99	72.971	20.29	5.09	25.38	27.75	5.08	32.83	107.02	24.16	131.1811
1976-77	73.91	18.13	92.04	20.55	3.95	24.50	25.48	3.81	29.29	119.94	25.89	145.832

¹Includes 1.7 MAF as Tarbela releases.²Includes 8.11 MAF as Tarbela releases (7.45 MAF in Rabi and 0.66 MAF in Kharif).

OVERALL WATER AVAILABILITY AT FARMGATES

(Million Acre Ft.)

Year	Surface Water		Groundwater		Total Water Availability	
	At Canal Heads	At farm-gates	Public T/wells	Private T/wells		
1965-66	Kharif	65.08	41.65	1.24	4.140	47.03
	Rabi	26.17	16.75	1.23	4.140	22.12
	Total	91.25	58.40	2.47	8.280	69.15
1966-67	Kharif	66.37	42.47	0.865	5.135	48.47
	Rabi	29.59	18.95	0.865	5.135	24.94
	Total	95.96	61.41	1.730	10.270	73.41
1967-68	Kharif	61.72	39.50	0.985	6.080	46.57
	Rabi	32.98	21.11	0.975	6.080	28.17
	Total	94.70	60.61	1.970	12.160	74.74
1968-69	Kharif	66.73	42.71	1.41	6.850	50.97
	Rabi	31.58	20.21	1.41	6.850	28.47
	Total	98.31	62.92	2.82	13.700	79.44
1969-70	Kharif	69.19	44.28	1.77	7.515	53.57
	Rabi	30.66	19.62	1.77	7.515	28.90
	Total	99.85	63.90	3.54	10.030	82.47
1970-71	Kharif	60.83	38.93	2.165	8.235	49.33
	Rabi	26.53	16.98	2.165	8.235	27.38
	Total	87.36	55.91	4.330	16.470	76.71
1971-72	Kharif	60.60	38.78	2.240	9.135	50.16
	Rabi	26.05	16.67	2.240	9.135	28.04
	Total	86.65	55.45	3.380	18.270	78.20
1972-73	Kharif	68.76	43.95	2.405	9.880	56.24
	Rabi	32.23	20.63	2.405	9.880	32.91
	Total	100.90	64.58	4.810	19.760	89.15
1973-74	Kharif	63.42	40.59	2.70	10.650	53.94
	Rabi	32.65	20.89	2.70	10.650	34.24
	Total	96.07	61.48	5.40	21.300	88.18
1974-75	Kharif	62.84	40.22	2.905	11.405	54.53
	Rabi	23.59	15.09	2.905	11.405	29.40
	Total	86.43	55.31	5.81	22.810	83.93
1975-76	Kharif	62.91	40.26	3.05	11.95	55.26
	Rabi	36.00	23.04	3.04	11.95	38.03
	Total	98.91	63.30	6.09	23.90	93.29
1976-77	Kharif	58.40	37.38	3.53	12.59	53.50
	Rabi	38.80	24.83	3.53	12.58	40.94
	Total	97.20	62.21	7.06	25.17	94.44

Water Losses :

(i) From canal head to outlet = 25% of canal head

(ii) From outlet to farmgate = 11% of canal head

Total = 36% of canal head

Annexure IX

WATER AVAILABILITY 1976-77

(MAF)

Source	At Canal Head			At Farmgate		
	Kharif	Rabi	Total	Kharif	Rabi	Total
Surface Water	58.40	38.80	97.20	37.38	24.83	62.21
Groundwater :						
1. Private tubewells	—	—	—	12.59	12.58	25.17
2. Public tubewells	—	—	—	3.53	3.53	7.06
Sub-Total ..	—	—	—	16.12	16.11	32.23
GRAND TOTAL ..	58.40	38.80	97.20	53.50	40.94	94.44

Annexure X

EXPECTED WATER AVAILABILITY DURING 1977-78

(MAF)

Source	At canal head			At farm Gate		
	Kharif	Rabi	Total	Kharif	Rabi	Total
Surface Water :						
1. Canal Withdrawals (Bench-mark) ..	65.5	32.5	98.0	41.92	20.80	62.72
2. Tarbela	—	9.3	9.3	—	5.95	5.95
3. Canal Remodelling	—	—	—	—	—	—
4. Small Irrigation Scheme	0.08	0.04	0.12	0.05	0.03	0.08
5. Hub and Khanpur Dam	—	—	—	—	—	—
6. Chashma	—	—	—	—	—	—
Sub-Total ..	65.58	41.84	107.42	41.97	26.78	68.75
Groud Water :						
1. Private Tubewells	—	—	—	13.22	13.22	26.44
2. SCARP Tubewells	—	—	—	3.78	3.77	7.55
3. Other than SCARP	—	—	—	0.25	0.25	0.50
Sub-total ..	—	—	—	17.25	17.24	34.49
Grand Total ..	65.58	41.84	107.42	59.22	44.02	103.24

RIVER INFLOW AT RIM STATIONS DURING 1975-76 AND 1976-77

Month	(MAF)								
	Indus at Kalabagh		Jhelum above Mangla		Chenab above Marala		Total		
	1975-1976	1976-1977	1975-1976	1976-1977	1975-1976	1976-1977	1975-1976	1976-1977	
Kharif									
April	3.18	4.63	2.41	2.62	1.72	1.80	7.31	9.05	
May	5.70	8.18	3.80	3.56	2.65	2.60	12.15	14.34	
June	11.64	11.10	3.76	3.33	4.15	3.35	19.55	17.78	
July	12.69	21.82	2.79	3.68	7.42	5.80	23.90	31.30	
August	16.89	18.99	3.93	5.31	7.74	8.63	28.56	32.93	
September	8.88	9.19	2.60	2.05	4.07	3.30	15.55	14.54	
Sub total (Kharif)	58.98	73.91	20.29	20.55	27.75	25.48	107.02	119.94	
Rabi									
October	3.40	3.24	0.78	0.92	1.30	1.06	5.48	5.22	
November	2.04	3.17	0.44	0.54	0.56	0.49	3.04	3.20	
December	1.49	2.65	0.37	0.40	0.38	0.37	2.24	3.42	
January	2.08	1.77	0.49	0.50	0.48	0.83	3.05	3.10	
February	2.04	2.99	1.19	0.59	1.01	0.51	4.24	4.09	
March	2.94	4.31	1.82	1.00	1.35	0.55	6.11	5.86	
Sub-total (Rabi)	13.99	18.13*	5.09	3.95	5.08	3.81	24.16*	25.89*	
Total	72.97	92.04	25.38	24.50	32.83	29.29	131.18	145.83	

*Including Tarbela release, as 1.7 MAF during Rabi 1975-76 and 7.45 MAF during Rabi 1976-77.

Annexure XII

RELEASES FROM TARBELA RESERVOIR, RABI 1976-77

Month	(000 AF)							
	Releases							
October	482
November	1,444
December	865
January	377
February	1,739
March	2,550
								7,457

Note :—Total releases during 1976-77 were 8.114 MAF including 0.657 MAF release during April, 1977.

Annexure XIII

RIVER INFLOW DURING RABI 1975-76 AND 1976-77 AT RIM STATIONS

(MAF)

Months	Indus at * Kala- bagh		Jhelum at Mangla		Chanab at Marala		Total	
	1975-76	1976-77	1975-76	1976-77	1975-76	1976-77	1975-76	1976-77
	October	3.30	2.76	0.78	0.92	1.30	1.08	5.38	4.74
November	1.83	1.73	0.44	0.54	0.56	0.49	2.83	2.76
December	1.49	1.79	0.37	0.40	0.38	0.37	2.24	2.56
January	1.70	1.39	0.49	0.50	0.48	0.83	2.67	2.72
February	1.68	1.25	1.19	0.59	1.01	0.51	3.88	2.35
March	2.29	1.76	1.82	1.00	1.35	0.55	5.46	3.31
Total	12.29	10.68	5.09	3.95	5.08	3.81	22.46	18.44

* Less Tarbela releases.

Annexure XIV

ACHIEVEMENTS FOR IRRIGATION DURING 1976-77

Province	New Chan- nels (miles)	Channels Remodelled (miles)	Structures Remodelled (No.)	New Struc- tures (No.)	Area bene- fited (acres)
Punjab	31.75	146.6	—	62	12,61,500
Sind	76.60	41.0	10	28	28,738
N.W.F.P.	75.0	37.0	—	57	41,424
Baluchistan	—	0.5	—	2	20,140
Total	183.35	225.1	10	149	13,51,802

PHYSICAL TARGETS AND ACHIEVEMENTS, 1976-77 AND 1977-78

PUNJAB

Sr. No.	Sub-sector	Achievements 1976-77	Targets 1977-78	Remarks
1. Survey and Investigation				
(a)	Rec. Survey (Sq. miles)	52.54	140.0	
(b)	Topo Survey (Sq. miles)	—	200	
(c)	Detailed Investigation surface water. (Sq. miles).	400	60	
	Groundwater. (Sq. miles)	—	—	
	Test Holes (No.)	—	—	
2. Irrigation				
(a)	New canals (Miles)	—	—	
(b)	Ext. of canals (Miles)	31.25	29.5	
(c)	Remod. of canals (Miles)	146.60	450	
(a)	New structures (No.)	62	294	
(e)	Accomm. Res. and Off. (No.)	244	182	
(f)	Small Dams (E/Work Mcf.)	5.76	0.72	
(g)	Area Benefited (Acres) :			
	New	31,500	2,000	
	Existing	12,30,000	36,000	
3. Drainage and Reclamation				
(a)	Ext. and Remod. of open drains. (length miles).	125.00	193.50	
(b)	Area protected (Acres)	19,000	1,00,000	
4. Flood Protection				
(a)	Ext. of bunds (Mcf.)	69.10	118	
(b)	Stone Pitching (Mcf.)	1.14	—	
(c)	Strengthening Restoration (Mcf.)	698.5	650	
(d)	Structures (No.)	—	—	
5. Water Management Research & Misc				
(a)	Total length of water courses to be improved (Miles)	6	70	
(b)	Precision land levelling (Acres)	629	18,000	

TARGETS AND ACHIEVEMENTS FOR 1976-77 AND 1977-78

SIND

Works	Unit	Targets for 1976-77	Achievements up to 1976-77	Targets for 1977-78
1. Survey and Investigation :				
A. Survey :				
(a) Reconnaissance Survey	Sq. mile.	400	40	80
(b) Topographic Survey	Sq. mile.			
B. Investigation :				
Surface Water Development Schemes	Nos.	5	20% (Project planning of canals re-modelling)	40
2. Irrigation :				
(a) Extension of Canals	Mile/MCF	40.00	78.60	75.71
		35.00	58.47	42.09
(b) Remodelling of Canals	Mile/ MCF	50.00	41.00	43.80
		30.00	9.36	—
(c) Remodelling of structure	No.	5	10	8
(d) New Structure	No.	8	28	40
(e) Residential accommodation	No.	—	51	67
(f) Public Tubewells	No.	—	—	—
(g) Pumping Stations	No.	—	2	2
(h) Cropped Area Benefited	Acres	10,000	28,738	—
3. Drainage and Reclamation :				
Extension and Remodelling of open drains	Mile	2	1.5	—
4. Flood Protection :				
(a) Strengthening/Restoration of flood embankment	Mcf.	30	288.50	151.21
(b) Stone pitching	Mcf.	—	5.01	2.04
(c) Sand coring	Mcf.	—	5.84	4.99
5. Water Management :				
(a) Improvement of watercourses	No.	12	12	24
(b) Precision Land Levelling	Acre	1,000	1,000	2,000

ACHIEVEMENTS DURING 1976-77 AND TARGETS FOR 1977-78 (N.W.F.P.)

Sl. No.	Name of Sub-Head	Targets for 1976-77	Achievements during 1976-77	Targets for 1977-78
1	2	3	4	5
1. Survey and Investigation :				
(a)	Reconnaissance Survey	196 Sq. Miles.	109 Sq. Miles.	} 4 Scheme in D.I. Khan.
(b)	Topographic Survey	29.0 "	78 Sq. Miles.	
(c)	Detailed Investigation (Dam Sites) ..	1 No.	25% (Dir Distt.)	
2. Irrigation :				
(a)	Extention of Canal	Length 75.90 Miles. EW 7.214 Mcft. MW. 1.252 "	75.00 Miles. 6.50 " 1.12 "	EW 2.461 Mcf. MW 0.217 " OW. 0.799 "
(b)	Remodelling of Canals	Length. 37.10 Miles. EW. 1.782 Mcf. MW. 0.105 "	37.00 Miles. 1.789 Mcf. 0.105 "	EW. 60.78 Mcf. MW. 1.9 Mcf. OW. 0.197 "
(c)	Enlargement of Canals	—	—	EW. 0.425 " MW. 0.168 "
(d)	Remodelling of Structures	—	—	EW. 11.650 " MW. 0.298 " OW. 0.092 "
(e)	New Structure	57 Nos.	57 Nos.	EW. 9.498 " MW. 1.14 "
(f)	Residential Accommodation	4 Nos.	4 Nos.	—
(g)	Metalled Roads	10,18,500 Sq. ft.	7 Miles.	EW. 4.588 " MW. 0.832 " OW. 4.189 "
(h)	Small Dams	EW. 0.2008 Mcft. MW. 1.1308 Mcft. G. I. Wire 0.0541 Mcft. 18 Tons.	—	EW. 0.062 " MW. 0.021 "
(i)	Area benefited (Cropped)	28820 Acres.	28820 Acres.	—
(j)	Total new area to be irrigated	13500 Acres.	12604 Acres.	[6543 Acres.
(k)	Total water to be made available	30,000	26,120 A.F.	19,219 A.F.
(l)	Areas to be improved by supplying additional water	7526	1339 Acres.	11400 Acres.
(m)	Additional water to be made available for the area at S. No. 3	14360	1960 A.F.	20800 A.F.
(n)	Areas under Civil Canals to be improved without supplying additional water	7900	7830 Acres.	7198 Acres.
(o)	Restoration of supplies to area under damaged tubewells	4800	4400 Acres.	3295 Acres.
(p)	Supplies restored to at Sr. No. 86	9600	8800 A.F.	6600 A.F.
3. Drainage and Reclamation :				
(a)	Extension and Remodelling and Open Drains	44.14 Miles.	Completed 100%	EW. 23.590 Mcf.
(b)	Area protected	25 Sq. Miles.	—	MW. 0.205 "
(c)	Area to be reclaimed through drainage	—	—	16,000 Acres.

1	2	3	4	5
4. Flood Protection :				
(a) Extension of Flood Embankment	...	Length. 2 Miles. EW. 0.840 Mcft.	} Completed.	EW. 8.294 Mcf. MW. 0.482 Mcft. OW. 21%
(b) Stone Pitching	Length. 2 Miles. EW. 0.6188 Mcft. MW. 0.0050		
(c) Strengthening/Restoration	-- --	0.37 Miles.		
(d) Structure	-- ...	-- --		
(e) Total No. of houses to be protected against floods	-- 60	60	--
(f) Land to be protected against floods	--	200	200 Acres.	32000 Acres.
5. Water Management :				
(a) Water Courses to be Improved	-- --	-- --	--	5 Nos.
(b) Precision land levelling	-- --	-- --	--	1325 Acres.
6. Groundwater Development :				
(a) Private Tubewells	-- --	-- --	--	--
(b) Non-Scarp Tubewells	..	-- 2 Nos.	Completed	2 Nos.
(c) Area to be given additional supplies	--	7500 Acres.	..	EW. 1.196 Mcf.
(d) New cropped area	-- ..	-- 300 Acres.	..	--
7. Misc. Issues :				
(a) Water quality standard	-- --	--	--
(b) Disposal of Saline water	..	-- --	--	--
(c) Cooperative Water Management	-- --	-- --	--	--
(d) No. of schemes to be completed	--	57	45	--
8. Requirement of Materials :				
(a) Cement	.. --	20963 Tons.	--	--
(b) Bricks	-- ...	1,371,000	--	--
(c) Reinforcing Structural Steel	207 Tons.	--	--
(d) Blind Pipe and Strainer	..	2500 Rft. 1312 Sft.	--	--
(e) Timber	9200 Rft.	--	--
9. Plants and Machinery :				
(a) Drilling Rigs	2 Nos.	--	--
(b) Pumps	--	--	--
(c) Scrapers	--	--	--
(d) Excavators	--	--	--
(e) Draglines	2 Nos.	--	--

PHYSICAL TARGETS AND ACHIEVEMENTS 1976-77 AND 1977-78

BALUCHISTAN

Sub-Sector	Unit	Targets	1976-77 Achievements	Targets for 1977-78
1. Survey and Investigation				
a. Reconnaissance Survey	Sq. mile.	7,000	6,955	1,400
b. Groundwater Survey	"	2,000	2,050	2,000
c. Geophysical Survey	"	5,000	5,720	6,920
d. Test Holes :				
(i) Irrigation Deptt	No.	40	34	50
(ii) Wapda	No.	110	116	75
Total		150	150	125
2. Irrigation				
a. Extension and Remodelling Canals	Mile/Mcf.	0.5	0.5	2
b. New structures	Nos.	1	1	2
c. Small dams	Nos.	1	1	2
d. Public tubewells :				
(i) Irrigation Deptt.	Nos.	25	23	30
(ii) WAPDA	"	55	53	37
(ii) Baluchistan Development Authority	"	18	18	38
Total		98	94	105
e. Area benefited	Acres	20,140	20,140	40,000
3. Flood Protection				
a. Extension of bunds	Miles/Mcf.	—	—	—
b. Stone Pitching	Mcf.	—	—	—
c. Strengthening/Restoration	Mcf.	20.00	19.9	17.2
d. Structures	No.	—	—	—
4. Water Management				
a. Watercourse improvement	No.	—	—	2
b. PLL.	Acres	—	—	5,000
5. Plant and Machinery				
a. Drilling Rigs	Nos.	—	—	6
b. Dozer	Nos.	—	—	20
c. Scrapers	Nos.	—	—	4

ACHIEVEMENTS OF SCARPS 1976-77 AND TARGETS FOR 1977-78

Sl. No.	Name of Project	Scope				Achievement during 1976-77					Targets for 1977-78				
		Area GCA (m.a.)	Tube-wells (Nos.)	Drains		Area GCA (m.a.)	Tube-wells (Nos.)	Pump-page (MAF)	Drains		Area GCA (m.a.)	Tube-wells (Nos.)	Pump-page (MAF)	Drains	
				Length (Miles)	E/W (Mcf)				Length (Miles)	E/W (Mcf)				Length (Miles)	E/W (MCF)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baluchistan															
1.	Hafrdin Drainage	0.09	—	632	77	0.04	—	—	287	35	0.02	—	—	123	15
	Sub-Total (Baluchistan)	0.09	—	632	77	0.04	—	—	287	35	0.02	—	—	123	15
N.W.F.P.															
2.	Antiwater-logging Peshawar City	—	32	1 tile	NA	—	28	N.A.	NA	0.7	—	20	0.01	—	—
3.	Pabbi Unit-II	0.03	40	54	55	0.03	45	0.03	31	32	0.01	5	0.00	10	10
4.	Kafur Dheri Unit	0.03	64	43	6	0.01	48	0.03	NA	18	—	—	—	NA	10
5.	Jue Sheikh Unit	0.06	32	59	79	0.01	6	0.004	5	4	0.01	—	—	7	10
6.	Warsak Unit	0.10	30	—	—	—	—	—	—	—	0.05	16	0.01	—	—
7.	Mardan SCARP	0.16	54	172	114	—	13	0.009	—	—	0.05	25	0.02	15	10
8.	Bannu SCARP	0.09	176	NA	4	—	—	—	NA	0.3	0.01	10	0.007	NA	4
9.	SCARP D. I. Khan	—	NA	—	—	—	—	—	—	—	NA	10	0.007	—	—
	Sub-Total (N.W.F.P.)	0.470	419	329	258	0.05	140	0.073	36	55	0.13	86	0.058	32	44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Sind															
10.	SCARP North Rohri ..	0.79	1392	—	—	0.14	294	0.21	—	—	0.02	42	0.03	—	—
11.	Sukkur Right Bank ..	0.15	408	—	—	0.08	236	0.17	—	—	0.03	50	0.04	—	—
12.	Rohri South ..	0.54	1692	—	—	—	—	—	—	—	0.032	100	0.07	—	—
13.	Ghohtki F. G.W. ..	0.44	1015	—	—	—	—	—	—	—	0.042	100	0.07	—	—
14.	Khandkot Pilot ..	0.013	36	—	—	—	—	—	—	—	—	—	—	—	—
15.	Larkana Shikarpar Stage-II.	0.69	—	550	315	0.17	—	—	157	90	0.08	—	—	70	40
16.	L.B.O.D. Phase-I ..	1.81	—	1003	1759	0.05	—	—	29	52	0.04	—	—	23	40
17.	Kotri Surface Drain ..	3.00	—	2045	2506	0.03	—	—	52	31	0.03	—	—	52	30
18.	North Dadu Drain ..	0.31	—	501	498	0.03	—	—	28	28	0.02	—	—	20	20
19.	Khairpur Tile Drain ..	0.04	—	1632	—	—	—	—	—	—	—	—	—	—	—
20.	Jacobabad Pilot ..	—	—	—	—	—	—	—	—	—	0.02	35	0.03	—	—
21.	R/R of Tubewells ..	—	—	NA	—	—	(11)	—	—	—	—	—	—	—	—
	Sub-Total (Sind) ..	7.983	4543	5731	5078	0.50	530	0.38	266	201	0.315	327	0.24	165	130
Punjab															
22.	SCARP-III ..	2.42	2205F	375	450	0.02	84	0.06	26	32	0.17	200	0.14	25	30
23.	SCARP-III ..	1.28	717	150	125	0.02	60	0.04	—	—	0.04	—	—	5	4
24.	Shorkot Kamalia pilot.	0.17	92	—	—	0.17	101	0.07	—	—	—	—	—	—	—
25.	Panjnad Abbasia pilot.¶	0.22	633	—	—	0.04	162	0.11	—	—	0.07	200	0.14	—	—
26.	Shahpur ..	0.11	263	—	—	0.01	30	0.02	—	—	0.03	80	0.06	—	—
27.	Fordwah Sadiqia pilot.	0.08	188	—	—	0.06	77	0.05	—	—	0.02	50	0.04	—	—
28.	Satiana pilot ..	0.12	69	—	—	0.07	71	0.05	—	—	—	—	—	—	—
29.	Anti waterlogging along T. P. Link ..	N.A.	—	—	—	—	10	0.007	—	—	0.11	70	NA	—	—
30.	Anti waterlogging C. J. Link.	—	—	—	—	—	—	—	—	—	0.04	65	—	—	—
31.	Pharang Drain ..	0.04	—	52	102	0.01	—	—	6	12	0.11	—	—	8	15
32.	R/R of Tubewells ..	—	(800)	—	—	—	—	(319)	—	—	—	(350)	—	—	—
	Sub-Total (Punjab) ..	4.45	5902	577	677	0.595	0.407	—	32	44	0.49	1015	0.38	38	49
	Total (Pakistan) ..	12.993	10864	7269	6090	0.99	1265	0.860	621	335	0.955	1428	0.678	358	238

PROGRESS OF FOREIGN AIDED PROJECTS

Name of Project	Source and amount of foreign aid (1976-77)	1976-77		Physical Achievements
		A.D.P. allocated (Million Rs.)	Revised estimate (Million Rs.)	
Master Planning	UNDP(9.1 million Rs.)	25.0	25.0	Base maps for 61 w/c completed, Data for agronomy, reclamation/drainage, Agr. economics etc. collected, Indus Basin Irrigation system Simulated.
Expansion and modernization of Hydrological data collection system.	Basic Dutch (1.5 Million Rs.)	2.0	2.5	Finalised location of 18 automatic river gauge recorders.
Accelerated Programme	.. Dutch IDA Germany UK (34.3 Million Rs.)	728.8	738.7	T/W Energized (No.)=1010 T/W drilled (no.)=1260 Drain (mcf)=335.
Groundwater Investigation in Baluchistan ..	UNDP (2.74 Million Rs.)	26.5	29.6	Reconnaissance Survey.=6955sq miles. Groundwater Survey=5722sq. miles. Geophysical Survey=2050 sq. miles Test holes=116 No.
On-Farm Water Management Project	USAID	6.0	3.8	Watercourse=18 PLL=1629

Annexure XXI

HUB DAM ANNUAL PLAN—1977-78

S. No.	Project Items	Unit	Total Qty. Involved	Achievement Upto June 77	Balance of Work	Expected date of Completion
1. Main Embankment						
	Earthwork	MCFT.	340 M cft.	271.36 Mcft.	68.64 Mcft.	June 1979
2.	Upstream Slope Protection ..	MCFT.	14.67 Mcft.	9.39 Mcft.	5.28 Mcft.	June 1979
3.	Downstream Slope Protection (Earthwork).	MCFT.	2.2 Mcft.	0.857 Mcft.	1.343 Mcft.	June 1978
4. Spillway						
	(i) Earthwork	MCFT.	71.3 Mcft.	45.9 Mcft.	25.4 Mcft.	January 1979
	(ii) Concrete	MCFT.	4.15 Mcft.	0.434 Mcft.	3.71 Mcft.	March 1979
5. Main Canal						
	(i) Earthwork	MCFT.	15.3 Mcft.	13.9 Mcft.	1.4 Mcft.	Decembr 1977
	(ii) Concrete	MCFT.	1.69 Mcft.	1.53 Mcft.	0.16 Mcft.	March 1977
	(iii) Lining	SQFT.	2.1 Mcft.	1.3 Mcft.	0.8 Mcft.	Decembre 1979
6. Lasbela Canal						
	(i) Earthwork	MCFT.	30.0 Mcft.	13.4 Mcft.	16.6 Mcft.	June 1978
	(ii) Lining	SQFT.	2.0 M.Sft.	0.553 M Sft.	1.4 M Sft.	
7. Water Supply Canal						
	(i) Earthwork	MCFT	4.7 M cft.	Nil.	4.7 M cft.	June 1979
	(ii) Lining	SQFT.	0.822 M cft.	Nil.	0.822 M cft.	

MAIN PHYSICAL TARGETS (1977-78)

Item	1976-77	1977-78
1. Area protected from waterlogging and salinity. (M.A.) ..	1	1
2. No. of tubewells :		
(i) Private	6,000	5,500
(ii) SCARPS	1,428	1,428
(iii) Other Irrign.	96	107
3. Length of surface drains. (miles)	621	575
4. Flood Control Programme E/W (MCF)	1,067	745
5. Water Management :		
(i) W/C improvement	18	101
(ii) Land Levelling	1,629	26,425

Annexure XXIII

PROGRAMMES OF FEDERAL AGENCIES (OTHER THAN WAPDA AND FFC)

1. *FATA Development Corporation.*—A sum of Rs. 23.438 million has been allocated in the ADP 1977-78. The major schemes included in the programme are Investigation of small Irrigation Schemes ; Tubewells Irrigation Schemes in North Waziristan Agency ; Sateen Irrigation Scheme ; Groundwater Investigation in Peshawar, Malakand and D. I. Khan areas, Irrigation Schemes in Mirali Tehsil, etc.

For carrying out the groundwater investigation work, the FATA Development Authority have about six percussion rigs and two rotary type rigs. These will be used for the development of testholes into tubewells and for further investigation.

A new area of about 5,000 acres and existing area of 4,000 acres in various agencies of FATA will receive assured irrigation supplies.

2. *Pakistan Meteorological Department.*—The Programme for 1977-78 consisting of on-going and new schemes has been given an amount of Rs. 18.0 million. Among the on-going schemes, World Meteorological Organization is assisting in establishing ground station for receiving Weather Satellite data at Karachi. UNDP is assisting on Remote Recording Equipment Project for Karachi Airport and nine other Airports, Weather Surveillance Radar Station and Meteorological Readout Station and Development of River flow and Flood Forecasting Projects. The other important projects included in the programme are ; First Class Observatories ; Upper Wind Observatories ; Remote Recording Equipment at Islamabad, Lahore and Peshawar Airports, Wind Finding Radar at Peshawar. Provision of Met. facilities at Moenjodaro establishment of First Class Service Observatory at Larkana, etc.

3. *Irrigation, Drainage and Flood Control Research Council.*—A sum of Rs. 5.0 million has been provided for 9 on-going schemes and initiating new studies to be conducted by the Council during the year 1977-78.

4. *Northern Areas.*—A provision of Rs. 3.699 million has been provided for the completion of on-going schemes and initiation of some of the new schemes.

5. *Azad Kashmir.*—During the ADP 1977-78 an amount of Rs. 0.103 million is assigned to the irrigation schemes of which Jari Bhimber Irrigation Scheme and Reclamation of land in Bhimber and Khari area, are the main ones.

FUNCTIONS AND RESPONSIBILITIES OF THE FEDERAL FLOOD COMMISSION

The Federal Flood Commission has the following functions :—

1. Preparation of a long term flood protection plan for the country.
2. Recommendations regarding regulation of reservoirs for flood control.
3. Review of damage to flood protection works and review of plans for restoration and reconstructions work.
4. Measures for improvement of flood forecasting and flood warning system.
5. Preparation of a research programme for flood control and protection.
6. Standardization of designs and specifications for flood control works.

Regarding financing of projects, the Federal Government would finance all such ongoing projects which are included in phase I of the plan. In case all reconstruction involving both repair and development, the development portion would be financed by the Federal Government. The machinery and overhead would be financed both the Federal and Provincial Governments in proportion to allocations for development or maintenance purposes.

Schemes costing above Rs. 25 lakhs would be processed by the flood commission and submitted to CDWP/ECNEC while schemes costing less than Rs. 25 lakhs and financed by the Federal Government would be approved by the Ministry of Water and Power.

Preparation of the Federal Portion of the annual development programme under the Flood Control Programme would be done by the Federal Flood Commission. Evaluation and Monitoring of the flood programme including restoration would also be the responsibility of the flood commission.

Work on repair and maintenance of the existing measures would be financed by the Provincial Governments.

CHAPTER 7—INDUSTRY

(253—254)

INDUSTRIAL PRODUCTION

S.No.	Item	Unit	Actual 1975-76	Revised Estimates 1976-77	Percent change
1.	Sugar	000 M.tons	623	736	18.1
2.	Vegetable Ghee	000 M.tons	277	328	18.4
3.	Cigarettes	Bill Nos.	27.5	28	1.8
4.	Cotton Yarn	Mill Kgs.	350	286	(-) 18.3
5.	Cotton Cloth	Mill Sq. Metres.	520	451	(-) 13.2
6.	Paper	000 M.tons.	21	25	19.0
7.	Board	000 M.tons.	21	41	95.2
8.	Soda Ash	000 M.tons.	78	50	(-) 35.9
9.	Caustic Soda	000 M.tons.	38	23	(-) 39.4
10.	Nitrogenous Fertilizer	000 Nutrient Metric tons.	320	312	(-) 2.5
11.	Phosphatic Fertilizer	000 Nutrient Metric tons.	12	14	16.6
12.	M. S. Products	000 M.tons.	231	242	4.8
13.	Cement	000 M.tons.	3168	3121	(-) 1.5
14.	Electric Fans	000 Nos.	148	135	(-) 8.8
15.	Bicycles	000 Nos.	218	225	3.2
16.	Sheet Glass	Mill sq. ft.	14	19	35.7
17.	Cotton ginning	Mill. bales	2.9	2.4	(-) 17.2
18.	Wheat Milling	Mill M.tons.	8.73	9.14	4.7
19.	Rice Milling	Mill M. tons.	2.62	2.64	0.7
20.	Footwear	Mill Pairs	111	113	1.8
21.	Jute goods	000 M.tons.	42	35	(-) 16.6
22.	Tyres and tubes (other than Scooter cycle.)	000 Nos.	309	300	(-) 2.9
23.	Paints and varnishes	000 litres.	7128	6460	(-) 9.4
24.	Trucks and Busses	Nos.	6132	4500	(-) 26.8
25.	Petroleum products	Mill. litres	3582	3845*	7.3
26.	Man made yarn	Million Kgs.	4.99*	5.17	3.6
27.	Fabrics of man made yarn	Mill sq. metres	176.4	201.5	14.2

Sources : CSO, Industries Div. Agt. Management, FOA Division, APCC

*Estimates

*Bengal Fibre, Ravi and Fazal Nylon.

GROWTH IN 1977-78 OVER 1976-77

S. No.	Item	Unit	Revised Estimates 1976-77	Targets 1977-78	Percentage change
1.	Sugar	000 M.tons.	736	762	3.50
2.	Vegetable Ghee	000 M.tons.	328	355	8.2
3.	Cigarettes	Bill. Nos.	28	30	7.1
4.	Cotton yarn	Mill Kilograms	286	386	35.0
5.	Cotton cloth	Mill sq. metres	451	552	22.4
6.	Paper	000 M. tons.	25	41	64.0
7.	Board	000 M.tons.	41	51	24.4
8.	Soda Ash	000 M.tons.	50	80	60.0
9.	Caustic soda	000 M.tons.	23	41	78.2
10.	Nitrogenous fertilizer	000 Nutrient ton	312	335	7.4
11.	Phosphatic fertilizer	000 Nutrient M.ton	14	15	7.1
12.	M.S. Products	000 M.tons.	242	280	15.7
13.	Cement	000 M.tons.	3121	3150	0.9
14.	Electric Fans	000 Nos.	135	175	29.6
15.	Bicycles	000 Nos.	225	240	6.6
16.	Sheet glass	Mill sq. ft.	19	23	21.0
17.	Cotton ginning	Mill bales	2.4	3.5	45.5
18.	Wheat Milling	Mill. M.tons.	9.14	9.65	5.5
19.	Rice Milling	Mill. M.tons.	2.64	2.84	7.6
20.	Footwear	Mill pair	113	120	6.2
21.	Jute goods	000 M.tons.	35	42	20.0
22.	Tyres and tubes (other than Scooter/cycle)	000 Nos.	300	325	8.3
23.	Paints and Varnishes	000 litres	6460	7000	8.3
24.	Trucks and Busses	000 Nos.	4500	6500	44.4
25.	Petroleum products	Mill. litres	3845	4118*	7.1
26.	Man made yarn	Mill Kilograms	5.17	5.44*	5.2
27.	Fabrics of Man made yarn	Mill sq. Metres	201.5	209	3.7

*Growth 8.1% over 1976-77 of Ravi rayon, Fazal Ny (on and Bengal Fibre. Source : (i) C.S.O. (ii) A.P.C.C. meeting (iii) Food & Agriculture Division. (iv) Industries Division. (v) Agrarian Management.

LETTERS OF CREDIT OUTSTANDINGS WITH PICIC AND IDBP AS ON 31ST MAY,
1977

(Rs. Million)

Industry	PICIC			*IDBP	TOTAL
	Local currency	Foreign currency	Total	Foreign currency only	PICIC and IDBP
1. Cotton Textiles	0.539	8.798	9.517	—	9.517
2. Woollen Textiles	0.002	18.939	18.941	2.779	21.729
3. Specialised Textiles	0.430	—	0.430	0.568	0.998
4. Sugar	4.507	9.445	13.952	—	13.952
5. Jute Manufacturing	4.546	—	4.546	—	4.546
6. Chemicals	1.545	2.227	3.772	4.012	7.784
7. Leather Industry	1.144	—	1.144	3.457	4.601
8. Non-metallic minerals	—	0.663	0.663	0.030	0.693
9. Paper and Board products	—	2.604	2.604	4.517	7.121
10. Cement	—	25.532	25.532	—	25.532
11. Food Products	—	0.059	0.059	15.787	15.846
12. Engineering	—	14.573	14.573	—	14.573
13. Glass Products	0.435	—	0.435	—	0.435
14. Rubber Products	—	—	—	1.198	1.198
15. Hotels	—	18.572	18.572	—	18.572
16. Miscellaneous	1.404	1.108	2.512	—	2.512
Total ..	14.551	102.700	117.252	32.348	149.600

*Notes ; IDBP information in foreign currency only.

SOURCE : PICIC AND IDBP

FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION (MANUFACTURING INDUSTRY) 1977-78

PAKISTAN

(Rs. Million)

Sector/Sub-Sector	Allocation for 1970-77	Revised Estimates during 1976-77	% Implementation	allocation for 1977-78	% share
1. Food Manufacture	348.800	382.286	109	269.827	4.8
2. Beverages	—	—	—	—	—
3. Tobacco Manufacture	—	—	—	-2.435	—
4. Manufacture of Textile	503.650	606.108	120	121.400	2.2
5. Footwear and Apparels	5.663	1.852	33	4.245	0.1
6. Wood and Cork	20.000	19.000	95	50.000	0.9
7. Furniture and Fixture	—	—	—	—	—
8. Paper and Paper Products	0.200	0.100	50	2.100	—
9. Printing and Publishing	4.697	3.427	73	2.515	—
10. Leather and Leather Products	5.855	5.015	86	—	—
11. Rubber Products	—	—	—	—	—
12. Chemical Industries	1725.630	1693.651	98	1268.000	22.6
13. Production of Petroleum Coal and Gas	—	—	—	—	—
14. Petro-chemical Industries	74.100	66.287	89	68.000	1.2
15. Non-metalic Mineral Pro.	407.500	325.903	80	338.000	6.0
16. Basic Metal Industries	2500.000	2026.200	81	2500.000	44.6
17. Metal Product Industries	84.068	121.228	144	95.500	1.7
18. Machinery except Electrical Machinery	95.900	34.950	36	54.000	1.0
19. Electrical Machinery Apparatus and Appliances	1.000	4.100	410	4.000	0.1
20. Transport Equipment	10.000	14.064	141	60.000	1.1
21. Miscellaneous Industries	70.607	70.304	99	262.008	4.7
22. Industrial Estate	7.635	9.130	120	10.341	0.2
23. Training and Research	27.543	15.879	58	25.251	0.5
24. Small Industries Promotional Programme	41.949	14.708	35	25.027	0.4
25. Scientific and Industrial Research	14.800	8.965	61	19.570	0.3
26. Survey and Investigations	—	—	—	—	—
27. Pakistan Mint. Lahore	0.115	0.115	100	0.115	—
28. Projects of Industrial Development Board	390.300	332.700	85	375.179	6.7
29. S.D.A. Projects	136.798	93.425	68	52.100	0.9
30. Security Printing Corporation	5.000	—	—	—	—
Total ..	6481.870	5848.797	90	5609.613	

The above figures are the total of ADP and outside ADP allocation and estimated expenditure during 1976-77.

**FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION
(MANUFACTURING INDUSTRY) 1977-78**

Sector/Sub-Sector	FEDERAL			(Million Rupees)	
	Allocation for 1976-77	Revised Estimates during 1976-77	% Imple- mentation	Allocation for 1977-78	% share
1. Food Manufacture	116.140	131.136	113	69.200	1.4
2. Beverages	—	—	—	—	—
3. Tobacco Manufacture	—	—	—	2.435	—
4. Manufacture of Textile	503.650	606.108	120	121.400	2.5
5. Footwear and Apparels	5.663	1.852	33	4.245	0.1
6. Wood and Cork	20.000	19.000	955	50.000	1.0
7. Furniture and Fixture	—	—	—	—	—
8. Paper and Paper Products	0.200	0.100	50	2.100	—
9. Printing and Publishing	—	—	—	—	—
10. Leather and Leather Products	5.855	5.015	86	—	—
11. Rubber Products	—	—	—	—	—
12. Chemical Industries	1725.630	1693.051	98	1268.000	25.3
13. Production of Petroleum Coal and Gas	—	—	—	—	—
14. Petro-chemical Industries	74.100	66.287	89	68.900	1.4
15. Non-metallic Mineral Products	407.500	325.903	80	338.000	6.9
16. Basic Metal Industries	2500.000	2026.200	81	2500.000	50.8
17. Metal Product Industries	76.268	121.228	159	95.500	1.9
18. Machinery except Electrical machinery	95.900	34.950	36	54.000	1.1
19. Electrical Machinery Apparatus and Appliances	1.000	5.100	410	4.000	0.1
20. Transport Equipment	10.000	14.064	140	60.000	1.2
21. Miscellaneous Industries	67.050	68.124	102	255.832	5.2
22. Industrial Estate	—	—	—	—	—
23. Training and Research	21.900	11.590	53	23.000	0.5
24. Small Industries Promotional Pro- gramme	12.655	3.985	31	11.660	0.2
25. Scientific & Industrial Research	14.800	8.965	61	19.570	0.4
26. Survey and Investigations	—	—	—	—	—
27. Pakistan Mint, Lahore	0.115	0.115	100	0.115	—
28. Projects of Industrial Development Board	—	—	—	—	—
29. S.D.A. Projects	—	—	—	—	—
30. Security Printing Corporation	5.000	—	—	—	—
Total ..	5663.426	5141.773	91	4947.057	—

The above figures are the total of ADP and outside ADP allocation and estimated expenditure during 1976-77.

**FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION
(MANUFACTURING INDUSTRY) 1977-78**

		BALUCHISTAN			(Million Rupees)	
Sector/Sub-sector		Allocation for 1976-77	Revised Estimates during 1976-77	% Imple- mentation	Allocation for 1976-77	% share
1.	Food Manufacture	—	—	—	—	—
2.	Beverages	—	—	—	—	—
3.	Tobacco Manufacture	—	—	—	—	—
4.	Manufacture of Textile	—	—	—	—	—
5.	Footwear and Apparels	—	—	—	—	—
6.	Wood and Cork	—	—	—	—	—
7.	Furniture and Fixture	—	—	—	—	—
8.	Paper and Paper Products	—	—	—	—	—
9.	Printing and Publishing	0.650	0.650	100	0.956	3.7
10.	Leather and Leather Products	—	—	—	—	—
11.	Rubber Products	—	—	—	—	—
12.	Chemical Industries	—	—	—	—	—
13.	Production of Petroleum Coal and Gas	—	—	—	—	—
14.	Petro-chemical Industries	—	—	—	—	—
15.	Non-metallic Mineral Products	—	—	—	—	—
16.	Basic Metal Industries	—	—	—	—	—
17.	Metal Product Industries	7.800	—	—	—	—
18.	Machinery except Electrical Machinery	—	—	—	—	—
19.	Electrical Machinery Apparatus and Appliances	—	—	—	—	—
20.	Transport Equipment	—	—	—	—	—
21.	Miscellaneous Industries	2.000	0.100	50	4.556	65.3
22.	Industrial Estate	0.800	0.800	100	1.010	14.5
23.	Training and Reseach	0.500	—	—	—	—
24.	Small Industries Promotional Programme	2.172	0.100	0.05	0.450	6.5
25.	Scientific & Industrial Research	—	—	—	—	—
26.	Survey and Investigations	—	—	—	—	—
27.	Pakistan Mint., Lahore	—	—	—	—	—
28.	Project of Industrial Development Board	—	—	—	—	—
29.	S.D.A. Projects	—	—	—	—	—
30.	Security Printing Corporation	—	—	—	—	—
Total ..		13.932	1.659	12	6.972	—

The above figures are total of ADP and outside ADP allocation and estimed expenditure during 1976-77.

**FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION
(MANUFACTURING INDUSTRY) 1977-78**

Sector/Sub-Sector	N.W.F.P.			(Million Rupees)	
	Allocation for 1976-77	Revised Estimates during 1976-77	% Imple- mentation	Allocation for 1977-78	% Share
1. Food Manufacture	—	—	—	—	—
2. Beverages	—	—	—	—	—
3. Tobacco Manufacture	—	—	—	—	—
4. Manufacture of Textile	—	—	—	—	—
5. Footwear and Apparels	—	—	—	—	—
6. Wood and Cork	—	—	—	—	—
7. Furniture and Fixture	—	—	—	—	—
8. Paper and Paper Products	—	—	—	—	—
9. Printing and Publishing	0.633	0.306	48	0.759	1.3
10. Leather and Leather Products	—	—	—	—	—
11. Rubber Products	—	—	—	—	—
12. Chemical Industries	—	—	—	—	—
13. Production of Petroleum Coal and Gas	—	—	—	—	—
14. Petrochemical Industries	—	—	—	—	—
15. Non-metallic Mineral	—	—	—	—	—
16. Basic Metal Industries	—	—	—	—	—
17. Metal Products Industries	—	—	—	—	—
18. Machinery except Electrical Machinery	—	—	—	—	—
19. Electrical Machinery Apparatus & Appliances	—	—	—	—	—
20. Transport Equipment	—	—	—	—	—
21. Miscellaneous Industries	—	—	—	—	—
22. Industrial Estate	0.265	—	—	—	—
23. Training and Research	—	—	—	—	—
24. Small Industries Promotional Pro- gramme	6.061	3.803	63	6.000	10.2
25. Scientific & Industrial Research	—	—	—	—	—
26. Survey and Investigations	—	—	—	—	—
27. Pakistan Mint, Lahore	—	—	—	—	—
28. Projects of Industrial Development Board	—	—	—	—	—
29. S.D.A. Projects	136.798	93.425	68	52.100	88.5
30. Security Printing Corporation	—	—	—	—	—
Total ..	143.757	97.534	68	58.859	—

The above figures are the total of ADP and outside ADP allocation and estimated expenditure during 1976-77.

**FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION
(MANUFACTURING INDUSTRY) 1977-78**

		SIND			(Million Rupees)	
Sector	Sub-Sector	Allocation for 1976-77	Revised Estimates during 1976-77	% Imple- mentation	Allocation for 1977-78	% Share
1.	Food Manufacture	232.720	251.150	108	200.627	98.0
2.	Beverages	—	—	—	—	—
3.	Tobacco Manufacture	—	—	—	—	—
4.	Manufacture of Textile	—	—	—	—	—
5.	Footwear and Apparels	—	—	—	—	—
6.	Wood and Cork	—	—	—	—	—
7.	Furniture and Fixture	—	—	—	—	—
8.	Paper and paper Products	—	—	—	—	—
9.	Printing and Publishing	—	—	—	—	—
10.	Leather and Leather Products	—	—	—	—	—
11.	Rubber Products	—	—	—	—	—
12.	Chemical Industries	—	—	—	—	—
13.	Production of Petroleum Coal and Gas	—	—	—	—	—
14.	Petrochemical Industries	—	—	—	—	—
15.	Non-metallic Minerals	—	—	—	—	—
16.	Basic Metal Industries	—	—	—	—	—
17.	Metal Product Industries	—	—	—	—	—
18.	Machinery except Electrical Machinery	—	—	—	—	—
19.	Electrical Machinery Apparatus and Appliances	—	—	—	—	—
20.	Transport Equipment	—	—	—	—	—
21.	Miscellaneous Industries	—	—	—	—	—
22.	Industrial Estate	0.10	—	—	—	—
23.	Training and Research	1.381	—	—	—	—
24.	Small Industries Promotional Pro- gramme	3.404	2.853	84	4.000	8
25.	Scientific & Industrial Research	—	—	—	—	—
26.	Survey and Investigations	—	—	—	—	—
27.	Pakistan Mint, Lahore	—	—	—	—	—
28.	Projects of Industrial Development Board	—	—	—	—	—
29.	S.D.A. Projects	—	—	—	—	—
30.	Security Printing Corporation	—	—	—	—	—
Total ..		237.665	254.003	107	204.627	—

The above figures are the total of ADP and outside ADP allocation and estimated expenditure during 1976-77.

**FINANCIAL EXPENDITURE AND A.D.P. ALLOCATION
(MANUFACTURING INDUSTRY) 1977-78**

Sector/Sub-Sector	PUNJAB			(Million Rupees)	
	Allocation for 1976-77	Revised % Estimates during 1976-77	% Implementation	Allocation for 1977-78	% Share
1. Food Manufacture	—	—	—	—	—
2. Beverages	—	—	—	—	—
3. Tobacco Manufacture	—	—	—	—	—
4. Manufacture of Textile	—	—	—	—	—
5. Footwear and Apparels	—	—	—	—	—
6. Wood and Cork	—	—	—	—	—
7. Furniture and Fixture	—	—	—	—	—
8. Paper and Paper Products	—	—	—	—	—
9. Printing and Publishing	3.414	2.471	72	0.800	0.2
10. Leather and Leather Products	—	—	—	—	—
11. Rubber Products	—	—	—	—	—
12. Chemical Industries	—	—	—	—	—
13. Production of Petroleum Coal and Gas	—	—	—	—	—
14. Petro-chemical Industries	—	—	—	—	—
15. Non-metalic Minerals	—	—	—	—	—
16. Basic Metal Industries	—	—	—	—	—
17. Metal Product Industries	—	—	—	—	—
18. Machinery except Electrical Machinery	—	—	—	—	—
19. Electrical Machinery Apparatus and Appliances	—	—	—	—	—
20. Transport Equipment	—	—	—	—	—
21. Miscellaneous Industries	1.557	2.080	34	1.620	0.4
22. Industrial Estate	6.410	8.330	130	9.331	2.4
23. Training and Research	3.762	4.289	114	2.251	0.6
24. Small Industries Promotional Programme	17.657	3.967	22	2.917	0.7
25. Scientific & Industrial Research	—	—	—	—	—
26. Survey and Investigations	—	—	—	—	—
27. Pakistan Mint., Lahore	—	—	—	—	—
28. Projects of Industrial Development Board	390.300	332.700	85	375.179	95.7
29. S.D.A. Projects	—	—	—	—	—
30. Security Printing Corporation	—	—	—	—	—
Total ..	423.100	353.837	84	392.098	—

The above figures are the total of ADP and outside ADP allocation and estimated expenditure during 1976-77.

PAKISTAN STEEL MILLS CORPORATION LTD

(1)	(2)	Physical Targets upto 30-6-77		Projected	Physical
		Planning & Designing	Constn. & Erection	Target upto 30-6-1978	Construction
		(%)	(%)	(%)	(%)
		(3)	(4)	(5)	(6)

I. Infra-Structure Facilities Construction Water

— Supply to Construction Base ..	100	100		Completed
— Supply to Township ..	100	100		Completed
— Supply to Main Plant ..	100	100		Completed
(i) Potable Water Supply ..	100	70	Completed	80
(ii) Industrial Water Supply ..	100	25	100	55
(iii) Sea Water Intake & Outlet Facilities ..	100	5	100	25
(iv) Sewerage Treatment & Disposal ..	100	—	100	50
(v) Slag & Sludge Disposal ..	10	—	100	—
(vi) Road Network ..	50	50	75	55
(vii) Unloader & Conveyor System ..	100	40	100	75
(viii) Railway Siding :				
(a) Railway siding from Pipri Station to Construction Base (Priority II) ..	100	100		Completed
(b) Extension of Rly. Siding from Constn. Base to Steel Structure Yard (Priority II) ..	100	100		Completed
(c) Extension of Rly. Siding from Steel Structure yard to Plant Site ..	100	100		Completed
(d) Rly. Siding from Railway Marshalling Yard to Construction Base ..	100	10		Completed
(e) Rly. Siding from Pig Casting Yard to Slag Dump ..	100	—		Completed
(ix) Administrative Block ..	100	100		Completed
(x) 4 Additional office Barracks ..	100	100		Completed
(xi) 2 additional Administrative Blocks—Office Block for design Bureau ..	100	90		Completed

Power Supply, Gas & Telephone :

(i) Construction power 12.5 KW :				
(a) Main Power Supply ..	—	—		Completed
(b) Distribution Power Supply ..	100	80		Completed
(c) Power Supply for Township (Additional feeder, for Township) ..	75	—	Completed	80
(d) 132 KV Transmission Line from Grid Station to TPP & MSDS ..	50	—	100	50
(ii) Main step-down Station ..	—	—	100	50
(iii) Telephone :				
(a) 10+100 Line PABX (Exchange) ..	100	100		Completed
(b) Permanent Telephone (Exchange)—2 × 600/1000 ..	60	—	100	10

1	2	(%) 3	(%) 4	(%) 5	(%) 6
(iv) Distribution of Telephone System :					
	(a) Secondary Cabling ..	60	40	100	50
	(b) Inter Block Wiring ..	60	30	100	50
(v) Natural Gas :					
	(a) Township	100	65	100	90
	(b) Main Plant	80	—	100	50
(vi) Workshop & Stores for Electrical Air Conditioning & Gas ..					
		100	50	100	100
II. Metallurgical Training Centre ..					
		100	100	Completed	100
III. Construction Base :					
(i) Engineering Production Base ..					
		100	100		Completed
(ii) Batching Plant Complex :					
	(a) Concrete Mixer & Aggregate Supply Gallery	100	100		Completed
	(b) Storage Bins	100	100		Completed
	(c) Cement Silos and Pneumatic Transport System	100	100		Completed
	(d) Store for Reinforcement Steel & Casting Yard ..	100	100		Completed
(iii) General Facilities					
		100	99		Completed
(ia) Roads, Drains & Boundry Wall..					
		100	100		Completed
(v) Steel Structure Yard					
		100	100		Completed
IV. MainPlant :					
(i) Soil Testing, Levelling & Grad- ing & Diversion Channel :					
	(a) Levelling & Grading ..	100	100	Completed	100
	(b) Storm Water Diversion Channels (with lining) :				
	— Pipri—Badal Channel ..	100	100	Completed	100
	— Pipri Lattro Channel ..	100			Completed
(ii) Repair Shops & Storage Facili- ties Complex :					
	(a) Block of Forge & Fabrica- tion Shop		80	Designing & drawing is being done in USSR which is a continuous process	100
	(b) Block of Mechanical Repair, Heat Treatment and Hard Surfacing Shop .. ..	..	70	..	100
	(c) Power Equipment Repair Shop .. ..	..	50	Designign & Drawing is being done in USSR which is a continuous process	100
	(d) Block of pattern making & building .. ..	..	45	..	100

1	2	3	4	5	6
(e) Foundry	Designing &	20	Designing &	70	
(f) Locomotive Wagon Shed ..	Drawing is	20	drawing is	70	
(g) Storage Facilities :	being done		being done		
—Equipment Storage ..	in USSR	20	in USSR	90	
—Auxiliary material stores..	which is a	—	which is a	100	
—Building material and tim-	continuous		continuous		
ber stores	process		process,		
—Lubricant and Parafine Stores					
—Ferro Alloys Stores					
(iii) Raw material preparation plant..		25		45	
(iv) Cok-even and By-product plant..		20		45	
(v) Iron making plant		25		45	
(vi) Thermal power plant		24		45	
(vii) Turbo Blower Station		24		45	
(viii) Main Ste-down Sub-station ..		10		25	
(ix) Steel making plant		5		30	
(x) Refractories and lime production		5		35	
(xi) 800 mm Billet Mills (Hot rolling		—		60	
mill)					
(xii) Power Supply Intershop Pipelines		5		10	
(xiii) Intershop Pipelines of Thermal		—		10	
power facilities and power utilities					
(xiv) Gas & Oxygen Facilities		5		10	
(xv) Transport & Communication Faci-					
lities		5		10	
(xvi) Structures, water supply, sewe-					
rage Pipelines and sludge facilities		10		25	
(xvii) Coolent Pipeline					
(xviii) Compressor Plant		15	100	30	
(xix) Administrative & Welfare Build-					
ing Laboratory Building &					
operative Centre	100	10	100	45	
(xx) Refrigeration Plant	100	15	100	15	

V. Township :

(i) Soviet Specialist Housing :					
(a) Single expatriate hostel-one	100	100		Completed	
block, 51 rooms					
(b) 2-Room Apartments for					
Married Specialists-11 Blocks					
(165 Units)	100	100		Do.	
—6 Blocks : 90 Units	100	100		Do.	
—5 Blocks : 75 Units	100	100		Do.	
(c) 3-Room Apartments for					
Soviet Specialists with					
family :					
—5 Blocks ; 90 Units	100	100		Do.	
(d) Amenity Buildings :					
—Shopping Centre	100	100		Do.	
—Health Clinic	100	100		Do.	
—School	100	100		Do.	
—Club Complex	100	100		Do.	
(e) 2-Room Apartments for					
Soviet Specialist-15 Blocks					
(225 Units)	100	66		Completed	
(f) 3-Room Apartments for					
Soviet Specialist-7 Block					
(126 Units)	100	66		Completed	

1	2	3	4	5	6
(g) Infra-structure for Soviet Specialist Colony ..	100	100	Completed	100	
(h) Accommodation for service Staff S/Specialists' colony :					
—Single Room Accommodation (5 Blocks:130 Units)	100	60	Do.	100	
—2 Room Accommodation (4 Blocks : 52 Units) ..	100	80	Do.	100	
(i) Accommodation for Pakistani Staff :					
—Two-Bedroom Flats (3 blocks 27 Units) ..	100	100	Do.	100	
—Three-Bedroom Flats (9 Blocks : 53 Units) ..	100	50	Do.	100	
(j) Trainees' Hostel :					
—4 Bed-Dormitories (1 Block : 24 Units for 96 students) ..	100	50	Do.	100	
—2 Bed-Dormitories (1 Block : 32 units for 64 Students) ..	100	50	Do.	100	
(k) Infra-structure for Township Water Supply, Sewerage, Roads, Pavements (Phase-I)	60	—	90	10	
(l) Conventional Housing for PASMIC Employees (1500 Units) ..	100	—	100	20	
(m) Pre-fabricated Housing for PASMIC Employees (4000 Units) ..	50	—	85	5	
(n) Amenities for Township (Phase-I) Stage I, Health Centre, Mosque and Community Centre ..	100	100	100	60	

LIST OF PROJECTS EXPECTED TO BE COMPLETED DURING 1977-78

Name of the Project	Capacity
1. Lasbela Textile Mill	50,000 spindles, 1100 looms
2. Bolan Textile Mill	50,000 spindles 1100 looms
3. Shahdad Kot Textile Mill	25,000 spindles, 550 looms
4. People Textile Mill, Bahawalpur	25,000 spindles, 335 looms
5. Azad Kashmir Textile Mill	25,000 spindles
6. Pattoki Sugar Mill	Crushing capacity 1,500 metric ton/day
7. Pasrur Sugar Mill	Crushing capacity 1,500 metric ton/day
8. Daud Sugar Mill	30,600 metric ton of sugar
9. Harnai Woolen Mill :	(i) Woolen spindles 2340
	(ii) Worsted spindles 1000
	(iii) Woolen Powerlooms 36
	(iv) Worsted Powerlooms 34
10. Dargai Ghee Factory	9,144 metric tons
11. Haripur Ghee Factory	9,144 metric tons
12. Manufacture & Assembly of High Voltage Switch Gear :	(i) 132 KV circuit Braker 50
	(ii) 66 KV circuit 2 Braker 40
	(iii) 132 KV Isolator 100
	(iv) 66 KV Isolator 80
13. Carbon Black	10,000 tons
14. Polyester Fibre	15,000 tons of staple Fibre 2,000 tons of Filament yarn
15. Pak-Arab Fertilizer Ltd.	Nitrogenous : 162,000 Nutrient metric tons Fertilizer.
16. Heavy Foundry & Forge, Taxila	1. Steel castings : 6,600 metric ton
	2. Steel Ingots : 38,600 metric ton
	3. Cast Iron castings : 5,000 metric ton
	4. Press Forgings of special and alloy steel : 4,670 metric tons
17. Speciality Oils	17,000 metric tons
18. Karachi Shipyard & Engineering Works Phase II Part II	Ship building capacity five ships of 15,000 DWT and three ships of 3,000 DWT. in a period of five years
19. Cold Storage Mardan	3,000 tons
20. Cold Storage Haripur	3,000 tons
21. Cold Storage Swat	3,000 tons
22. Corn Complex Jahangira	15,240 tons
23. Footwear and Leather Goods Factory at Spinkai Raghzai S.W. Agency.	(i) Chappals 1,20,000 pairs
	(ii) Men's Shoe 1,80,000 pairs
	(iii) Belts 30,000 Nos.
	(iv) Holsters 30,000 Nos.
24. Marble Processing Industry	(i) Marble slabs : 7,75,000 sq. ft.
	(ii) Terraze titles 2,24,000 sq. ft.
	(iii) Marble chips 6,000 tons.

CHAPTER 8—FUEL AND POWER

(269—270)

Annexure P-1

(Rs. in million)

Name of the Scheme	Provision for 1977-78
<i>On-Going Scheme :</i>	
A. Generation	
1. 25 MW Gas Turbine Power Station Quetta	5.000
2. Guddu Thermal Power Station Stage II	100.000
3. Mangla Hydel Power Station (Units 5 & 6)	0.880
4. Mangla Hydel (7 & 8) Power Station	67.000
5. Tarbela Hydel Power Station (Units 1—4)	40.000
6. Tarbela Hydel Power Station (Units 5—8)	150.000
7. 200 MW Gas Turbine Lyallpur	18.000
8. Chitral Hydel Power Station	6.000
9. Warsak Hydel P/Station (Units 5 & 6)	70.000
10. Kalabagh Dam	5.000
11. 2 x 25 MW Gas Turbine at Kotri	90.000
12. Planning and Investigation of major Hydel Schemes	1.000
13. Lakhra coal fired P/Station, Hyderabad	2.000
Total ..	554.880
B. Transmission	
14. 500 KV Tarbela-Lyallpur Transmission Line 1st. Circuit	114.100
15. 220 KV double circuit Tarbela Wah (Burhan) Transmission Line	20.000
16. 220 KV Mangla Transmission Extension Post Development Cost	11.000
17. Guddu-Sibbi-Quetta Transmission Line	11.000
18. 500 KV Lyallpur-Multan-Guddu-Karachi Transmission Line	595.000
19. Power Development in Azad Kashmir	30.000
20. 220 KV Tarbela Mardan Transmission Line	10.000
21. Fund for reserve stock material procurement	—
22. Second circuit Tarbela Lyallpur 500 KV Transmission Line	7.000
23. Secondary Transmission and Grid Stations	550.000
Total—(Transmission) ..	1348.100

Annexure P-1

(Rs. in million)

Name	Provision for 1977-78
C. Distribution	
24. Distribution of Power and Village Electrification	600.000
25. Installation of Diesel Generating Sets in Baluchistan	30.000
Total—(Distribution) ..	630.000
Total—WAPDA (Power) ..	2532.980

Annexure G-1

CONSUMERS

(Natural Gas)

(Numbers)

Categories	Up to 30-6-1976				1976-77 Estimated				1977-78 target			
	KGC	IGC	SNGPL	Total	KGC	IGC	SNGPL	Total	KGC	IGC	SNGPL	Total
Gen. Industry ..	663	161	2,062	2,886	27	11	151	189	20	20	260	300
Fertilizer ..	—	—	3	3	—	—	—	—	—	—	—	—
Power ..	3	5	10	13	—	—	—	—	—	—	—	—
Cement ..	2	2	5	14	—	—	—	—	—	—	—	—
Commercial ..	2,897	1,933	8,554	13,384	245	318	566	1,129	120	340	2,190	2,650
Domestic ..	1,14,672	31,647	1,06,946	2,53,265	24,972	8,220	5,623	38,815	35,000	9,640	30,550	75,190
Total ..	1,18,237	33,748	1,17,580	2,69,565	25,244	8,549	6,429	40,133	35,140	10,000	33,000	78,140

CONSUMPTION

(Natural Gas)

Annexure G-2

	1975-76				1976-77				1977-78			
	KGC	IGC	SNGPL	Total	KGC	IGC	SNGPL	Total	KGC	IGC	SNGPL	Total
Total ..	33,999	21,04,02	84,783.921	1,39,796.94	35,773	20,367	80,343	1,45,482	45,571	21,520	78,918	1,46,009
Daily Average.	92.9	57.415	236.311	386.63	205	111.482	244.775	561.257	125	58.957	216.2	400.157
Max. Demand.	114.00	70.000	—	—	112	75	344.3	541.33	144	83	382.5	609.5
Existing Capacity	—	66.000	—	—	do	do	do	do	do	do	do	do
Capacity/Utili- zation ..	—	87%	100	—	—	85%	72%	—	—	89%	157%	—

CONSUMPTION AFFAIRS OF DOMESTIC CONSUMPTION OF OIL (INCLUDING BUNKERS)

(Tons)

Products	Actual 1974-75	1975-76 Actual quantity	Growth	1976-77 Revised Estimates quantity	Growth	1977-78 Estimates quantity	Growth
100/130	2,777	4,416	59.02%	5,170	17.07%	6,100	17.99%
73 ON	1,527	1,217	-20.30%	1,890	55.30%	2,400	26.98%
JP-4	35,111	69,149	-18.75%	72,447	4.77%	72,000	-0.62%
MS	2,64,597	2,74,070	3.58%	2,92,069	6.57%	3,01,000	3.06%
HOBC	65,127	73,276	12.51%	84,628	15.49%	92,000	8.71%
Others	—	—	—	—	—	25,000	—
(Sub-Total light Distillates)	4,19,139	4,22,128	0.71%	4,56,204	8.07%	4,98,500	9.27%
JP-1	2,57,973	2,97,670	15.39%	3,14,690	5.72%	3,23,000	2.64%
SK	5,56,237	5,08,023	-8.67%	5,80,856	14.34%	6,02,000	3.64%
HSD	11,11,865	11,89,882	7.02%	12,72,702	6.96%	13,86,000	8.90%
LDO	2,85,559	2,69,736	-5.54%	2,28,374	-15.33%	2,50,000	9.47%
Others	9,337	10,336	10.70%	7,850	-24.05%	13,200	68.15%
Sub-Total Middle Distillates	22,20,971	22,75,647	2.46%	24,04,072	5.64%	25,74,200	7.08%
FO	9,57,684	7,10,441	-25.82%	7,42,659	4.53%	7,11,000	-4.26%
Total Fuel Products	35,97,704	34,08,216	-5.27%	36,03,335	5.72%	37,87,700	5.12%
Asphalt	91,299	82,747	-9.37%	84,075	1.60%	1,22,306	45.47%
Others	66,876	65,349	-2.28%	82,916	26.88%	97,100	17.12%
Total Heavy Distillates	1,58,175	1,48,096	-6.37%	1,66,991	12.76%	2,19,406	31.39%
Grand Total	37,55,969	35,56,312	-5.32%	37,70,326	6.02%	40,03,106	6.17%

PRODUCTION, IMPORTS AND DISPOSAL OF ALL PRODUCTS 1976-77 (REVISED ESTIMATES)

(All Figures in Tons)

Products	Availability of Pol						Domestic Consumption	Total Disposal	Change in stock
	Local Production	Imports	Total Availability	Exports	Bunker	Total External			
100/130	—	5,530	5,530	—	33	33	5,137	5,170	+ 360
73 ON	—	1,708	1,708	—	—	—	1,890	1,890	— 182
JP-4	72,312	—	72,321	—	—	—	72,447	72,447	+ 371
MS	2,90,565	—	2,90,565	—	—	—	2,92,069	2,92,069	— 1504
HOBC	46,051	43,864	88,915	—	—	—	84,628	84,628	+ 4,287
Naptha	1,65,484	—	1,65,484	1,63,191	—	1,63,191	—	1,63,191	+ 2,293
Total (Light Distillates) ..	5,74,918	50,102	6,25,020	1,63,191	33	1,63,234	4,56,171	6,19,395	+ 5,625
JP-1	3,14,507	—	3,14,507	—	1,35,830	1,35,839	1,78,851	3,14,690	— 183
SK	2,29,508	3,79,806	6,09,314	—	—	—	5,80,856	5,80,856	+ 28,458
HSD	7,03,765	6 18,593	13,22,358	—	13,433	13,433	12,59,269	12,72,702	+ 49,656
LDO	2 39,074	—	2,39,074	—	2,397	2,397	2,25,977	2,28,374	+ 10,700
Others	10,231	—	10,231	—	—	—	7,850	7,850	+ 2,381
Total (Middle Distillates) ..	14,97,085	9,98,399	24,95 484	—	1,51,669	1,51,669	22,52,803	24,04,472	+ 91,012
F. O.	9,13,014	—	9,13,014	2,05,223	74,992	2,80,215	6,67,667	9,47,882	— 34,868
Total of Fuel Products ..	29,74,786	10,48,501	40,23,287	3,68,414	2,26,694	5,95,106	33,76,641	30,71,749	+ 61,769
Asphalt	93,613	—	93,613	3,421	—	3,421	84,075	87,496	+ 6,117
Others	1,02,012	—	1,02,012	—	97	97	82,819	82,916	+ 19,096
Grand Total	31,80,642	10,48,501	42,29,143	3,71,835	2,26,791	5,98,626	35,43,535	41,42,161	+ 86,982

OGDC-APPRAISAL OF PERFORMANCE IN DRILLING PROGRAMME 1976-77

Sl. No.	Name of Well	Classification drilling	Rig No.	Rig Building	Targets for 1976-77			Achievement		Remarks/Reasons for not completing	
					Drilling	Production Testing	Total months	Footage to be drilled (Feet)	By 30-4-77 (Feet)		Expected by the end of 1976-77 (Feet)
1.	Toot-7	Development	305 3D	3 months 1st Oct. to 30th Dec. 76	6 Months Jan. 77 to 30th June 1977	Nil.	9	11,000	6,600	8,600	
2.	Toot-8	Do.	303 3D	3 Months Feb. 77 to April 77	2 Months May to June 77	Nil.	5	4,000	Nil.	Nil.	
3.	Toot-9	Do.	N-3	2 Months March to April 77	2 Months May to June 77	Nil.	4	7,000	Nil.	Nil.	Reasons for not completing targets is attached separately at Annexure
4.	Rodho-3	Do.	BU-75	2 Months March to April 77	2 Months May to June 77	Nil.	4	2,500	Nil.	Nil.	
5.	Dhodak-1	Exploratory	301 3D	Nil.	6 Months July to Dec. 76	1 Month Jan. 77	7	2,300	616	616	
6.	Pirkoh-1	Do.	F-125	Nil.	4 Months July to Oct. 76	2 Months Nov. 76 to Dec. 76	6	2,250	1,110	2,250	
7.	Kotrum-1	Do.	N-1	2 Months March to April 77	2 Months May to June 77	Nil.	4	7,000	Nil.	Nil.	
8.	Jhabi Dhok-1	Do.	N-4	2 Months April-May	1 Month June 77	Nil.	3	4,500	Nil.	Nil.	
								40,550	8,326	11,466	
								12,363	25,538		

**OIL AND GAS DEVELOPMENT CORPORATION
APPRAISAL PERFORMANCE 1976-77**

Annexure O-4

Name of the survey parties	Type of survey	Area surveyed		Achievement		
		Description	Location	Months	Upto 30-4-77	Expected by 30-6-77
1	2	3	4	5	6	7
Geological	1. Regional geological studies	.. Nadrakki EL.	Bannu, Kohat.	12 party months	645 L. Km	560 L. Km
	2. Detailed geological mapping	.. Thatta EL and	Mianwali.			
	3. Stratigraphic investigations.	.. Ranpathani LP.	Campbellpur, Thatta			
	4. Detailed structural studies	.. Dadu districts.				
					(Field operations completed on 7th May 1977).	

PERFORMANCE OF PRIVATE COMPANIES SURVEY IN 1976-77

Annexure O-5

Name of the Company (Operator)	Area leased out	Number of survey Parties deployed	Type of survey	Area surveyed
1. Pakistan Petroleum Ltd. and AMOCO Joint Venture.	6822 sq. miles.	One.	Geological field work.	200 sq. miles approximately.
2. Pakistan Texasgulf Inc Karachi ..	11, 120 sq. miles upto October 31, 1976.	One.	Seismic survey.	2250 sq. miles.
3. Pakistani Trexasgulf Inc (Trans Indus Petroleum Project).	468.24 sq. miles.	One.	Seismic.	Karak Block.
4. Marathon Petroleum Pakistan Ltd. (1976 concession).	9441 sq. miles.	One.	Marine Seismic and gravity.	311 line miles.
5. Marathon Potroleum Pakistan Ltd. (1976 Concession).	6011 sq. miles.	One.	Marine seismic and gravity.	1290 line miles.
6. Husky Oil (Pakistan) Inc.	6800 sq. miles.	A seismic ship was deployed to carry out offshore survey	Offshore seismic survey.	Offshore seismic survey carried out over 1664 sq. miles.

PERFORMANCE OF PRIVATE COMPANIES HOLDING CONCESSIONS IN DRILLING 1976-77

Name of the company (operator)	Area leased out	Region	Name of the well	Total depth of the well to be drilled (Feet)	Depth actually drilled (Feet)
1. Pakistan Petroleum Limited	.. Sui Mining lease ..	Baluchistan.	Sui well No. 22.	4920	4920
2. PPLAMOCO Joint Venture	.. 6822 sq. miles.	(Baluchistan Sind and Punjab).	Sui well No. 23 Adhi well.	4913 ..	4913 (to be started shortly).
3. Pakistan Texasgulf Inc.	.. .. 11,120 sq. miles upto Oct. 13, 1976. 7880 sq. miles at present.	Punjab, Sind and Baluchistan.	Nil.	Nil.	Nil.
4. Pakistani Texasgulf Inc. (Trans Indus Petroleum Project).	468.24 sq. miles.	Kohat and Campbellpur districts.	Karak No. I.	10,000	to be started shortly.
5. Marathon Petroleum Pakistan Ltd. (1973 Concession agreement).	9,841 sq. miles.	Makran Coast.	Jalpari.	12,000	6585
6. Pakistan Oilfields Limited	.. .. Meyal. Meyal.	Punjab. Punjab.	Well No. 6. Well No. 7.	13,424/ 14,211/	13,424 14,211

PRODUCTION, IMPORTS DISPOSAL OF OIL (1977-78) (ESTIMATES)

(All Figures in Tons)

Product	Availability of POL										Change in Stock
	Local Production	Import	Total Availability	Exports	Bunker	Total External	Domestic Consumption	Total Disposal			
100/130	—	6,100	6,100	—	—	—	6,100	6,100	—		
73 ON	—	2,400	2,400	—	—	—	2,400	2,400	—		
JP-4	97,000	—	97,000	—	—	—	72,000	72,000	+ 25,000		
MS	2,90,494	—	2,90,494	—	—	—	3,01,000	3,01,000	— 10,506		
HOBC	84,366	7,634	92,000	—	—	—	92,000	92,000	—		
Naptha	2,92,424	—	2,92,424	2,99,413	—	2,99,418	—	2,99,418	— 6,974		
Others	25,000	—	25,000	—	—	—	25,000	25,000	—		
Total (Light Distillates)	7,89,284	16,134	8,05,418	2,99,418	—	2,99,418	4,78,500	7,97,918	+ 7,500		
JP-1	3,33,430	—	3,33,400	—	1,37,000	1,37,000	1,66,000	3,23,000	+ 10,480		
S. K.	3,81,759	2,02,261	5,84,020	—	—	—	6,02,000	6,02,000	— 17,980		
H. S.	9,71,102	4,14,896	13,85,998	—	12,000	12,000	13,74,000	13,86,000	— 2		
LDO	2,59,035	—	2,59,035	—	5,000	5,000	2,45,000	2,50,000	+ 9,035		
Others	14,200	—	14,200	—	—	—	13,200	13,200	+ 1,000		
Total (Middle Distillates)	19,59,576	6,17,157	25,76,739	—	1,74,000	1,74,000	24,00,200	25,74,000	+ 2,533		
F.O.	16,20,480	—	16,29,480	9,18,480	1,00,000	10,18,480	6,11,000	16,29,480	—		
Total Fuel Products	43,78,340	6,33,291	50,11,631	12,17,898	2,74,000	14,91,898	35,09,700	50,01,598	+ 10,033		
Asphalt	1,22,306	—	1,22,306	—	—	—	1,22,306	1,22,306	—		
Others	96,100	—	96,100	—	—	—	97,100	97,100	— 1,000		
Grand Total	45,96,746	6,33,291	52,30,037	12,17,898	2,74,000	14,91,898	37,29,106	52,21,004	+ 9,033		

OIL AND GAS DEVELOPMENT CORPORATION TARGETS FOR EXPLORATION PROGRAMME 1977-78

Name of survey parties	Type of survey	Area to be surveyed		Physical Targets	Parties months
		Description	Location		
1	2	3	4	5	6
Geological	1. Regional geological studies	Lakki EL	Bannu	900 L. Km	18 party months
	2. Geological mapping	Chakwal EL			
	3. Structural investigations	Dadhar EL	D.I. Khan, Campbellpur		
	4. Stratigraphic investigations	Darya Khan EL Domanda EL (applied for)	Jhelum, Mianwali, Sargodha		
	5. Lithological investigations	Thatta EL and Petaro EL (applied for)	D.G. Khan, Thatta, Sibbi, Kalat and Karachi districts.		

GEOPHYSICAL

OIL AND GAS DEVELOPMENT CORPORATION TARGETS FOR EXPLORATION PROGRAMME 1977-78

Name of Survey Parties	Type of Survey	Area to be surveyed		Physical Targets	Parties Months
		Description	Location		
1	2	3	4	5	6
Gravity Party No. 1	Detailed Gravity Survey	(i) Thatta EL area. (ii) Choolistan EL area.	(i) Thatta and Badin distt. (ii) Bahawalpur and Rahim Yar Khan, Multan, Sahiwal, Dera Ghazi Khan, Bahawalpur and Muzaffargarh district.	4000 Stn.	7 months.
Seismic Parties No. 1, 2, 3, 4 and 5.	Detail and Semi details Seismic Survey. Reconnaissance and Semi detail	(i) Pari Wali PL (ii) Jabbi Dhok PL (iii) Surjan PL (iv) Banu PL (i) Tuziani EL (ii) Loti EL (iii) Lakki EL (iv) Choolistan EL (v) Chakwal EL (vi) Chakwal EL (vii) Pano Aqil EL (viii) Dhadar (ix) Johi.	District Campbellpur Do. District Dadu and Thatta District Banu and Kohat District Dera Ghazi Khan District Dera Bugti Tribel area District Bannu & D.I. Khan District Bahawalpur and Bahawal Nagar District Jhelum District Sukkur District Sibbi, Katat & Khachi District Dadu & Larkana	1600 Km	1st July 77 to 30th June 1978.

TARGETS OF PRIVATE COMPANIES FOR EXPLORATION IN 1977-78

Name of the Company	Area leased out	No. of survey parties to be deployed	Type of Survey	Area to be surveyed
1. Pakistan Petroleum Ltd. & AMOCO Joint Venture.	(822 sq. miles)	One	Geological field work	200 sq. miles approx.
	(Kandkhot South) (Rahim Yar Khan)	One	Seismic Surveys	750 sq. miles approx.
2. Pakistani Texasgulf Inc.	7880 sq. miles	Nil.	Nil	To be decided.
3. Pakistani Texasgulf Inc. (Trans Indus Petroleum Project)	468.24 sq. miles	One	Seismic	Dakhni Block
4. Marathon Petroleum Pakistan Ltd. (1973 Concession Agreement)	9841 sq. miles	One	Marine Seismic and gravity	Off shore part of Licensee only.
5. Pakistan Oilfields Ltd. (POL/AOC/Texas Gulf)	Lakhni 6,800 sq. miles	One (Seismic programme)	Geological (October 1977 to January 1978)	241 sq. miles.

OIL AND GAS DEVELOPMENT CORPORATION TARGETS FOR DRILLING PROGRAMME 1977-78

Annexure O-12

Name of Well	Place	Rig No. and origin	Date of Starting work	Expected date of completion	To be completed during 1977-78	To be started during 1977-78	Drilling to continue	Recent Depth in Feet	Estimated Depth to be drilled 1977-78	Ultimate Depth Proposed to be drilled	Test Drilling or development Drilling
1. Toot-7	.. Campbellpur Punjab	305 3-L USSR	Oct' 76	Aug' 78	—	—	Yes	6,660	5,570	15,088	Development
2. Toot-8	.. Do.	303 3-D USSR	Feb' 77	Jan' 79	—	—	Yes	—	9,500	15,088	Do.
3. Toot-9	.. Do.	I-3 USA	June' 77	March' 78	Yes	—	—	—	15,088	15,088	Do.
4. Toot-10	.. Do.	N-4 USA	July' 77	March' 78	Yes	Yes	—	—	15,088	15,088	Do.
5. Toot-11	.. Do.	N-4 USA	April' 78	Dec' 78	—	Yes	Yes	—	7,000	15,088	Do.
6. Jabi Dhok-1	.. Do.	N-3 USA	April' 78	Jan' 79	—	Yes	Yes	—	7,000	16,400	Exploratory
7. Kotrum-1	.. D.G. Khan Punjab	N-1 USA	June' 77	Feb' 77	Yes	—	—	—	15,750	15,750	Do.
8. Shahdad Pur-1	.. Nawabshah Sind	N-1 USA	March' 78	Nov' 78	—	Yes	Yes	—	7,800	15,088	Do.
9. Rodho-3	.. D.G. Khan Punjab	BU-75 USSR	June' 77	March' 78	Yes	—	—	—	5,250	5,250	Development
10. Dhodak-2	.. D.G. Khan	N-2 USA	July' 77	Jan' 78	Yes	Yes	—	—	9,200	9,200	Do.
11. Dhodak-3	.. Do.	301 3DUSSR	July' 77	Sept' 78	—	Yes	Yes	—	8,500	9,200	Do.
12. Dhodak-4	.. Do.	N-2 USA	Feb' 78	July' 78	—	Yes	—	—	9,200	9,200	Do.
13. Rodho-4	.. Do.	BU-75 USSR	April' 78	Dec.' 78	—	Yes	Yes	—	1,000	5,250	Do.
14. Loti	.. N.W.F.P,	F-125 Romanian	July' 77	June' 78	Yes	Yes	—	—	9,200	9,200	Exploratory
15. Nandrakki	.. Do	N-55 USA	Sept' 77	June' 78	Yes	Yes	—	—	9,200	9,200	Do.
									1,33,546		
									40,715		
Estimated Drilling Rate Per Day Per RIG .. 11.15 M											
= 36.6 Feet											

TARGETS OF PRIVATE COMPANIES FOR DRILLING DURING 1977-78

Name of the Company	Area leased out	Region	Name of the Well	Total depth of the well to be drilled	Depth planned to be drilled
1. Esso Eastern Inc. (Pak-Stan- vac Petroleum Project)	339.30 sq. miles of Mari Mining leases	Sind Distt. Sukkur.	Mari Deveiopment Wells: A three I (9 wells)	Each well is estimated to be a depth of 2500 feet.	22,500 feet (9 develop- ment wells).
2. Pakistan Petroleum Ltd. (PPL/AMOCO Joint Venture)	6822 sq. miles	Potwar	PPL/AMOCO Adhi Well 5	10,000 ft.	10,000 feet
3. Pakistani Texasgulf Inc. . .	7880 sq. miles	Punjab, Sind and Baluchistan.	One well (Not known)	Not planned	Not planned
4. Pakistani Texasgulf Inc. (Trans-Indus Petroleum Project).	468.24 sq. miles	Kohat & Campbellpur Districts.	Karak No. I	10,000 ft.	10,000 feet.
5. Marathon Petroleum Pak- istan Ltd. (1976 Conces- sion Agreement)	6011 sq. miles	Not known at this time.		12,000 ft.	12,000 feet
6. Husky Oil (Pakistan) Inc.	6,800 sq. miles	Offshore and onshore	(One well Name not known).	Not planned	To be decided.

Name of the Scheme	Provision for 1977-78
I. PETROLEUM CONCESSION	
<i>On-going Projects :</i>	
1. Pak. Stanvac Petroleum Project	20.036
2. Pakistan Oil field Ltd.	—
3. Amoco Pak. Exploration Co.	—
4. Wintershall Oil Company	0.003
5. Pak. Hunt Petroleum Project	—
6. Marathan Petroleum Pak. Limited 1973 Agreement	3.548
7. Marathan Petroleum Pak. Limited 1976 Agreement	6.713
8. Pakistan Petroleum Limited	9.700
9. Husky Oil Pakistan Limited	1.000
10. Union Taxes Oil Company	1.000
Total—(Petroleum Concession)	42.000
II. OIL AND GAS DEVELOPMENT CORPORATION	
11. Drilling (6 Development wells and 3 exploration wells)	205.400
12. Dhodak Topping Unit	70.000
13. Toot Mini Refinery	35.000
14. Dhodak condensate and gas pipeline	95.000
15. Technical Services Training (Including reservoir Study)	44.600
Total—(OGDC)	450.000
III. DIRECTORATE OF OIL OPERATIONS	
16. Pak. Arab Refinery	—
17. Hydro Carbon Development Institute	0.500
	*0.500
*In addition Rs. 528,000 million would be provided as follows :—	
(i) Private financing	396.000
(ii) Credit Budget	132.000
	528.000

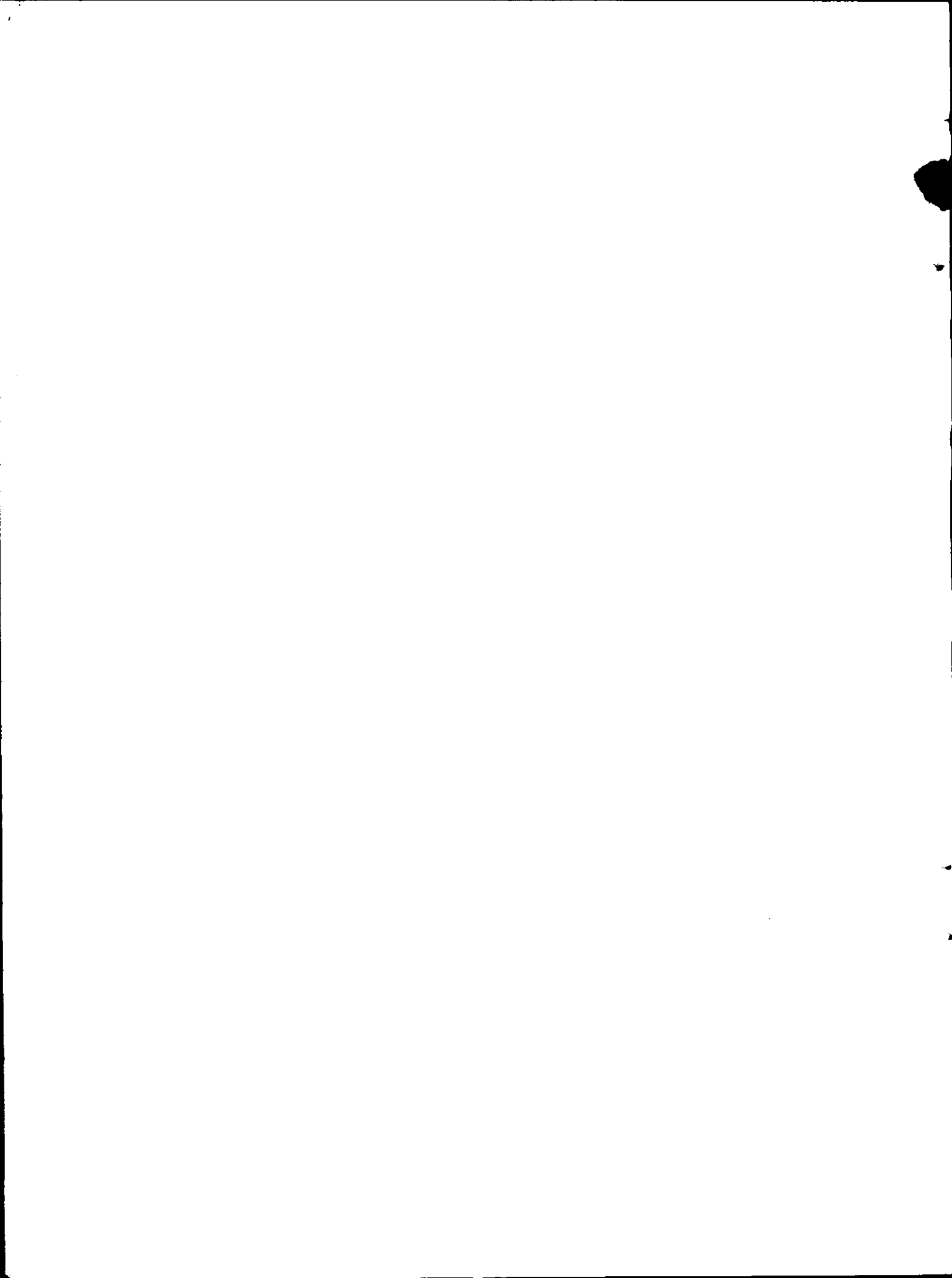
Name of the Scheme	Provision for 1977-78
IV. DIRECTORATE OF GAS OPERATIONS	
18. Project 4 SNGPL (App).
19. Distribution Development and Normal Capital Expenditure (Un-approved)
20. Supply of gas to new towns in SNGPL's area (Un-approved)
21. SGTC'S IRBP Pipeline Under Preparation
22. Sulphur Recovery Plant at Sui Continuous Programme
23. Supply of Gas to Jacobabad, Usta Mohd. and Tample Dera with ECNEC
24. Distribution Development Plan of KGC with ECNEC
25. Subsidy for Air-Mix LPG Project for Quetta by IGC
26. Subsidy for Air-Mix LPG Project for Larkana by IGC
27. Supply of gas to townships in Sind
Total—(Directorate of Gas Operations) ..	*
Total—(FUELS) ..	492.500

*Rs. 48.2 million outside ADP. In addition Rs. 200.000 million will be provided as follows :—

(i) IBRD	130.000
(ii) Credit	70.000
	<u>200.000</u>

CHAPTER 9—TRANSPORT AND COMMUNICATIONS

(287—288)



IMPORT AND SALE OF ROAD TRANSPORT VEHICLES

Year	Import				Sale					
	Trucks	Buses	Mini Wagons		Trucks	Buses	Mini Wagons			
			Goods Carrier	Pass Carrier			Goods Carrier	Pass Carrier		
1972-73	4,518	888	—	—	3,586	795	—	—
1973-74	8,310	2,932	1,009	1,601	3,909	2,443	947	1,370
1974-75	4,968	3,316	3,715	1,160	5,848	1,901	3,165	1,976
1975-76	6,700	2,430	5,148	6,190	3,305	2,438	3,219	2,467
1976-77*	598	1,512	—	—	3,343	920	7,631	2,478

PUBLIC SECTOR BUSES SALES

Year	No.
1972-73	482
1973-74	1,520
1974-75	1,288
1975-76	1,544
1976-77	—

*Provisional.

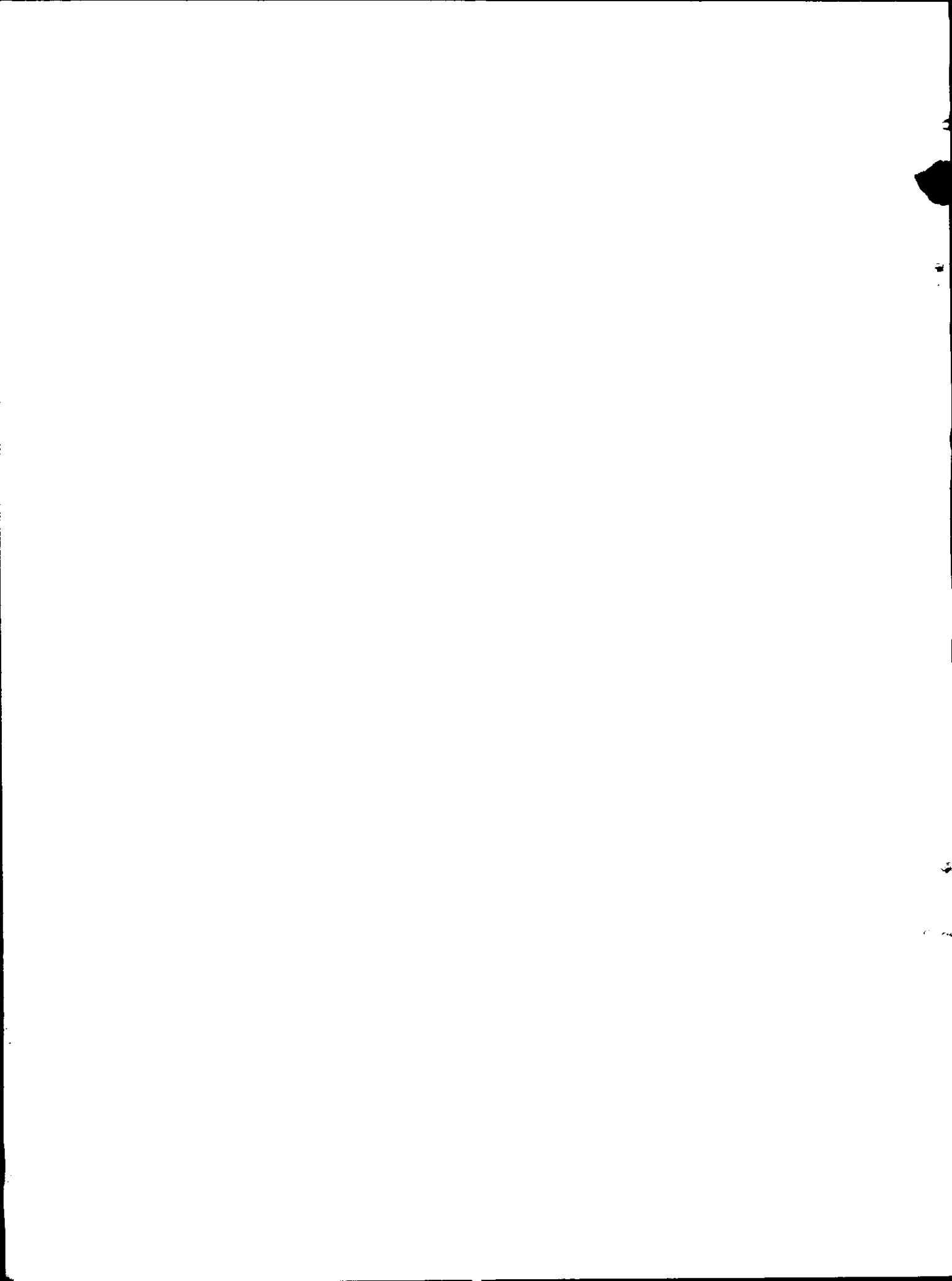
PERFORMANCE OF PIAC

Year	RPK's in Million			Dead weight RTK's in Million		
	International	Domestic	Total	International	Domestic	Total
1972-73	1,035	325	1,360	62	6	68
1973-74	1,145	448	1,593	69	11	80
% Increase	10.5	38.1	17.1	11.3	57.1	17.6
1974-75	1,673	558	2,231	115	12	127
%Increase	46.1	24.5	40.0	66.7	9.1	58.8
1975-76	2,251	686	2,937	132	13	145
% Increase	34.5	22.7	31.6	14.8	8.3	14.2
1976-77	3,200	883	4,083	146	16	162
% Increase	42.2	28.7	39.1	10.6	23.1	11.7

Year	ASK's in Million			Dead weight AFTK's in Million		
	International	Domestic	Total	International	Domestic	Total
1972-73	1,909	486	2,395	138	23	161
1973-74	2,296	630	2,926	151	29	180
%Increase	20.3	29.6	22.2	9.4	26.1	11.8
1974-75	3,162	865	4,027	280	38	318
%Increase	37.7	37.3	37.6	85.4	31.0	76.7
1975-76	4,188	1,077	5,265	291	41	332
%Increase	32.4	24.5	30.7	3.9	7.9	4.4
1976-77	5,353	1,317	6,670	360	60	420
%Increase	27.8	22.3	26.7	23.7	46.3	26.5

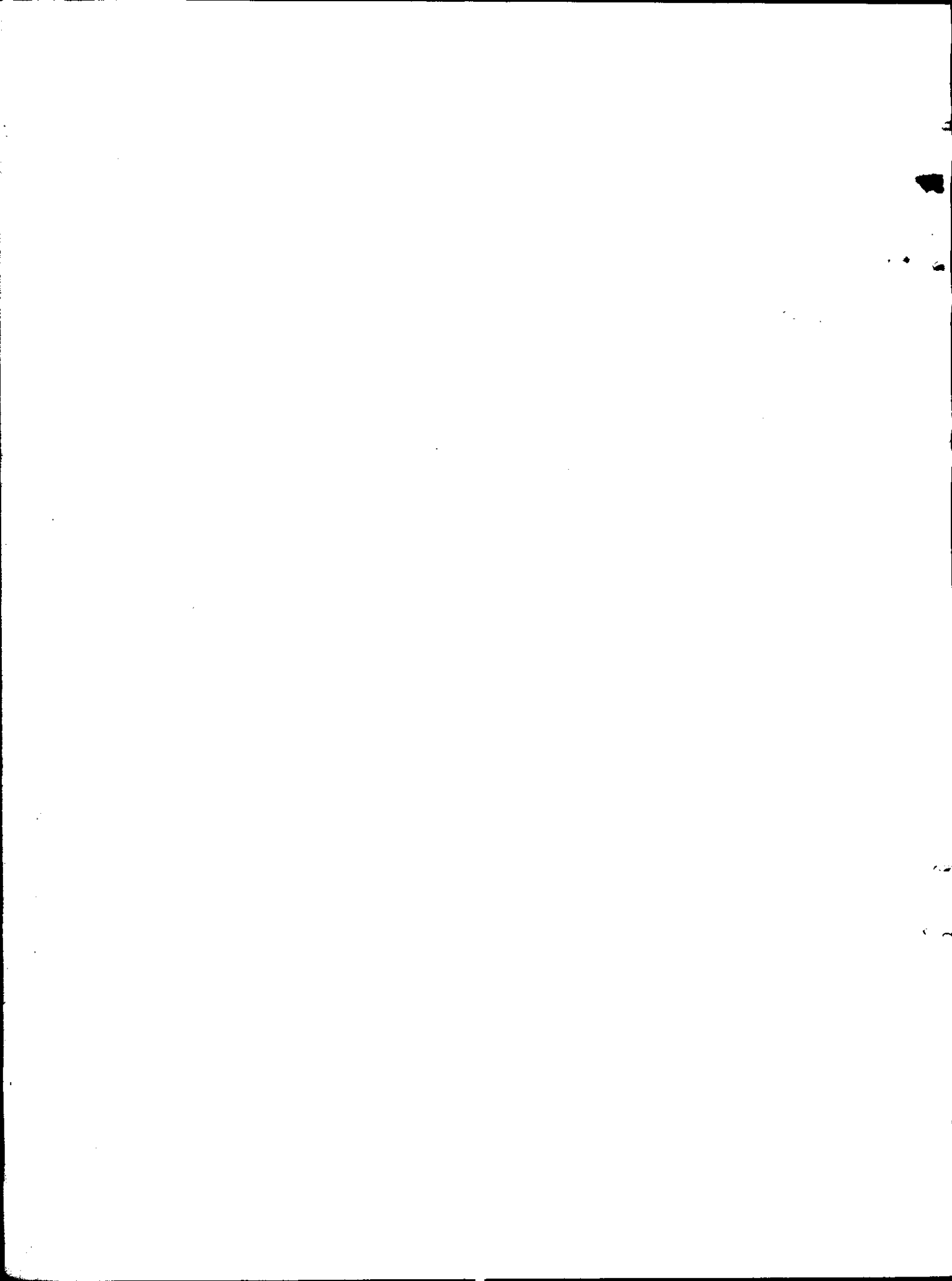
TELECOMMUNICATIONS**ACHIEVEMENTS DURING 1976-77 & PHYSICAL TARGETS FOR 1977-78**

	Position on 30-6-1976	Achieve- ment 1976-77	Position on 30-6-1977	Target 1977-78	Position on 30-6-1978
1. Telephones	2,49,000	20,000	2,69,000	15,000	2,84,000
2. Density per thousand population ..	3.5	—	3.57	—	3.62
3. Places provided with .					
(a) Telephone exchange ..	600	43	643	20	663
(b) Public Call Offices ..	409	197	606	50	656
(c) All places with telephone facilities	1,009	240	1,249	70	1,319
4. Trunk Positions	550	18	568	15	583
5. STD channels	1,364	236	1,600	—	1,600
6. NWD stations	—	13	13	15	28
7. Telex line units	3,300	—	3,300	—	3,300
8. VFT channels	1,568	—	1,568	—	1,568



CHAPTER 10—MASS MEDIA

(293—294)



A.D.P. ALLOCATIONS FOR PAKISTAN TELEVISION CORPORATION

S.No.	Name and Status of the Scheme	Estimated Cost		Estimated Expenditure upto 1975-76	Revised Estimates for 1976-77	Percentage Physical Achievement 1976-77	Provision for 1977-78	Foreign Exchange Component	Physical Targets for 1977-78 %
		Total	F.E.C.						
1	2	3	4	5	6	7	8	9	10
(a) On-going Schemes									
1.	Islamabad T.V. Station (Approved) ..	214.650	67.632	29.020	52.300	26	20.000	13.500	47
2.	Karachi T.V. Station (Approved) ..	133.120	46.871	44.338	20.000	49	20.000	11.500	75
3.	Lahore T.V. Station (Approved) ..	122.270	49.013	48.817	14.600	49	19.500	6.500	68
4.	Shujabad R.B. Station (Approved) ..	17.815	3.795	15.335	1.480	94	1.000	—	100
5.	Quetta T.V. Station (Approved) ..	113.020	40.307	48.759	5.000	21	6.900	1.500	54
6.	Peahawar T.V. Station (Approved) ..	108.320	40.468	43.346	5.000	31	10.000	—	54
7.	Shikarpur R.B. Station (Approved) ..	14.651	4.086	13.181	0.700	94	0.700	—	100
8.	Rojhan R.B. Station (Approved) ..	16.870	4.973	—	12.670	75	4.200	—	100
9.	Tandianl-Narran T.V. Link (Approved) ..	34.327	11.376	—	29.827	25	4.500	—	100
10.	Chishtian T.V. Translator (Approved) ..	6.667	1.500	—	2.000	37	3.300	—	100
Total (On-going Schemes)					143.577		90.100	33.000	
(b) New Schemes									
11.	Karachi-Gawader T.V. Link (Approved) ..	73.410	19.200	—	0.400		5.000	—	
12.	Education T.V. Scheme (Un-approved) ..	4.900	—	—	—		2.500	—	
13.	Modernization of Equipment (Un-approved)	2.072	1.100	—	—		1.000	1.000	
Total (New Schemes)					0.400		8.500	1.000	
Total (P.T.V.C.)					143.977*		98.600	34.000	

* Excluding other schemes for which special grants were given during the year.

A.D.P. ALLOCATIONS FOR PAKISTAN BROADCASTING CORPORATION

S.No.	Name and Status of the Scheme	Estimated Cost		Estimated Expenditure upto 1975-76	Revised Estimates for 1976-77	Percentage Physical Achievement 1976-77	Provision for 1977-78	Foreign Exchange Component	Physical Targets for 1977-78 %
		Total	F.E.C.						
1	2	3	4	5	6	7	8	9	10
(a) On-going Schemes									
1.	2-250 KW SW Transmitters, Islamabad (Approved)	29.248	15.785	21.889	0.568	95	0.200	—	100
2.	2-100 KW SW Transmitters, Islamabad (Approved)	20.078	11.210	13.354	0.788	95	0.200	—	100
3.	100 KW MW Transmitter, Muzaffarabad (Approved)	18.093	7.100	1.926	1.000	15	0.900	3.500	21
4.	Village Broadcasters (Approved)	12.000	0.100	0.311	1.400	15	2.000	—	31
5.	10 KW MW Transmitter, D.I. Khan (Approved)	14.131	2.319	3.239	0.100	23	1.700	0.050	35
6.	100 KW MW Transmitter, Karachi (Approved)	14.642	4.731	10.226	3.000	90	0.800	—	96
7.	Security Works (Approved)	4.237	—	—	2.566	60	0.100	—	63
8.	100 KW MW Transmitter, Khairpur (Approved)	17.846	4.153	0.094	3.825	22	10.400	0.100	80
9.	1000 KW MW Transmitter, Islamabad (Approved)	52.565	19.637	36.100	3.125	75	5.300	—	85
10.	Broadcasting House, Islamabad (Approved)	76.132	14.076	49.422	8.710	77	18.000	—	100
11.	300 KW MW Transmitter, Peshawar (Approved)	38.752	11.045	27.064	2.000	70	0.500	0.100	75
12.	Broadcasting House, Peshawar (Approved)	20.023	4.200	3.474	2.533	30	5.000	—	55
13.	Security Works R. Centre, Peshawar (Approved)	2.116	—	0.003	0.329	—	0.200	—	—
14.	Studio Transmitter Links (3) (Approved)	2.030	0.300	—	0.200	—	0.300	—	—
15.	Standby Generators (Approved)	5.007	2.573	0.094	1.100	—	0.800	—	—
16.	300 KW MW Transmitter, Khuzdar (Un-approved)	81.265	15.881	—	5.000	6	10.000	6.000	18
17.	Modernization of Equipment (Un-approved)	18.000	6.837	—	4.200	—	—	—	—
Total							40.444*	56.400	9.750

* Excluding other schemes for which Rs. 5.856 million were released in the supplementary budget.

CHAPTER 11—PHYSICAL PLANNING AND HOUSING

(297—298)

ADP 1976-77 : ALLOCATION AND UTILIZATION

(Million Rs.)

Executing Agency	Original Allocation 1976-77	Estimated expenditure	% Utilization
Baluchistan	31.269	16.123	51.50
N.W.F.P.	149.990	128.604	85.74
Sind	184.330	146.400	80.00
Punjab	534.610	495.969	92.78
Federal Government	474.335	489.577	103.20
Total	1374.534	1276.673	92.88

PROVINCE-WISE TARGETS AND ACHIEVEMENTS 1976-77

Sub-Sector	Unit	Punjab		Sind		N.W.F.P.		Baluchistan		Federal		Total	
		Targets	Achievements	Targets	Achievements	Targets	Achievements	Targets	Achievements	Targets	Achievements	Targets	Achievements
Plots													
(i) Urban Residential plots.	Nos.	55,000	31,000	25,000	25,000	5,000	—	2,000	2,000	15,000	2,000	102,000	60,000
(ii) Rural Residential plots ..	Nos.	62,000	192,000	—	—	—	—	—	—	—	—	192,000	62,000
Water Supply/Sanitation													
(iii) Urban Water supply/sanitation ..	Additional Population served (lakhs)	25.73	20.00	5.0	10.85	1.27	1.30	—	—	—	—	32.0	33.4
(iv) Rural Water supply/sanitation ..	Do.	7.33	5.35	1.20	3.11	4.20	2.00	0.40	0.11	—	—	13.13	10.57

MAJOR PHYSICAL TARGETS, 1977-78

Item	Unit	Punjab	Sind	N.W.F.P.	Baluch- istan	Federal Govt.	Total
1. Urban Residential plots	Nos.	57,000	25,000	5,000	—	13,000	10,000
2. Urban Water Supply	Additional Population (000 persons)	1,000	1,420	100	30	26	2,576
3. Urban Sewerage and Drainage	Do.	1,200	672	75	—	30	1,947
4. Rural Water Supply	Do.	760	760	500	20	310	2,350
5. Rural Sanitation	Do.	105	235	100	—	—	440
6. Govt. Servants Housing (including Islamabad)	Nos.	600	105	200	100	1,800	2,805
7. Govt. Offices and Buildings	Lakh Sq. ft.	5.68	1.38	1.72	1.00	2.00	11.78
8. Environmental Improvements of slum dwellers	Population to be benefitted (000 persons)	350	550	—	—	—	900

FINANCIAL ALLOCATIONS BY EXECUTING AGENCIES AND SUB-SECTOR 1977-78

Sub-Sector	Federal Govt.	Punjab	Sind	N.W.F.P.	Baluchistan	Total
1. Basic Devt., Regional and Town Planning ...	0.600	2.200	7.535	—	—	10.335
2. Agrovilles — ...	1.000	—	—	—	—	1.000
3. Low Income Housing ...	—	86.900	1.500	—	—	88.400
4. H.B.F.C. ...	65.000	—	—	—	—	65.000
5. Advances to Govt. Servants for House Building ..	30.000	—	—	—	—	30.000
6. Urban Water Supply/Sewerage ...	—	63.400	16.000	8.861	4.569	92.830
7. Rural Water Supply and Sanitation ...	—	86.000	35.000	51.811	5.766	178.577
8. Govt. Servants Housing ...	44.000	24.200	10.750	22.587	7.657	108.194
9. Govt. Offices and Buildings ...	16.493	45.500	15.985	21.662	12.853	112.493
10. Urban Development — ...	—	486.600	72.152	50.435	4.830	614.017
(Aid to Local Bodies for Water Supply, Housing and other Schemes)						
(i) Water Supply and Sewerage ...	—	208.000	29.652	8.957	—	246.609
(ii) Low Income Housing ...	—	28.200	4.000	21.000	—	53.200
(iii) Katchi Abadies ...	—	161.100	—	—	—	161.100
(iv) Roads and Bridges ...	—	85.300	—	—	—	85.300
(v) Others ..	—	4.000	38.500	20.478	4.830	67.808
11. Special Projects ...	—	—	7.722	0.526	—	8.248
12. Capital at Islamabad ...	146.500	—	—	—	—	146.500
13. Tourism ...	65.000	—	—	1.000	—	66.000
14. Interior Division ...	25.000	—	—	—	—	25.000
15. Frontier Constabulary ...	23.000	—	—	—	—	23.000
16. F.A.T.A. ..	22.000	—	—	—	—	22.000
17. Northern Areas ...	16.000	—	—	—	—	16.000
18. Azad Kashmir ...	17.081	—	—	—	—	17.081
19. Science and Technology ..	1.100	—	—	—	—	1.100
(GRAND TOTAL) —	472.774	794.800	166.644	155.882	35.675	1625.775

SUB-SECTOR-WISE ALLOCATION DURING 1976-77 AND 1977-78

PUNJAB

(Rs. Million)

S. No.	Sub-Sector	Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1.	Water Supply and Sewerage	263.300	49.25	357.400	44.97
	(a) Urban	207.400	38.80	271.400	34.15
	(b) Rural	55.900	10.45	86.000	10.82
2.	Low Income Housing	166.500	31.14	276.200	34.75
	(a) Plot Development	166.500	31.14	115.100	14.48
	(b) House Construction	—	—	—	—
	(c) Katchi Abadies	—	—	161.100	20.27
3.	Government Servants Housing	20.600	3.85	24.200	3.04
4.	Government Offices and Buildings	45.660	8.54	45.500	5.72
5.	Other Urban Development Projects	18.300	3.42	91.500	11.52
6.	Tourism	10.250	1.94	—	—
7.	Capital at Islamabad	—	—	—	—
8.	Others	10.000	1.86	—	—
	Total—Punjab	534.610	100.00	794.800	100.00

SUB-SECTOR-WISE ALLOCATION DURING 1976-77 AND 1977-78

SIND

(Rs. Million)

S. No.	Sub-Sector	Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1.	Water Supply and Sewerage ..	73.227	39.72	80.652	48.39
	(a) Urban	52.900	28.70	45.652	27.39
	(b) Rural	20.327	11.02	35.000	21.00
2.	Low Income Housing	3.500	1.90	5.500	3.30
	(a) Plot Development	3.500	1.90	5.500	3.30
	(b) House Construction	—	—	—	—
	(c) Katchi Abadies	—	—	—	—
3.	Government Servants Housing ..	15.050	8.16	10.750	6.45
4.	Government Offices and Buildings ..	15.005	8.14	15.985	9.59
5.	Other Urban Development Projects ..	40.000	21.70	46.035	27.62
6.	Tourism	—	—	—	—
7.	Capital at Islamabad	—	—	—	—
8.	Others	37.548	20.38	7.722	4.65
	Total—Sind ..	184.330	100.00	166.644	100.00

SUB-SECTOR-WISE ALLOCATION DURING 1976-77 AND 1977-78

N. W. F. P.

(Rs. Million)

S. No.	Sub-Sector	Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1.	Water Supply and Sewerage ..	52.638	35.09	69.629	44.66
	(a) Urban	12.248	8.16	17.818	11.43
	(b) Rural	40.390	26.93	51.811	33.23
2.	Low Income Housing	13.000	8.67	21.000	13.47
	(a) Plot Development	13.000	8.67	21.000	13.47
	(b) House Construction	—	—	—	—
	(c) Katchi Abadies	—	—	—	—
3.	Government Servants Housing ..	—	—	21.587	13.85
4.	Government Offices and Buildings ..	59.242	39.50	21.662	13.91
5.	Other Urban Development Projects ..	2.591	1.73	20.478	13.13
6.	Tourism	6.000	4.00	1.000	0.64
7.	Capital at Islamabad	—	—	—	—
8.	Others	16.519	11.01	0.526	0.34
	Total—N. W. F. P. ..	149.990	100.00	155.882	100.00

SUB-SECTOR-WISE ALLOCATION DURING 1976-77 AND 1977-78

BALUCHISTAN

(Rs. Million)

S. No.	Sub-Sector	Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1.	Water Supply and Sewerage ..	9.110	29.13	10.335	28.97
	(a) Urban	—	—	4.569	12.81
	(b) Rural	9.110	29.13	5.766	16.16
2.	Low Income Housing	0.700	2.23	—	—
	(a) Plot Development	0.700	2.23	—	—
	(b) House Construction	—	—	—	—
	(c) Katchi Abadies	—	—	—	—
3.	Government Servants Housing ..	9.600	30.71	7.657	21.46
4.	Government Offices and Buildings ..	10.559	33.77	12.853	36.03
5.	Other Urban Development Projects ..	—	—	4.830	13.54
6.	Tourism	—	—	—	—
7.	Capital at Islamabad	—	—	—	—
8.	Others	1.300	4.16	—	—
	Total—Baluchistan ..	31.269	100.00	35.673	100.00

SUB-SECTOR-WISE ALLOCATION DURING 1976-77 AND 1977-78

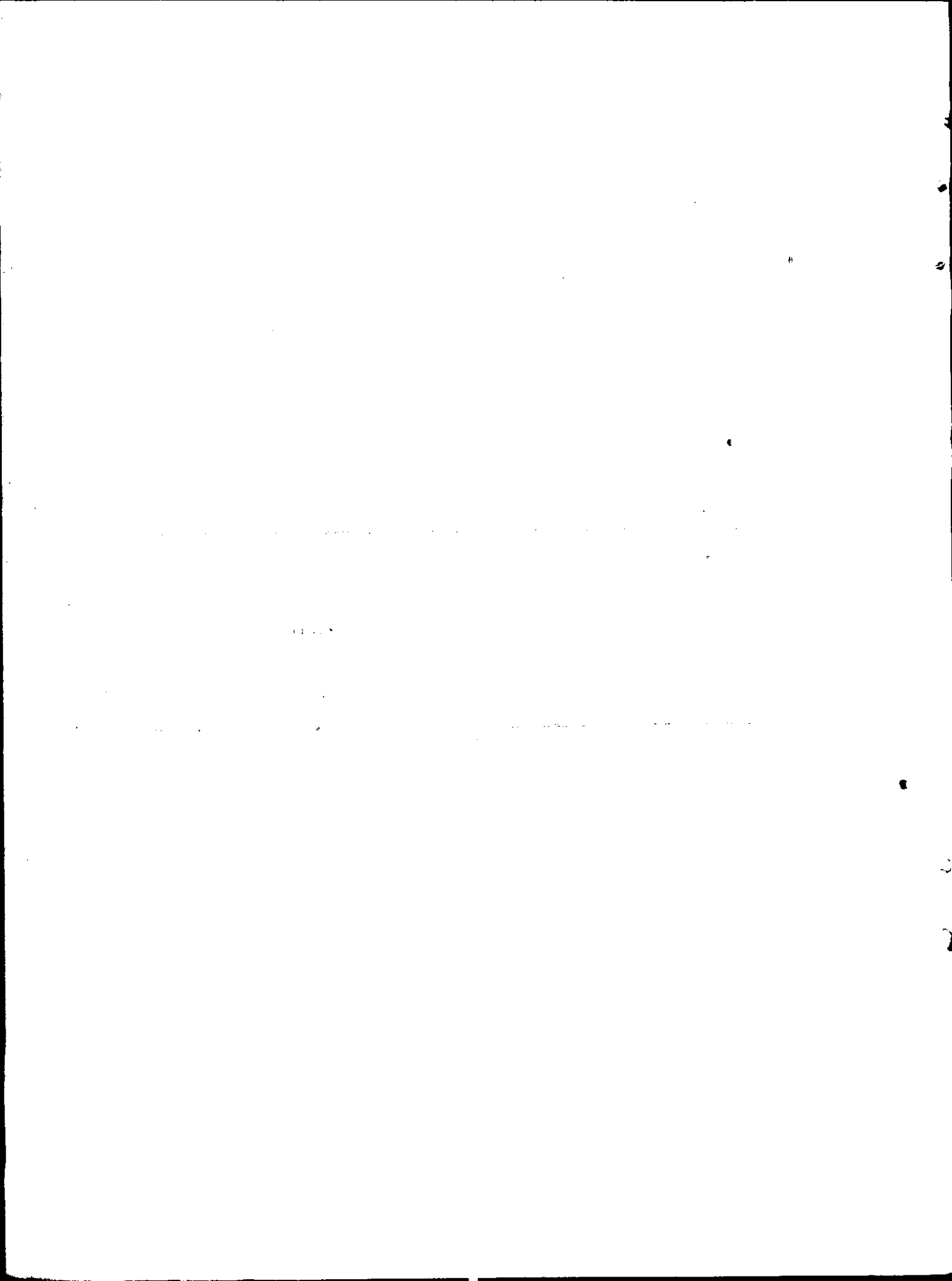
FEDERAL GOVERNMENT

(Rs. Million)

S. No.	Sub-Sector	Allocation in ADP 1976-77		Allocation in ADP 1977-78	
		Amount	%	Amount	%
1.	Water Supply and Sewerage ..	—	—	—	—
	(a) Urban	—	—	—	—
	(b) Rural	—	—	—	—
2.	Low Income Housing	110.00	23.19	95.000	20.09
	(a) Plot Development	—	—	—	—
	(b) House Construction	110.00	23.19	95.00	20.09
	(c) Katchi Abadies	—	—	—	—
3.	Government Servants Housing ..	37.424	7.89	44.000	9.31
4.	Government Offices and Buildings ..	11.476	2.42	16.493	3.47
5.	Other Urban Development Projects ..	1.500	0.36	1.600	0.38
6.	Tourism	36.900	7.88	65.000	13.74
7.	Capital at Islamabad	174.300	36.85	146.500	30.98
8.	Others	102.735	21.66	104.181	22.03
	Total—Federal Government ..	474.335	100.00	472.774	100.00

CHAPTER 12—EDUCATION AND TRAINING

(309—310)



SUB-SECTOR-WISE ALLOCATION AND REVISED BUDGET ESTIMATES FOR THE YEARS 1976-77

(Rs. in Million)

Sub-Sector	Federal government		Baluchistan		N. W. F. P.		Sind		Punjab		Total	
	Alloca- tion.	Revised Estimate	Alloca- tion.	Revised Estimate	Alloca- tion.	Revised Estimate	Alloca- tion.	Revised Estimate	Alloca- tion.	Revised Estimate	Alloca- tion.	Revised Estimate
1	2	3	4	5	6	7	8	9	10	11	12	13
Primary	36.720	14.545	4.486	3.924	19.927	17.260	14.650	9.181	13.800	3.563	89.583	48.473
Secondary	41.491	35.487	10.262	9.137	17.416	13.789	10.957	9.903	38.850	17.848	118.976	86.164
Teacher	2.400	2.686	1.000	1.000	2.000	1.846	1.600	0.337	13.350	9.659	20.350	15.528
Technical	2.700	1.700	1.600	0.546	3.907	4.894	19.350	18.995	33.895	24.375	61.452	50.510
College	21.799	22.835	3.579	1.153	16.835	14.332	7.940	6.735	23.450	14.081	73.603	59.136
University	26.200	27.861	3.000	5.000	10.026	20.280	7.500	6.500	14.480	9.030	61.206	68.671
Scholarship	26.240	24.100	—	—	4.700	4.700	3.500	3.500	27.500	19.937	61.940	52.237
Curriculum Books Library Examination & Guidance.	19.700	21.415	1.060	—	0.700	0.700	0.500	1.679	3.310	0.142	25.270	23.936
Federal Students Hostel	29.500	29.500	—	—	—	—	—	—	—	—	29.500	29.500
Miscellaneous	9.691	5.277	—	—	0.300	0.300	0.500	—	13.400	5.959	23.941	13.936
Sports & Archaeology and Culture	22.285	18.132	0.257	—	2.073	2.064	1.450	1.200	—	—	26.065	21.396
Islamabad Sports Complex	112.500	90.292	—	—	—	—	—	—	—	—	112.500	90.292
Planning Research Statistics	6.505	5.100	0.500	0.060	5.240	0.482	0.100	0.600	0.915	—	13.260	3.842
Establishment Division	2.650	2.250	—	—	—	—	—	—	—	—	2.650	2.250
Religious Affairs Division	10.000	—	—	—	—	—	—	—	—	—	10.000	—
Total	370.381	301.180	25.744	20.820	83.124	80.647	68.097	58.630	182.950	104.594	730.296	565.871

PERCENTAGE UTILIZATION OF EXPENDITURES FOR 1976-77

Sub-Sector	Federal Government	Baluchistan	N.W.F.P.	Sind	Punjab	Total
Primary	40	87	87	63	26	54.1
Secondary	85	89	79	90	46	72.4
Teachers	112	100	92	21	72	76.3
Technical	63	34	125	98	72	82.2
College	105	32	85	85	60	80.3
University	106	167	202	87	62	112.2
Scholarship	92	—	100	100	72	84.3
Curriculum, Books, Library, Examination, Guidance & Counselling	109	—	100	336	4	94.7
Federal Students Hostel	100	—	—	—	—	100
Miscellaneous	54	—	100	—	44	58.2
Sports, Archaeology & Culture	81	—	99	83	—	82.1
Islamabad Sports Complex	80.3	—	—	—	—	80.3
Planning Research & Statistics	68	12	9	600	—	28.8
Establishment Division	85	—	—	—	—	85.0
Religious Affairs Division	—	—	—	—	—	—
TOTAL	81	81	97	86	57	77.3

**SUB-SECTOR-WISE ALLOCATIONS AND REVISED ESTIMATES OF DIFFERENT FEDERAL GOVERNMENT
AND AGENCIES FOR 1976-77**

(Rs. in Million)

Sub-Sector	Allocations				Expenditure				% Utilization			
	Edu. Div.	AJK	FATA	Total	Edu. Div.	AJK	FATA	Total	Edu. Div.	AJK	FATA	Total
Primary ..	33.500	—	3.220	36.720	12.420	—	2.125	14.545	37.1	—	66.0	40.2
Secondary ..	28.270	6.600	6.621	41.491	24.098	5.402	5.987	35.487	85.2	81.8	90.4	85.5
Teacher ..	1.30	0.800	0.300	2.400	0.300	1.650	0.736	2.686	23.0	206.5	245.3	111.9
Technical ..	2.70	—	—	2.700	1.700	—	—	1.700	63.0	—	—	63.0
College ..	9.170	5.20	7.429	21.799	8.110	4.372	10.353	22.836	88.4	84.1	139.3	104.7
University ..	26.200	—	—	26.200	27.861	—	—	27.861	106.3	—	—	106.3
Scholarship ..	21.240	—	5.000	26.240	19.100	—	5.000	24.100	89.9	—	100	91.8
Curriculum, Books, Library and Exami- nation Guidance and Counselling ..	19.700	—	—	19.700	21.415	—	—	21.415	108.7	—	—	108.7
Federal Student Hostel ..	29.500	—	—	29.500	29.500	—	—	29.500	100	—	—	100
Miscellaneous ..	9.500	—	0.191	9.691	4.462	—	0.815	5.277	47.0	—	426.7	54.5
Sports, Archaeology and Culture ..	22.285	—	—	22.285	18.132	—	—	18.132	81.4	—	—	81.4
Islamabad Sports Complex ..	112.500	—	—	112.500	90.292	—	—	90.292	80.3	—	—	80.3
Planning Research and Statistics ..	6.005	0.500	—	6.505	3.907	—	—	3.901	65.0	—	—	60.1
Establishment Division ..	2.650	—	—	2.650	2.250	—	—	2.250	84.9	—	—	84.9
Religious Affairs Division ..	10.000	—	—	10.000	—	—	—	—	—	—	—	—
Total ..	334.520	13.10	22.761	370.381	264.740	11.424	25.016	299.987	79.1	87.2	109.9	81.0

SUB-SECTOR-WISE ALLOCATION : ANNUAL DEVELOPMENT PROGRAMMES 1976-77 AND 1977-78

(Rs. in Million)

Sub-Sector	Federal Govt.		Baluchistan		N.W.F.P.		Sind		Punjab		Total			
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78	1976-77	Allocation as % total	1977-78	Allocation as % total
Primary	36.720	95.649	4.486	2.704	19.927	52.042	14.650	23.150	13.800	32.025	89.583	12.3	205.570	26.7
Secondary	41.491	34.596	10.262	8.323	17.416	18.577	10.957	10.018	38.850	17.225	118.976	16.2	88.739	11.6
Teacher	2.400	10.319	1.000	5.146	2.000	3.000	1.600	4.310	13.350	17.330	20.350	2.8	40.105	5.2
Technical	2.700	8.400	1.600	—	3.907	6.295	19.350	23.345	33.895	22.683	61.452	8.4	60.723	7.9
College	21.799	21.012	3.579	5.037	16.835	14.174	7.940	6.835	23.450	9.797	73.603	10.0	56.855	7.4
University	26.200	37.987	3.000	3.000	10.026	11.920	7.500	5.700	14.480	25.400	61.206	8.5	84.007	10.9
Scholarship	26.240	27.660	—	—	4.700	7.500	3.500	3.500	27.500	20.000	61.940	8.5	58.660	7.6
Curriculum, Books, Library Examination, Guidance and Counselling	19.700	9.000	1.060	—	0.700	—	0.500	0.675	3.310	1.677	25.270	3.5	11.352	1.5
Federal Students Hostel	29.500	21.400	—	—	—	—	—	—	—	—	29.500	4.0	21.400	2.8
Repair of Educational Institutions	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous	9.691	6.155	—	1.495	0.300	1.360	0.550	0.329	13.400	10.354	23.941	3.3	19.693	2.6
Sports, Archaeology and Culture	22.285	28.300	0.257	0.200	2.073	0.500	1.450	0.600	—	4.700	26.065	3.6	34.300	4.5
Islamabad Sports Complex	112.500	75.000	—	—	—	—	—	—	—	—	112.500	15.4	75.000	9.8
Planning Research and Statistics	6.505	4.365	0.500	0.300	5.240	0.379	0.100	2.100	0.915	1.109	13.260	1.8	8.253	1.1
Establishment Division	2.650	2.990	—	—	—	—	—	—	—	—	2.650	0.4	2.990	0.4
Religious Affairs Division	10.000	—	—	—	—	—	—	—	—	—	10.000	1.3	—	—
Scientific and Technology Research Division	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ..	370.381	382.833	25.744	26.205	83.124	115.747	68.097	80.562	182.950	162.300	730.296	100	767.647	100

ANNUAL DEVELOPMENT PROGRAMME 1977-78
SUB-SECTORAL ALLOCATIONS OF ON-GOING AND NEW SCHEMES

(Rs. in Millions)

Sub-Sector	Federal Govt.		Baluchistan		N.W.F.P.		Sind		Punjab		Total			
	On-going	New	On-going	New	On-going	New	On-going	New	On-going	New	On-going	% Allocation	New	% Allocation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Primary	16.749	78.900	0.549	2.155	2.376	49.666	4.400	18.750	2.925	29.100	26.999	13.1	178.571	86.9
Secondary	29.896	4.700	4.637	3.686	5.137	13.440	6.493	3.525	14.675	2.550	60.838	68.6	27.901	31.4
Teacher	4.969	5.350	4.546	0.600	1.000	2.000	4.310	—	16.330	1.000	31.155	77.7	8.950	22.3
Technical	1.000	7.400	—	—	6.295	—	23.000	0.345	22.683	—	52.978	87.2	7.745	12.8
College	20.512	0.500	4.637	0.400	10.274	3.900	6.535	0.300	9.797	—	51.755	91.0	5.100	9.0
University	35.010	2.977	3.000	—	11.920	—	5.700	—	17.400	8.000	73.030	86.9	10.977	13.1
Scholarship	27.660	—	—	—	7.500	—	3.500	—	20.000	—	58.660	100	—	—
Curriculum, Books, Library, Examination Guidance and Counselling	7.900	1.100	—	—	—	—	0.675	—	0.177	1.500	8.752	77.1	2.900	22.9
Federal Students Hostel	21.400	—	—	—	—	—	—	—	—	—	21.400	100	—	—
Repairs of Educational Insti- tutions	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous	4.995	1.160	—	1.495	0.500	0.860	0.329	—	6.854	3.500	12.678	64.4	7.015	3.6
Sports, Archaeology and Culture	25.500	2.800	—	0.200	0.500	—	0.600	—	4.700	—	31.300	91.3	3.000	8.7
Islamabad Sports Complex	75.000	—	—	—	—	—	—	—	—	—	75.000	100	—	—
Planning Research and Statistics Establishment Division	4.365	—	0.300	—	0.279	0.100	2.100	—	1.109	—	8.153	98.9	0.100	0.1
	2.990	—	—	—	—	—	—	—	—	—	2.990	100	—	—
Total	277.946	104.887	17.669	8.536	45.781	69.966	57.642	22.920	116.650	45.650	515.688	67.2	251.959	32.8

SUB-SECTOR-WISE ALLOCATIONS OF FEDERAL GOVERNMENT 1977-78

Sub-Sector	Education Division	A.J.K.	F.A.T.A.	Total
Primary	88.700	—	6.949	95.649
Secondary	15.520	8.360	10.716	34.596
Teachers	7.200	1.950	1.169	10.319
Technical	7.700	—	0.700	8.400
College	9.150	2.271	9.591	21.012
University	37.987	—	—	37.987
Scholarship	21.960	—	5.700	27.660
Curriculum, books, library, examination, guidance and counselling	9.000	—	—	9.000
Federal Students Hostel..	21.400	—	—	21.400
Miscellaneous ..	5.040	—	1.115	6.155
Sports, Archaeology and Culture	28.300	—	—	28.300
Islamabad Sports Complex	75.000	—	—	75.000
Planning, Research and Statistics..	3.000	1.365	—	4.365
Establishment Division ..	2.990	—	—	2.990
TOTAL ..	332.947	13.946	35.940	382.833

CHAPTER 13—HEALTH

(317—318)

Annexure IALLOCATION IN ADP 1976-77 AND REVISED ESTIMATES BY EXECUTING AGENCIES
(HEALTH SECTOR)

(Million Rs.)

S. No.	Executing Agencies	ADP Allocation	Revised estimates	Percentage Utilization
1.	Health Division	428.747	247.735	57.8
2.	Azad Kashmir	9.245	9.646	104.3
3.	Northern Areas	6.300	6.129	97.3
4.	Federally Administered Tribal Areas	10.907	11.316	103.7
5.	Interior Division	0.500	0.500	100.0
6.	Planning & Development Division	2.000	1.800	90.0
7.	Science and Technology Division	3.110	1.200	38.6
8.	Baluchistan	11.200	10.000	89.3
9.	N.W.F.P.	81.100	72.383	89.3
10.	Sind	52.300	50.900	97.3
11.	Punjab	166.600	128.200	77.0
	Total ..	772.009	539.809	70.0

Annexure II

PHYSICAL TARGETS/ACHIEVEMENTS 1976-77 (HEALTH SECTOR)

S. No.	Category	Targets	Achievements	Percentage achievement
1.	Doctors	1,400	842	60.1
2.	Nurses	595	525	88.2
3.	LHVs	373	194	52.0
4.	Health Auxiliaries/Paramedicals (All categories)	2,404	1,706	71.0
5.	Community Health Workers	300	314	104.7
6.	Hospital Beds	3,574	2,024	56.6
7.	Rural Health Centres	65	44	67.7
8.	BHU's/dispensaries/M.C.H. Centres	369	97	26.3
9.	Training Schools	1	2	200%

Annexure III

PHYSICAL ACHIEVEMENTS IN THE HEALTH SECTOR

(Year-Wise)

(1970—1977)

S. No.	Category	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	Total
1.	Doctors	753	927	696	745	1,560	1,180	842	6,703
2.	Nurses	532	429	429	414	752	450	525	3,511
3.	Health Auxiliaries/ Para-Medicals (all categories) ..	835	885	974	822	1,086	1,090	1,900	7,598
4.	Community Health Workers	—	—	—	542	807	272	314	1,935
5.	Hospital Beds ..	503	275	1,790	2,247	2,300	2,400	2,024	11,540
6.	Rural Health Centres	8	7	9	12	22	62	44	164
7.	BHU's/dispensaries/ MCH Centres ..	20	25	36	36	50	390*	97	654
8.	Medical Colleges..	—	—	3	3	1	—	1	8
9.	Training Schools..	—	—	—	—	—	—	2	2

*Includes 220 dispensaries.

Annexure IV

DEVELOPMENT/NON-DEVELOPMENT EXPENDITURE ON HEALTH, SINCE 1970-71

(Million Rs.)

S. No.	Sector	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	Total
1.	Development ..	61.730	57.260	95.550	157.670	309.000	629.099	539.809	1850.118
2.	Non-Development ..	151.700	141.100	171.900	210.100	278.000	375.530	439.194	1767.524
	Total ..	213.430	198.360	267.450	367.770	587.000	1004.629	979.003	3517.642

RECURRING EXPENDITURE BY EXECUTING AGENCY

(Million Rs.)

Executing Agency	Revised Estimates 1976-77	Budget Estimates (1977-78)
Health Division	81.014	74.144
Azad Kashmir	0.459	0.489
Northern Areas	5.489	6.434
Federally Administered Tribal Areas	10.532	11.786
Baluchistan	32.500	42.900
N.W.F.P.	61.000	83.000
Sind	88.600	121.600
Punjab	159.600	218.200
Total	439.194	558.553

PHYSICAL TARGETS 1977-78 BY EXECUTING AGENCIES

S. No.	Category	Federal	Baluchistan	NWFP	Sind	Punjab	Total	Achievements 1976-77
1.	Doctors	159	70	150	1,700	580	2,659	842
2.	Nurses	100	50	46	100	300	596	525
3.	Health Auxiliaries*	325	208	429	200	1,200	2,362	1,900
4.	Community Health Workers	300	—	220	1,000	—	1,520	314
5.	Hospital Beds	250	90	218	1,300	760	2,618	2,024
6.	Rural Health Centres	5	9	4	14	3	33	44
7.	Basic Health Units/Dispensaries/ MCH Centres	75	42	153	84	175	529	97
8.	Auxiliary/Paramedical Training School	—	—	—	—	1	1	2

*Includes all categories.

ALLOCATION 1977-78 BY SUB-SECTORS AND EXECUTING AGENCIES

(Million Rs.)

S.No.	Sub-Sector	Health Division	Science and Tech.	Plann- ing and Dev. Division	Interior Division	F.A.T.A.	Nor- thern Areas	Azad Kashmir	Balu- chistan	N.W.F.P.	Sind	Punjab	Total	%
1.	Rural Health Programme	—	—	—	—	10.000	5.500	4.000	14.923	51.454	29.900	75.076	190.853	27.7
2.	Preventive Programme including Malaria	228.950	—	—	1.200	—	—	0.855	0.530	9.826	1.100	1.922	244.383	35.7
3.	Hospital facilities including teaching hospitals	19.730	—	—	—	5.000	3.000	2.000	1.014	28.623	11.453	43.842	114.662	16.8
4.	Health Manpower Development	43.800	—	—	—	—	—	2.000	0.150	10.143	26.727	33.670	116.490	17.0
5.	Medical and Nutrition Research	1.000	3.000	2.600	—	—	—	—	—	—	—	—	6.600	0.9
6.	Miscellaneous	—	—	—	—	—	—	—	—	2.193	—	9.159	11.352	1.7
	Total	293.480	3.000	2.600	1.200	15.000	8.500	8.855	16.617	102.239	69.180	163.669	684.340	100

CHAPTER 14—POPULATION PLANNING PROGRAMME

(323—324)

ALLOCATION/EXPENDITURE 1960—77

(Rs. in million)

Period								Allocation	Expenditure
1960—65	..	..	..	..	..	..	..	30.5	8.6
1965—70	..	..	..	..	..	..	..	148.2	144.7
1970—75	..	..	..	..	..	..	..	314.9	359.4
1975—76	..	..	..	..	..	..	..	189.5	189.5
1976—77	..	..	..	..	..	..	..	243.0	202.3*

*Initial estimate of the expenditure.

YEARLY SALE OF CONTRACEPTIVES 1960—78

Year	Conventional contracep- tives (million units)	Oral Pills (Million cycles)	IUD's	Steriliza- tions	Liquid Foam (Bottles)	Inject ables
1960-61	0.44	—	—	—	—	—
1961-62	0.70	—	—	169	—	—
1962-63	0.32	—	936	505	—	—
1963-64	0.64	—	469	351	—	—
1964-65	0.50	—	7,760	—	—	—
1965-66	27.6	—	186,996	1,644	—	—
1966-67	62.4	44,856	337,884	1,824	—	—
1967-68	96.0	20,088	425,952	14,556	—	—
1968-69	102.0	5,376	438,348	58,440	—	—
1969-70	102.0	4,848	342,960	10,296	—	—
1970-71	68.4	4,872	237,255	4,764	—	—
1971-72	25.2	59,544	124,380	3,312	—	—
1972-73	28.8	166,224	106,860	4,168	—	—
1973-74	48.0	1,264,656	91,884	4,128	—	—
1974-75	82.8	2,540,688	137,496	7,740	—	—
1975-76	148.2	5,154,415	224,576	13,835	—	—
1976-77	96.4	4,129,510	171,448	14,578	—	—
1977-78*	115.6	5,200,000	300,000	45,000	30,000	200,000

*Targets.