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Nepal
Public Expenditure Review
(In Five Volumes) Volume III: Social Sectors

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Education Sector Unit
South Asia Region

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CURRENCY

Currency	NRs/US$
1980	12.00
1981	12.34
1982	13.24
1983	14.55
1984	16.46
1985	18.25
1986	21.23
1987	21.82
1988	23.29
1989	27.19
1990	29.37
1991	37.26
1992	42.72
1993	48.61
1994	49.40
1995	51.89
1996	56.69
1997	58.01
1998	65.97
1999	68.25

Note: **The Nepali fiscal year runs from July 16 through July 15.**
Source: **IMF, International Finance Statistics (IFS), line "rf" (period average).**

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[a] **Starting November 30, 1985, the Nepali Rupee was linked to a basket of currencies. Subsequently in early 1992, a two-tier exchange rate system with partial convertibility was introduced. In February 1993, the dual exchange rate system was replaced by a unified market-determined exchange rate system providing de facto convertibility for all current account transactions.**

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ABBREVIATIONS AND ACRONYMS

BPEP	Basic and Primary Education Project
DALYs	Disability Adjusted Life Years
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HMGN	His Majesty's Government Nepal
HSEB	Higher Secondary Education Board
IDA	International Development Association
NGOs	Non-governmental Organizations
NLSS	Nepal Living Standards Survey
PFHP	Population and Family Health Project
SLC	Secondary Level Certificate
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme

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ACKNOWLEDGMENTS

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ECONOMIC DEVELOPMENT DATA

GNP Per Capita (US$, 1998): 210 **a/**

Gross Domestic Product (FY99) b/

	FY99		Annual Growth Rate (% p. a., constant prices)		
	US$ Million	% of GDP	FY86-90	FY91-94	FY95-99
GDP at Factor Cost	4754	96.5	4.8	5.6	3.9
GDP at Producers' Prices	4926	100.0	4.6	5.6	3.9
Gross Domestic Investment	956	19.4	19.8/c	21.9/c	22.8/c
Gross National Saving	700	14.2	12.2/c	14.2/c	14.2/c
Current Account Balance	-256	-5.2	-7.6/c	-7.6/c	-8.6/c

Output, Employment and Productivity

	Value Added, FY 99b/		Labor Force d/		V.A. per Worker	
	US$ Million	% of Total	Million	% of Total	US$	% of Average
Agriculture	1906	40.1	7.2	76.1	265	52.7
Industry	998	21.0	0.9	9.8	1072	213.5
Services	1849	38.9	1.3	14.0	1391	277.0
Total	4754	100.0	9.5	100.0	502	100.0

Government Finance e/

	NRs. billion	% of GDP	As % of GDP		
	FY99		FY86-90	FY91-94	FY95-99
Revenue Receipts	37.2	11.1	9.0	9.2	11.1
Total Expenditures	63.2	18.9	18.8	17.4	18.4
Regular Expenditures	31.8	9.5	6.4	6.5	9.0
Development Expenditures	31.4	9.4	12.4	10.9	9.5
Overall Deficit	-24.7/f	-7.4/f	-9.8	-8.2	-7.4
External Assistance	18.7	5.6	7.4	6.2	5.5
Domestic Borrowings	6.0	1.8	2.4	2.0	1.9

Money, Credit , and Prices g/

	FY94	FY95	FY96	FY97	FY98	FY99
	NRs. Billion outstanding, end of period					
Broad Money (M2) h/	69.8	81.0	92.7	103.7	126.5	152.9
Bank Credit to Government (net)	23.5	25.2	27.5	29.2	31.8	35.5
Bank Credit to Private Sector	32.3	44.9	57.7	64.7	76.8	90.8
	Percentage or index number					
Broad Money as % of GDP	35.0	36.9	37.2	37.0	42.6	45.7
Consumer Price Index (1983/84=100)	284	305	330	356	370	417
Annual Percentage Changes in:						
Consumer Price Index	9.0	7.6	8.1	7.8	4.0	12.7
Broad Money (M2)	19.6	16.1	14.4	11.9	21.9	20.9
Bank Credit to Government (net)	0.2	7.3	9.3	6.2	8.6	11.7

Bank Credit to Private Sector	35.1	38.8	28.7	12.0	18.8	18.2

a/ World Development Report 2000, The World Bank.

b/ National Accounts of Nepal 1999, Central Bureau of Statistics.

c/ Data for Gross Domestic Investment, Gross Domestic Savings and Current Account Balance are as percentage of GDP.

d/ Nepal Labor Force Survey 1998/99, Central Bureau of Statistics.

e/ Economic Survey FY99, Ministry of Finance.

f/ After "non-budgetary receipts" of Rs. 1.3 billion.

g/ Nepal Rastra Bank.

h/ Includes money supply (M1) and time deposits.

Balance of Payments (US$ Million)

	FY97	FY98	FY99
Exports of Goods & NFS	1295.0	1108.3	1061.9
Merchandise, fob	397.4	444.6	525.3
Imports of Goods & NFS	1854.7	1645.7	1495.9
Merchandise, cif	1642.3	1439.1	1290.6
of which POL products	126.5	154.0	128.6
Trade Balance	-1244.9	-994.6	-765.3
Non Factor Services (net)	685.2	457.2	331.3
Resource Balance	-559.7	-537.4	-434.0
Net Factor Income	5.0	13.0	25.0
Net Transfers	94.5	103.0	152.9
Current Account Balance	-460.3	-421.4	-256.1
Official Grants	170.8	176.3	171.4
Medium & Long Term Capital			
Gross Inflows	197.0	229.8	195.2
Principal Repayments	49.8	62.4	61.3
Miscellaneous Capital Flows	198.5	254.8	95.5
Overall Balance (-Increase)	-56.1	-177.0	-144.8
Gross Reserves (end year)	865	969	1128

Rate of Exchange

Period Average Rate (US$/NRs.)	57.03	61.95	67.95

Merchandise Exports (Average FY95 - FY99)

	US$ Million	% of Total
Woolen Carpets	147.9	35.5
Readymade Garments	112.1	26.9
Others	156.5	37.6
Total	416.4	100.0

Total External Debt,1998 a/

	US$ Million
External Debt	2646.0

Debt Service Ratio for 1998 a/

	% of current Receipts
Debt Service	7.1

IDA Lending, January 2000 i/

	US$ Million
Outstanding & Disbursed	1211.1
Undisbursed	253.6

i/ The World Bank.

NEPAL SOCIAL INDICATORS

	Latest single year			Same region/income group	
	1970-75	1980-85	1992-97	South Asia	Low-income
POPULATION					
Total population, mid-year (millions)	12.8	16.5	22.3	1,281.3	2,035.6
Growth rate (% annual average)	2.4	2.6	2.5	1.5	1.7
Urban population (% of population)	5.0	7.8	10.9	27.0	28.4
Total fertility rate (births per woman)	6.3	6.1	4.4	3.5	4.0
POVERTY					
(% of population)					
National headcount index	..	..	42.0	..	..
Urban headcount index	..	..	23.0	..	..
Rural headcount index	..	..	44.0	..	..
INCOME					
GNP per capita (US$)	120	170	220	380	350
Consumer price index (1995=100)	17	35	114	117	122
Food price index (1995=100)	..	33	111	..	..
INCOME/CONSUMPTION DISTRIBUTION					
Share of income or consumption					
Gini index	..	..	36.7	..	..
Lowest quintile (% of income or consumption)	..	..	7.6	..	..
Highest quintile (% of income or consumption)	..	..	44.8	..	..
SOCIAL INDICATORS					
Public expenditure					
Health (% of GDP)	..	..	1.2	0.8	1.0
Education (% of GNP)	1.5	2.6	2.8	3.0	..
Social security and welfare (% of GDP)	0.1	0.1	..	..	..
Net primary school enrollment rate					
(% of age group)					
Total	..	58	..	..	..
Male	..	79	..	..	..
Female	..	36	..	..	..
Access to safe water					
(% of population)					
Total	8	24	59	81	69
Urban	85	78	61	84	80
Rural	5	20	59	80	66
Immunization rate					
(% under 12 months)					
Measles	..	34	85	81	74
DPT	..	32	78	87	76
Child malnutrition (% under 5 years)	69	..	47	53	..

Life expectancy at birth					
(years)					
Total	43	49	57	62	59
Male	44	50	58	62	58
Female	43	48	57	63	60
Mortality					
Infant (per thousand live births)	160	125	83	77	82
Under 5 (per thousand live births)	234	180	117	100	118
Adult (15-59)					
Male (per 1,000 population)	482	376	274	219	274
Female (per 1,000 population)	476	395	314	212	255
Maternal (per 100,000 live births)	..	..	..	..	..

1999 World Development Indicators CD-ROM, World Bank

EXECUTIVE SUMMARY

The report

1. The population of Nepal suffers from extensive poverty and poor social conditions. An effective development strategy must give high priority to programs and policies that both raise the productivity of the labor force and improve the quality of life of the whole population. Education and health programs contribute centrally to these objectives. There are, however, other sectoral programs which also lay claim to the public resources available for investment. And, in turn, these resources which are generated both domestically and externally are constrained. In such a situation there is no alternative to prioritizing expenditures, both between sectors and within them. The central purpose of this report is to assess the extent to which the Government of Nepal is spending public money (including development assistance) in an appropriate and effective way to provide education and health services, and to develop recommendations for increasing the benefits from these investments.

The framework

2. Before detailing the current status of the education and health sectors in Nepal and the expenditures being made both by Government and by others, it is useful to consider briefly the grounds on which the use of public resources in these sectors can be justified. Conventionally, economists have used the arguments of both *economic efficiency* and *equity*. Subsidization is justified on grounds of economic efficiency when private markets are prone to failures, which prevent the aggregate result of individual decisions coinciding with social valuations. In the social sectors a reliance on individuals to purchase health and educational services *at their full cost* would result in the demand and provision being below socially optimal levels. The standard list of causes of market failure includes externalities, public goods, non-competitive markets and an absence of well-informed consumers or producers. An explicit concern with the social *equity* of the distribution of services, which would result from the sole operation of markets can also justify government interventions. However, each of these cases for subsidization needs to be made carefully. Presenting justifications for public expenditure is not the same as declaring that all public expenditures in the social sector are justified, or are all equally justified. For instance, subsidization of education and health expenditures may publicly be justified on equity grounds but in practice the subsidies may be captured largely or not less than proportionately by the richer sections of the population. Similarly, government interventions and subsidies may be justified on the grounds of externalities and public goods yet in practice be concentrated on types of education and health care where virtually all of the benefits are gained by the individual and few accrue to the rest of society. One purpose of this review is to assess the extent to which public expenditures in Nepal in education and health are currently distributed in ways which increase demand to socially desirable levels and/or improve social equity.

Education

3. The education system in Nepal is one of the youngest in the world and operates within a political democracy, which has been established only recently. Not surprisingly, while parts of the system have been well designed and are implemented effectively, others remain in an embryonic stage and are only partially effective. Overall, while enrolments and access to all levels of the system have improved dramatically over the past four decades, there is a general concern over the quality of schooling. Low participation and retention rates and high examination failure rates at each level are evidence that the

public education system, which caters to ninety percent of the population and virtually all of the poor, is not functioning as effectively as is desirable. This arises from limited amounts of resources and inputs, and the poor quality of many of these, but also from the often inefficient ways in which they are deployed and managed.

4. Government expenditure on education as a share of GDP continually increased between 1981 and 1993, from 1.4 to 2.5 percent, apart from a brief period in the late 1980s. The share then remained constant to 1997 when it increased to 2.7 percent and has remained at around that level since. Compared to India, which spends 3.9 percent of GDP on education the effort is low, though it is above that for Pakistan (2.2 percent) and Bangladesh (2.3 percent). As a share of total government expenditure the trend in education expenditure is generally similar having increased from 9.4 to 13.4 percent between 1981 and 1993 and remained around that level for the following four years before again increasing to 13.9 percent in 1996/97. However, the allocations have since fallen back to 13.1 percent. Compared to other countries in the region, Nepal allocates a slightly above average proportion of total government expenditure to education. However, the share is below that in almost every sub Saharan country.

5. Of the total allocation to education, the share for primary schooling, covering grades I–V, increased rapidly from just over one third of the total in 1980 to over one half in 1990. Shares for secondary and tertiary education fell at roughly equal rates. Since 1990, the primary share has remained largely between 53 percent and 56 percent. The main change in shares in the 1990s has been the increase for secondary (from 15.6 percent in 1992/3 to 23.0 percent in 1999/2000) at the expense of tertiary (from 30.9 percent to 20.3 percent). This has resulted from, on the one hand, the 'free secondary education' policy and the gradual increase in the numbers of teachers in community secondary schools being paid for by Government and, on the other, the conscious decision to limit increases to Tribhuvan University. Over the whole nineteen-year period there has been a very significant change in the allocations, particularly in the shares for primary and tertiary. In 1980/1 these were 38 percent and 36 percent in favor of tertiary while in the allocations for 1999/2000 they were 54 percent and 22 percent in favor of primary. In the future, as places increase at a greater rate in post primary schooling, the share for secondary will need to increase. If primary education is not to be squeezed, an increased proportion of the resources for tertiary education will need to be generated through cost recovery and other internal sources of finance.

6. Total expenditure per primary school pupil has been increasing through the 1990s and in 1996/97 stood at Rs. 1270. At constant prices, this 'unit cost' was 65 percent higher than in 1990/91 reflecting both increases in real teacher salaries and changes in student:teacher ratios. For secondary schooling, expenditure per pupil was Rs. 1644 in 1996/7 and 54 percent higher than in 1990/1. In tertiary education, unit costs vary significantly by field of study ranging from Rs. 1390 in Management and Rs. 2124 in Law to Rs. 38,000 in Agriculture and Rs. 46,000 in Medicine. Dividing total tertiary expenditure in 1995/6 by total enrolments at Tribhuvan University (including classes 11 and 12) gives an average cost of Rs. 13,239. However, subtracting the costs of the four professional Institutes which enroll just 4.6 percent the total, the expenditure per student was Rs. 7420. On that basis, unit cost ratios for primary, secondary and tertiary education are roughly 1.0:1.3:5.8. Sixty percent of enrollments in tertiary education are at the higher secondary level. Present arrangements for teaching this level of education appear to be financially inefficient.

7. How efficiently and equitably are these public resources allocated? Overall, the education subsidy as a share of household expenditure is higher for the poor than for the better off. However, in absolute terms it is lower. This implies that the expenditures as a whole cannot be justified on the grounds that they increase equity as they are currently allocated across levels of education and as access is

currently rationed between income groups. Current expenditures on higher secondary and tertiary education have a retrogressive effect on income distribution. Only 6 percent of students in higher education are from the 50 percent poorest households.

8. Since almost all children in the highest income group are in school and the size of families decreases by income group, in the future as long as the expansion of school places is at a higher rate than the growth of the age group the marginal benefits will increasingly accrue to the low income groups. This will be particularly the case for primary schooling. Increased *quality* of primary education is also particularly important for the poor. For children of higher income households, alternative*private* primary schooling exists if the quality of government schooling is low. This alternative is not available for the poor. Their only chance is in government schools. Beyond primary schooling there is a greater justification for the subsidization of secondary schooling than of higher education.

9. From the evidence of the externalities resulting from education in Nepal, public expenditure to provide *some varying* amounts of subsidy to each level of education is justified on the grounds of increasing social welfare through mitigating the effects of market failure. The evidence suggests that, on these grounds, the justification for subsidizing primary schooling is greater than for secondary schooling, which in turn is much greater than for higher education. Currently, the degree of subsidization is greater for higher education than for secondary. On both equity and efficiency grounds, justifications for subsidizing higher education in Nepal are limited. To the extent possible, subsidies at this level should be shifted away from the institutions towards the few students from the poorest 50 percent of households.

10. Overall, the experience of recent years and the results of revenue and expenditure projections suggest increases in real budgetary resources derived internally and externally of around five percent a year in the immediate future. *This is significantly below the increases that have been allocated to the Education sector over the past decade.* A fifteen- percent increase over the next three years would yield around Rs. 1100 million, or US$16 million. Around half of the development expenditures funded directly by Government take the form of counterpart funding for donor-supported projects. An additional US$3 million over the next three years is already preempted by the counterpart funding for the Basic and Primary Education Project II. The extent to which the rest could be used to fund additional activities depends largely on increases in the teachers' salary bill which in turn are influenced by the level of new recruitment and the increase in real salaries. Even in the best of circumstances, levels of discretionary resources will be low. In all, Government's efforts would best be served by reviewing the effectiveness of the resources being funded through the existing regular budget, developing strategies to attract more donor funding and taking steps to increase the absorptive capacity of the system to utilize it effectively, and devising ways to encourage greater household contributions at the higher levels of the system.

11 The first priority for Government in the education sector is to increase the effectiveness of current levels of expenditures. Overall, management of the education system is highly centralized and community interest groups such as parent-teacher associations are generally weak. The consequence is both a lack of accountability and little community feeling of school ownership. Where communities do show initiative is in starting schools which cover the first two or three years of primary school, but there is then the expectation that government will take over. Given the recent development of the education system compared to virtually all other countries, these characteristics are not surprising. The recent moves to strengthen decentralization through the transfer of additional powers to Village and District Development Committees, the devolution of more responsibilities to district officials plus the emergence of user groups across a range of activities from social forestry to savings and loans schemes suggest the beginnings of change. Experiences of other countries over the past decade to decentralize the

management and financing of the education system, particularly in Latin America, could provide useful lessons. The new Basic and Primary Education Project (BPEP II) will provide very useful lessons. Eighty percent of the Project's resources will flow according to priorities determined within the districts. Individual school improvement plans formulated by school-community groups are anticipated to be central to the planning process.

12. Prior to the expenditure of large amounts of additional resources, beyond those already planned for primary education, there is a need for policy analysis and decisions to be taken regarding the medium term structure of secondary education. Policy analysis might first concentrate on broad issues such as the desired/required proportions of the relevant age groups completing eight, ten and twelve years of schooling within various time periods. This would then set the framework for Government and donors to consider the financial requirements of secondary and higher education within a realistic phasing of their expansion. The financing of these levels will need to be a joint venture of Government and households with the level of subsidization lower at the University and targeted towards the small number of students from the poorest fifty percent of households. An essential complement to the required analytical work on the post primary education system will again be a required focus on issues of management and governance in the context of a more decentralized system of government and the need to capitalize on community initiatives.

13. Some progress has been made recently to improve the effectiveness of donor support. The new project in primary education (BPEP II) has two important characteristics in this regard. First, it is supported by a core group of donors each of which will provide finance for the project as a whole rather than for specific activities. Second, there is a general understanding that funding over a ten-year period could be available provided that project activities are effectively implemented. In the early years of this period the focus will be on primary schooling and in the latter it could switch towards lower secondary grades. This will require Government to conceptualize further the role and structure of the whole of the secondary cycle from grades 6–12 and resolve all of the issues involved in de-linking grades 11 and 12 from higher education.

Health

14. While substantial and increasing amounts of public money are being spent on health services in Nepal there is a common conception that both the quality and coverage of services are poor and that expenditures are having a limited impact on indicators of health status. Recent reviews of the health status of the population indicate that while improvements have occurred in recent decades, it remains very low. Among the five most populated countries of South Asia – Bangladesh, India, Nepal, Pakistan and Sri Lanka – Nepal comes last or next to the last on every important indicator, including infant and maternal mortality, child malnutrition, expectation of life at birth, access to safe water and the overall level of the burden of disease. There is an urgent need to review the allocation of public resources across activities, the potential roles of private and non government providers, the appropriate arrangements for providing public health services within the emerging structures of decentralization and the means of empowering communities to influence the provision and quality of services.

15. Public health expenditures (Government plus donor grants and loans recorded in the Budget) are very low in absolute terms but have been increasing. Expenditures were equal to 3.5 percent of total government expenditure in 1991/92 and had increased slightly to 3.7 percent in 1995/96. The allocation further increased to 4.9 percent in 1996/97 and to 6.5 percent in 1997/98. In 1998/99 the budgeted share fell to 5.6 percent. The increase in the share has resulted from an expansion of real expenditure, which

grew by 35 percent between 1991/92 and 1996/97 compared to a 29 percent growth in overall public expenditures. The share of health expenditure in total government expenditure and in GDP (1.26 percent) in Nepal is comparable with that in most other countries in the region, and higher than in Pakistan. Unfortunately, the regional comparisons provide little comfort. In the rest of the world only six countries, mainly small African countries, devote a smaller share of GDP to publicly financed health services than does Nepal.

16. The impact of the expansion of expenditures has been reduced partially by the high growth rate of population of around 2.4 percent a year. At constant prices, per capita health expenditures since 1991/92 have increased from Rs. 48 to Rs. 59. At current prices, per capita expenditure in 1998/99 was equivalent to US$2.54 a year. This level of expenditure is very low, and only in five other countries in the world is it lower. Per capita allocations in many similarly poor countries such as Tanzania, Sierra Leone, Malawi, Niger and Uganda are higher and for sub Saharan Africa as a whole they are twice as high. Further, while the health expenditure share has increased through the 1990s, that of water supply fell significantly from 5.1 percent to 2.9 percent of the total between 1991/92 and 1996/97. There is considerable evidence within the region that clean water and sanitation are closely associated with health status.

17. It is in the elimination of infectious diseases and improvement in maternal and child health conditions, that the economic rationale for public sector interventions are most valid and that the higher than proportional incidence for the poor provides an additional rationale on the grounds of equity. It is also from success in these areas that any major reductions in the (recently analyzed) burden of disease will result. However, one third of the burden of disease results from non-communicable diseases and other conditions. While the argument for public sector interventions on grounds of economic efficiency are not so strong for these (apart from arguments based on the absence of insurance markets for catastrophic risks), the equity justification argument may apply if the interventions are included within the definition of the minimum coverage of access to health care. The upshot is that while all arguments suggest that the overwhelming priority in the allocation of public resources be given to the prevention and treatment of non communicable and maternal and child health conditions, some justification exists for some level of subsidization of other conditions, at least *for those economically most in need.* Operationalizing the equity criteria requires care.

18. Overall, the changing allocations in public expenditures which until recently have been towards urban hospitals and away from rural facilities probably run contrary to the trends which would be implied by considerations of the justifications for public expenditure. This has been the case particularly in the development budget. The available data suggest strongly that the subsidization of higher level facilities such as hospitals benefits the higher income population disproportionately. If subsidization of health services is to be based on the rationale of equity, its pattern must be one which actually benefits the lowest income groups more than proportionately. For this to occur there will need to be greater targeting in the location of facilities with a greater focus on providing facilities in rural areas rather than spending a large proportion of public money on urban hospitals. In addition there is a need for means-based instruments of cost recovery for hospital-based treatment.

19. Certainly publicly funded hospitals must play an important role in providing facilities beyond primary care for the rural poor, and also for the Nepali middle class in cases of rare but expensive clinical care. However, given the strong public finance arguments for subsidizing infectious diseases and reproductive and child health programs, their overall importance in the overall patterns of mortality and illness, and the evidence from the Nepal Living Standards Survey that public hospitals are used more by

members of higher income households than of poorer households, the changes in the relative allocations between primary health care and (particularly urban) hospitals would not seem to be justified. The allocations in 1998/99 and 1999/2000 budgets appear to reverse the trend, though the very large increases in the regular budget allocations for the health services subsector now raise the issues of long-term sustainability.

20. The public sector and public expenditures in Nepal will not be able to provide all of the health services required in the immediate future, even for the poor. Planning the allocation of public resources needs to take place within a full understanding of the provision in the non-government, profit and non-profit, sector *and* of the effects of government actions on the behavior of that sector. Government can improve the health status of the citizens of Nepal not only by providing more public resources and allocating and using them more efficiently but also by taking measures that will encourage and enable other providers of health services to expand their activities.

21. In the future, attention on three areas is required if public sector expenditures are to have an increased impact on health status in Nepal:

(a) *greater efficiency in the use of existing resources within the existing pattern of allocation.* While public resources for the health sector have increased over the past decade, there is a general belief that efficiency in the way that they are used has not increased. The results of a recent Facilities Survey indicate that inputs are not being optimally combined and are often wasted. This implies the need for major reforms in the deployment of staff, equipment and drugs which in turn requires increased institutional capacity for planning and program coordination at the center and in the districts;

(b) *more resources from all sources.* Only when progress in increasing efficiency has been achieved will additional resources be justified and more easily procured from Government, donors and patients. Conversely, if the absorptive capacity of the public sector remains low, pressure to increase budgetary allocations will be justifiably resisted, donors will not be prepared to increase support (and may reduce it) and patients will resist measures of cost recovery; and

(c) *a more rational allocation of both existing and increased resources.* Five interventions would address 65 percent of the total estimated disease burden in Nepal: the extended program of immunization, safe motherhood, improved nutrition, and programs to prevent and cure tuberculosis and leprosy. Adding in programs for malaria and hepatitis would cover 75 percent of the burden. Public expenditure on each of these can be justified on the grounds of market failures, resulting from externalities and public goods. In addition the disease and illness levels reduced by these interventions would disproportionately benefit the poorest sections of the society. Current allocations do not adequately reflect this situation and the trend, until very recently, at least of development expenditures, appears to be in the opposite direction with increased priority being given to curative services in urban hospitals. Calculations undertaken for the Operational Issues study indicate that interventions in these areas would require annual expenditures of around four US dollars per capita. While not all of these programs need to be, or indeed are, provided by the public sector, this requirement can be compared with the US$2.5 – 3.0 annual per capita *total* expenditure currently financed from public funds. Even with increases in Government funding and continued donor support, it is obvious that little would be available for clinical care and referral services. The main justification for providing these services is based on the lack of insurance markets and on considerations of equity and given the concentration of

poor people in relatively remote regions, and the lack of non-government provision in these areas, any increase should be very tightly concentrated on these regions. Currently, this is not the case. Cost recovery measures tied to improved quality of service will need to be the main source of increased funds for curative services in the better-off regions and in urban areas. The encouragement of a competitive and low cost private sector in urban areas would also enable public resources to be shifted to areas where they are more effective in reducing overall levels of illness and disease, and more accessible to the poor.

22. Similar to all of the social services in Nepal, the development of a national health service is very recent and has had to take place within a country with low levels of national income and government revenues. Over the past forty years much has been achieved by government, donors and by a variety of other providers. In some ways this delayed start and the variety of experiences which the range of providers has been able to bring has been advantageous and there are many examples in the country of health provision which is innovative, cost effective and exemplary. This review, however, has highlighted some of the areas in which further attention is now required. First there is the need when planning the public sector to have a full understanding of the current provision and future plans of the private and non-government sectors. These currently provide one quarter of all health services. Second, the government needs to give further consideration to the limited objectives of publicly financing health care. Generally these are to provide for the poorest groups in general and for services which have wide societal benefits such as preventing and treating infectious diseases. In addition, though lower in importance, a case can be made for financing treatments of conditions, which are rare and expensive to treat, particularly in countries such as Nepal where insurance markets are thin. The economic and social circumstances of the population in Nepal, the evidence from the burden of disease and the very restricted amounts of public resources strongly suggest that the bulk of expenditure should be devoted to conditions which disproportionately affect the poor and have wide societal costs. And that remaining resources be focused on preventing and treating the non-communicable illnesses of the poor. Recent trends in the patterns of expenditure do not correspond as closely as they might to these principles. The use of government resources to provide treatment for non-communicable illnesses of those who can afford to pay needs to be restricted at this time. This does not imply that government should not provide services for the whole population but rather that the level of subsidy should vary across income groups. Finally, the converse situation might also be considered. That is, government might finance activities which are delivered by private and non-government bodies if that is more cost effective than providing the service directly.

23. Over the next few years, for the health sector in Nepal, greater efficiency in the use of resources within the existing allocation pattern, changes in that pattern and an increased focus on the quality of health services will be as important as increasing the amount of resources. These messages are not new. In general, they support the conclusions of several recent reports on the provision of health services in Nepal.

Final comment

24. The financing of the social sectors in Nepal needs to be analyzed in the context of two broader issues. The first is the role of the social sectors in Nepal's overall development and poverty reduction strategy, and the second is the appropriate role which the government should adopt in their provision and financing. Universalization of basic education and a greater effort in the area of reproductive health (which indirectly would reduce population growth) are essential for the country's development strategy. A reduction in the causes of the major sources of the burden of disease, which affect the poor disproportionately, is also essential but may result more from increasing the cost effectiveness of existing

expenditures than from major additions. While a justification can be made for the expansion of secondary education and health care and, less strongly, for tertiary levels of provision in both sectors in terms of their impact on development and poverty, it is not clear that these interventions have a stronger impact on poverty alleviation than do increased supplies of clean water, small scale irrigation or minor roads. This leads to the second issue which is the roles of government and households in financing social services and the roles of government and the non-government sector in providing them. This review began by presenting the conventional arguments which are made to justify public expenditures on education and health. These largely center around social equity and economic efficiency, in the sense that there may be wide societal benefits from an activity which would be lost if the demand for it depended on individuals having to pay the full cost. At issue is the *degree* of public subsidization and it is not clear on the grounds of economic efficiency that education and health services beyond a basic level justify high levels. Subsidization based on equity considerations requires an effort in targeting. Once the justification has been made for the government to fund an activity, the issue remains of who is to provide it and how. As the process of decentralization further evolves in Nepal and government relationships with NGOs and the private sector strengthen, the opportunities to experiment and for communities to influence the choice and accountability of providers will increase. Given the paucity of resources and the enormous needs and demands being made of the social sectors, the determining factor in raising social indicators in Nepal is mainly the extent to which more effective ways of managing existing resources can improve the quality of services and raise the level of outcomes.

I. INTRODUCTION

A. THE NATURE OF THE REVIEW

1.1 The population of Nepal suffers from extensive poverty and poor social conditions. An effective development strategy must give high priority to programs and policies, which both raise the productivity of the labor force and improve the quality of life of the whole population. Education and health programs contribute centrally to these objectives. There are, however, other sectoral programs that also lay claim to the public resources available for investment. And, in turn, these resources which are generated both domestically and externally are constrained. In such a situation there is no alternative to prioritizing expenditures, both between sectors and within them. The central purpose of this report is to assess the extent to which the Government of Nepal is spending public money (including development assistance) in an appropriate and effective way to provide education and health services, and to develop recommendations for increasing the benefits from these investments.

1.2 These issues have to be considered within three specific contexts. First, over the next four or five years, the growth rate of both the economy and resources for Government programs is likely to be around five percent a year in real terms. In the past few years, public expenditures in the education and health sectors have increased at rates higher than this and higher than those of public expenditures overall. Any further increases above five percent a year would require lower than average increases for some other sectors and would need to be based on sound justifications. Second, it is important that analyses of public expenditures and government policies for the social sectors acknowledge that some education and health services are provided outside of the public sector and that public expenditures are only part of overall expenditures spent on providing and accessing these activities. Some estimates suggest that public expenditures on health are less than household expenditures and are equal to sixty percent of the total expenditure in education. Third, expanded and higher quality provision in the education and health sectors can be gained by increasing program efficiency as well as by increasing expenditures.

1.3 While per capita public expenditures on education and health are low in Nepal compared to those in most other countries, the aggregate amounts are equivalent to around US$200 million a year and are much higher than expenditures in any other category of government developmental expenditure. The importance of these expenditures requires periodic re-assessment of their size and distribution and of the extent to which they continue to reflect the importance which is given to achieving the sets of particular objectives adopted by Government. In assessing public expenditures on education and health in Nepal, the fundamental questions are:

(a) What should be the role of government in Nepal in financing and providing education and health services and what are the implications of this for the degree of subsidisation for each part of the sectors?

(b) What are the Government's several objectives in the sectors and how do they relate to the justifications for financial involvement?

(c) Given the justifications and the objectives, is the level of public expenditure and its distribution relatively optimal?

(d) How effective and efficient are publicly funded activities and programs in meeting Government objectives and in responding to the rationale for Government involvement and what are the major constraints to improving their outcomes?

1.4 More simply, is the level of public expenditure appropriate in the context of the population's education and health status, alternative sources of expenditure and competing demands for public resources? Is the distribution of public resources between the various components of the education and health delivery system, across regions and between inputs, appropriate? Are the inputs funded by public resources used efficiently?

B. WHY PUBLIC EXPENDITURE IN EDUCATION AND HEALTH

1.5 Before detailing the current status of the education and health sectors in Nepal and the expenditures being made both by Government and by others, it is useful to consider briefly the grounds on which the use of public resources in these sectors can be justified. Conventionally, economists have used the arguments of both *economic efficiency* and *equity*. Subsidization is justified on *efficiency* grounds when private markets are prone to failures which prevent the aggregate result of individual decisions coinciding with social valuations. In the social sectors a reliance on individuals to purchase health and educational services *at their full cost* would result in the demand and provision being below socially optimal levels. The standard list of causes of market failure includes externalities, public goods, non-competitive markets and an absence of well-informed consumers or producers. An explicit concern with the social *equity* of the distribution of services, which would result from the sole operation of markets, can also justify government interventions. However, each of these cases for subsidization needs to be made carefully. None justifies the complete subsidization of *all* health or education services. Further, analyses of the results of market failures and the inequities which would arise from the operation solely of private markets need also to identify the types of intervention likely to correct for these failings.

1.6 Across the full range of health services, private markets fail to work to different degrees. Disease control measures such as spraying are generally regarded as being close to pure public goods, and are unlikely to be provided by the private sector. Infectious disease control and certain immunization programs result in large externalities. In general, preventative care is often undervalued by individuals because of inadequate information. In all such cases, provision determined solely by private valuations would almost certainly result in levels lower than are socially desirable. Curative health services are not public goods, and apart from for infectious diseases, are less likely to result in externalities. A functioning market for such services is more likely. Even in this case, however, the imperfect information of consumers (patients) often resulting in the need to trust the judgment of the sellers (health service providers) often fails to ensure appropriate care at the lowest prices. In addition, the high cost of treating particular illnesses together with a lack of insurance markets results in a fear of exposure to great financial risk leading to large welfare losses. In education, the main causes of market failures are externalities. Further, when the private costs of education are borne by parents and the future benefits accrue to children or to the parents of male children only, underinvestment from a societal viewpoint is likely. Imperfect credit markets, which would allow borrowing against anticipated future increased earnings again, limit the demand for education below the amount which would be socially justified. In higher education, an additional area of market failure is in the funding of basic research.

1.7 Public interventions in the supply of education and health services can also be justified on the grounds of promoting *social equity* and *alleviating poverty*. The responsibility to foster *cultural*

awareness and *national harmony*, and to respond to democratic mandates, are additional objectives for most governments and again can be used to justify subsidization of particular types of social expenditures.

1.8. Presenting justifications for public expenditure is not the same as declaring that all public expenditures in the social sector are justified, or are all equally justified. For instance, subsidization of education and health expenditures may publicly be justified on equity grounds but in practice the subsidies may be captured largely or not less than proportionately by the richer sections of the population. Similarly, government interventions and subsidies may be justified on the grounds of externalities and public goods yet in practice be concentrated on types of education and health care for which virtually all of the benefits are gained by the individual and few accrue to the rest of society. One purpose of this review is to assess the extent to which public expenditures in Nepal in education and health are currently distributed in ways which increase demand to socially desirable levels and/or improve social equity.

1.9 The main body of the rest of the report is organized into separate sections on Education and Health. Each begins by discussing the current status, priorities and problems of the sector, moves to a description and analysis of current expenditures and trends, including assessments of effectiveness and the constraints to improved performance, and then considers the expenditure patterns in the context of Government objectives. In the final part of each section, the implications of the analysis are drawn and recommendations are made for changes in resource allocation and reductions in the constraints. In the final section of the report, some wider issues and considerations relating to the longer term development of education and health in Nepal are signaled.

II. EDUCATION

Overview

2.1 The education system in Nepal is one of the youngest in the world and operates within a political democracy that has been established only recently. Not surprisingly, while parts of the system have been well designed and are implemented effectively, others remain in an embryonic stage and are only partially effective. Overall, while enrolments and access to all levels of the system have improved dramatically over the past four decades, there is a general acceptance that the quality of schooling received by the majority of students is low. This arises from limited amounts of resources and inputs, and the poor quality of many of these, but also from the inefficient ways in which they are deployed and managed.

2.2 Compared to the mid-1980s the share of government expenditure devoted to education has increased considerably and is similar to that in surrounding countries. However, per capita allocations remain among the lowest in the world and while public resources from government and donors are likely to continue to increase marginally they will remain low relative to the needs until the economy achieves higher sustained rates of growth. In these circumstances, which are similar for all of the social services, the main challenges to government are (a) to ensure that expenditures are really allocated to those activities which best promote its own objectives, (b) to provide a context which supports non government sources of expenditures and provision and, critically, (c) to put into place procedures and mechanisms which would lead to public resources being used more efficiently and effectively. Public expenditures should focus explicitly on activities which minimize social inequalities and maximize the social benefits and which would be underprovided if all of education were privately financed. These considerations suggest that, in contrast to the current situation, the level of subsidization of primary schooling should be much higher than that for higher education. Around 40 percent of total educational expenditures come from households. The majority of these are required to access government schools, though the private sector is growing rapidly, particularly in secondary education. Both of these developments need to be addressed. Some of the efforts to increase efficiency and effectiveness would have a technical focus, such as improving the knowledge and teaching skills of teachers and designing more effective textbooks. Others would cover broader issues of governance and system management, including the devolution of responsibilities to officials at lower administrative levels, the decentralization of powers to lower levels of government and the empowerment of community groups to influence the operation of schools and their quality.

A. THE STATUS OF EDUCATION IN NEPAL

Basic and primary education

Trends in performance

2.3 Levels of adult literacy and current participation in the educational system in Nepal are relatively low even for the South Asia region. The literacy rate in 1995 was 36 percent compared to 90 percent in Sri Lanka, 52 percent in India, 39 percent in Bangladesh and 35 percent in Pakistan. For women the rate was just 19 percent. There are significant geographical differences in rates: in the Kathmandu Valley literacy is 76 percent while in the rural central Terai it is just 23 percent (Prennushi,

1999). Of the population aged above fifteen years, 50 percent of males and 82 percent of females have had no schooling. Primary school enrolments (a five-year cycle) have increased rapidly over the past decade, from 1.86 million in 1986 to 3.45 million in 1996, but universalization at this level is far from having been achieved. While the gross primary enrollment ratio is officially recorded as 117 the net enrollment ratio is estimated to be just 69. The Nepal Family Health Survey for 1996 estimated that 74 percent of boys aged 6-10 years and 57 percent of girls were in school implying a net enrollment rate of around 65 percent, leaving slightly more than one million 6–10 years olds not in school (HMGN, Ministry of Health 1998). The net enrollment ratios compare favorably with rates in Pakistan but unfavorably with those in Sri Lanka, India and Bangladesh. Of the population below 24 years who have ever attended school, the lowest rates are for females living in rural locations in all regions and for males in the Eastern and Western Terai. Forty percent of the current students are girls, up from 30 percent a decade ago but again there are significant geographical variations. For instance, in the Mid-Western Mountain region the share is 22.7 percent while in the Western Mountain region it is 48.5 percent. Of the roughly 3,400,000 primary school enrolments in 1996, around 279,000 (or 8.1 percent) were enrolled in private schools, mainly in Kathmandu (HMGN, Ministry of Education 1998a).

2.4 Success in increasing the initial enrollment in primary schools has been accompanied by high dropout and repetition rates. A recent internal study undertaken within the Ministry of Education shows that out of every 100 children who enroll in grade 1, only eighteen will complete the primary cycle five years later and 63 will complete eventually. Thirty-seven will dropout altogether and 45 will repeat at least one grade. On average, those who do graduate take two years more than the prescribed time. The combined enrollment and completion rates indicate that only just over two out of every five Nepalese children complete a primary schooling.

2.5 The quality of primary schooling is difficult to assess. However, the results from a recent national survey of learning achievement of grade III students indicate that the level in public schools is quite low (Educational Development Services Centre, 1997). Overall, the scores in tests in three subjects averaged between 44 percent and 50 percent. Similar tests given to students in private schools resulted in an average score of over 75 percent in each subject.

Policies, priorities and issues

2.6 The Government's immediate main priority in the education sector is to encourage, and provide facilities for, the 30-35 percent of 6-10 year olds who currently do not attend primary school, and to improve levels of retention. According to the official gross enrolment ratio, and across the country as a whole, there are sufficient places and teachers (at the current pupil-teacher ratio) in primary schools for all 6–10 year olds, once under- and over-age pupils are no longer enrolled. However, this will take some time to achieve as around 40 percent of all pupils are in these categories. In addition, there are very large differences across regions in the provision of schooling inputs. Pupil-teacher ratios in the Terai average 48:1 compared to 28:1 in the hills and mountains. While the variations in population density across regions are part of the reason for such differences, if there is to be progress in moving towards universalization within a realistic budget, a major effort will be needed to re-deploy teachers.

2.7 Efforts to universalize schooling will not be cost effective unless progress is made in reducing dropout and repetition rates and in improving learning achievement. The two are related. Several of the causes of high dropout and repetition rates and low levels of achievement are internal to the schools. These include a large number of untrained teachers (around 60 percent of the total), teacher absenteeism, overcrowding particularly in the Terai, insufficient teaching-learning materials and inadequate levels of

supervision. To rectify each of these requires effective program design and a strengthening of implementation capacity as well as additional resources. The two major programs focusing on these issues since the beginning of the Eighth Plan in 1992 have been the donor-supported Basic and Primary Education Project (BPEP) and the Primary Education Development Project.

2.8 The less than universal spread of schooling, however, is not simply a result of a lack of facilities. In fact, data from the Nepal Living Standards Survey (NLSS) collected in 1995 point to the opposite (Central Bureau of Statistics 1996). Of those aged 6-24 years who had never attended school, less than five percent gave a lack of facilities or their distance as the main cause. Over 50 percent cited the need to help at home or on the farm plus parents' hostility as the main reason while another 20 percent stated that schooling was too expensive. The average household cost of attending a public primary school is Rs. 320 a year (and Rs. 2474 in private schools). In addition, the poor health of children conspires to limit both attendance and learning. In 1996, 47 percent and 16 percent of children were defined as severely and chronically malnourished respectively, while less than half of all young children had received a full set of vaccinations (HMGN, Ministry of Health 1998).

2.9 A probability analysis of the data from the NLSS gives some quantitative definition to the causes of non-attendance. The results indicate that the probability of attending a primary school is influenced by the schooling level of both parents, ethnic group, the level of household assets, overall accessibility to markets and services and, for girls, the quality of inputs proxied by toilets and the proportion of female teachers (Prennushi, 1999, Annex B).

2.10 In the early stages of primary school expansion, higher income parents invariably are more likely than others to enroll their children in public primary schools and benefit most from government subsidies. This is also the case in Nepal. In 1996, the literacy rate within the lowest income quintile was 19 percent, increasing to 26, 29, 42 and 56 percent for respectively higher quintiles. The percentages of those aged 15 years and over who had ever attended school were, from lowest to highest income quintile: 33, 41, 44, 57 and 69 (Central Bureau of Statistics, 1996). In addition, those in the highest quintile group who had ever attended school averaged 8.6 years compared to 5.4 years for those in the lowest quintile. As the primary enrollment rate increases, however, more children from low-income households are included. At the same time, many higher income families are sending their children to private schools. Almost a fifth of the enrolled children in the highest income group attend private schools while the percentage is no higher than 5 percent in any of the other income groups. Since around 70 percent of children attend primary schools, any programs to increase further the enrollment rate will provide mainly for children within the poorest two quintiles (see section C below). In Nepal where the per capita income is US$220 and 42 percent live below the poverty line, households in that category are very poor indeed.

2.11 A new project (Basic and Primary Education Project II) focusing on schooling quality, and including measures aimed at increasing decentralization and system efficiency, is supported by a consortium of donors and became effective in late 1999. The project inputs and the reforms and processes it seeks to put into place, together with the existing physical infrastructure and teaching force, should be sufficient to ensure that a five year schooling cycle of reasonable quality will be available for all children. The challenge for the education sector will then be to ensure that parents and children perceive the benefits from schooling to be greater than the very real direct and indirect costs. This will require a continuing focus on improving the quality of education, and some additional resources. However, additional resources to expand the system, including from donors, will not need to be significant.

Secondary education

Trends in performance

2.12 Secondary education in Nepal comprises three grades of lower secondary schooling (6-8) and two grades of secondary schooling (9-10). The two-year upper secondary cycle following grade 10 is commonly regarded as part of tertiary education, though there is an intention to incorporate it within secondary education. There are three types of secondary schools: government aided, community and private. The Government provides all teacher salaries in aided lower secondary schools and 60 percent of salaries in secondary schools. Community schools are constructed and initially run by communities, hoping for conversion to aided schools. There are over 1000 such schools. In addition, there are 300-500 private schools situated in urban centers, mainly run by individuals for profit.

2.13 Over the past twenty-five years enrollments in secondary schooling have increased seven fold but from a very low base. Total enrollment in the lower secondary cycle in 1996 was 790,000 implying a gross enrollment ratio of 54 percent (64 percent males and 44 percent females). Just over eighty percent of these enrolments are in publicly funded schools. In the secondary cycle enrolments were 341,000 with a gross enrollment ratio of around 31 percent (35 percent males and 26 percent females). In this case, sixty percent of enrollments are in public schools. Overall, 72 percent of enrollments in grades 6–10 are in public schools and 28 percent in private schools. Growth in the private schools has been at a much higher rate in recent years.

2.14 Gross enrollment rates for both lower secondary and secondary education vary across the country more than for primary schooling. According to the Nepal Living Standards Survey, in urban and rural areas, lower secondary rates are 84 percent and 52 percent respectively. Across regions the variation is between 73 percent and 30 percent. In secondary schooling the variations are even greater—85 percent and 40 percent for urban and rural areas, and between 69 percent and 25 percent across regions. Access to secondary schooling differs appreciably by level of household income. The gross enrolment rates for lower secondary and secondary schooling for the children from households with incomes in the highest quartile are 94 percent and 90 percent respectively. For children from the poorest quartile of households, the enrolment rates are 22 percent and 8 percent. Overall there are very large regional and social class variations in access to schooling beyond the first five-year cycle.

2.15 Student teacher ratios are around 46:1 for lower secondary and 25:1 for secondary schools with an overall average of 38:1. Again there are wide geographical variations ranging from 24:1 in the mountains to 41:1 in the Terai. While professional training is much more prevalent than for primary teachers, it remains limited to around one third of lower secondary teachers and less than half of secondary teachers. Only one in eight teachers are female. An analysis of teacher growth in the first half of the 1990s showed an overall increase of 5.6 percent for all teachers but only 1.8 percent growth of teachers in public schools. This demonstrates both the more rapid expansion of private schooling and the smaller pupil:teacher ratio.

Policies, priorities and issues

2.16 Access, retention and quality are all low in secondary schooling in Nepal. Access is limited mainly through the small number of children who graduate from primary schooling. Of those who do graduate, however, the transition rate to lower secondary is relatively high. A primary schooling is not

regarded as a terminal stage. Levels of internal efficiency are low, though not as low as in primary schooling. Out of every 100 students entering the first year of lower secondary, 25 drop out by the end of the second year and 40 complete the whole five-year cycle (grade 10). The average pass rate for the Secondary Leaving Certificate (SLC) taken at the end of grade 10 has ranged between 25 and 35 percent over the past decade. This average hides wide differences between rates of around 70 percent in private schools and 20-30 percent in public schools. (In 1998 the pass rates improved to 84 percent and 44 percent for private and public schools respectively). High dropout rates throughout the secondary school cycle and the low pass rates in examinations are indicators of a low quality public schooling. Further evidence of this is the growth of private schools, which currently cater for around 25–30 percent of enrolments. The causes of low quality include a lack of curriculum development, an unreliable examination system, poorly designed and out of date textbooks, under trained teachers and the virtual absence of supervision and technical support. Low quality public schooling has the greatest impact on poor children who do not have the option of a private schooling.

2.17 Over the next few years, as net enrolments in primary schooling increase and retention rates improve, the demand for a lower secondary education will automatically increase since transition rates are high. The degree to which this occurs, and is accompanied by increased equity in access to secondary schooling in terms of regional, gender and income differences, will depend to a large extent on the success in implementing the new Basic and Primary Education Project II. The low pass rates, high dropout rates and the growth of the private sector all indicate that the secondary education system is weak and needs to be strengthened if it is to cope with the anticipated rise in enrolments. In addition, Government is currently considering whether to shift the focus for the universalization of schooling from providing five years of primary schooling to eight years. The anticipated expansion and the new role to be given to grades six to eight will require additional thought to be given to the organization and functioning of this part of the system. For example, a fundamental decision will be needed regarding whether these grades are delivered as part of an elementary schooling cycle or a secondary schooling cycle. Additional analyses and decisions will then be required in areas such as school location, teacher education, curriculum and materials, and assessment and examination.

2.18 Until 1994, tuition fees were charged in publicly supported secondary schools. These were abolished under the free education policy. Somewhat ironically, since then the virtual freeze on the establishment of new public schools and the general limitation of resources for this sub sector has resulted in restrictions on access and on quality promoting inputs leading to a burgeoning of private schools with much higher fees. Enrolments in private schools have been increasing at a faster rate than in the public schools and for grades 9 and 10 are now around 30 percent of the total (HMGN, Ministry of Education 1998a). A continuation of recent trends could result in enrolments being equally divided between public and private schools by the end of the next decade. In developing its policies for secondary education, and forecasting the level of public resources required, Government will need explicitly to take account of the private sector. If the Government decides that it wishes to encourage further development it might consider ways of increasing the security of school owners against future government takeover and re-examining tax exemption provisions. However, the current large discrepancies in the examination pass rates between public and private schools suggest that a continuation of the current situation will lead to a dual system of education in which the children of poor households attend low quality public schools and have high failure rates while children from middle class households attend private schools and are almost guaranteed success. This could have significant social consequences. There is a need to understand the reasons for the much better performance of the private schools and to replicate these conditions in the public schools. Similarly there is a need to understand the private costs for these two types of schooling, the level of public subsidy in each and the

social composition of pupils. Once information is available in these areas, the issues of school tuition fees, the use of fee income and the provision of scholarships for both private and public schools could be re-examined. This is now a priority. Over the past decade, the Government and donors have focused their attention on expanding and improving primary schooling. Following the implementation of the BPEP II, it is appropriate for attention now to shift more towards the reform of the secondary education system, including grades 11 and 12.

Higher education

Trends in performance

2.19 Higher education in Nepal has traditionally been defined as grade 11 and above; this includes the two-year upper secondary course, the two-year bachelor's degree and post-graduate studies. In 1995/96, 99,000 of the 140,000 total enrollments at this level were in the 65 public campuses of Tribhuvan University, 35,000 in private colleges affiliated to the University and a further 6,000 affiliated to the Higher Secondary Education Board (HSEB). Of total enrolments, 44,500 were enrolled in degree courses and the rest in the grade 11 and 12 Proficiency Certificate Level course under the University or courses authorized through the HSEB. Degree students represent only around 2.2 percent of the age cohort. Of these students only 11 percent are enrolled in technical and scientific courses and the share has been falling. The highest enrollments are in management, humanities and social sciences, and education, respectively. Constituent and affiliated campuses are located in all regions, though almost half are in the Central Region, particularly in the Kathmandu Valley. Enrollments in the 65 university campuses grew from 22,000 in 1975/76 to 99,000 in 1995/96 at an average rate of around nine percent a year (Centre for Economic Development and Administration, 1995). Only 26 percent of higher education students are female. Most of the students enrolled in both higher secondary and degree programs are from higher income families. According to the Nepal Living Standards Survey, only 6 percent of students come from the poorest 50 percent of households and only 1 percent comes from the poorest 25 percent. The representation of females from the poorest 50 percent of households is virtually nil. Publicly provided higher education in Nepal is accessed almost entirely by children from higher income householders.

2.20 Dropout and repetition rates are high. Pass rates in the Proficiency Level Certificate are very low. The results of the examinations conducted at the same level by the HSEB are similarly poor but have been improving alongside increases in entrants. Of the 6889 entrants in 1997, 24 percent passed. In 1998, of the 10,913 entrants, 39 percent passed. Pass rates in the degree programs vary by subject and are particularly low in the Humanities, Management and Education where most of the students are enrolled. For example, the first year pass rates in these subjects in 1998 were 25 percent, 24 percent and 17 percent, respectively. Such low pass rates are indicative of an inefficient and low quality system in crisis.

Policies, priorities and issues

2.21 Public financing of higher education in Nepal essentially means the financing of Tribhuvan University and its constituent campuses. Public funding for higher education has been squeezed since the mid-1980s. Real allocations have increased by 3.4 percent on average, and recurrent allocations by 5.9 percent, while enrolment growth has averaged 9 percent until recently. Simultaneously, other sources of income have increased but from a relatively low level. For instance, tuition fees, which had not been changed since 1974 were increased in 1991 and are Rs. 500 for certificate courses and Rs. 600 a year for

degree courses (equivalent to less than US$10). Other fees amount to around Rs. 200 a year. The overall result of these trends is that real public expenditures per student in higher education have been falling. This has altered the composition of expenditures. Of the allocations from the regular budget, salaries now account for 92 percent of the total compared to 74 percent twenty years ago. Conversely, expenditures under the budget headings of teaching quality, publications, research, educational materials and magazines fell from 15 percent to 6 percent between 1977 and 1994. The University's library budget in 1996 was equal to US$0.41 cents per student. This structure of expenditure is untenable and cannot support the intended purposes of the institution. A lack of resources is not the only problem affecting the level of teaching quality. For instance, the academic year allows for just 150 days of lectures, equivalent to six months of the year. In practice, various disruptions reduce this total significantly.

2.22 The single most needed rationalization policy across the education sector is to phase out the Proficiency Certificate program from the University, locate all grade 11 and 12 classes in schools and expand the degree program from two to three years. This would not only have educational advantages but also financial advantages over the longer term, even with the longer degree courses and other measures to raise the quality of teaching. Planning for this separation began in 1994 but has proceeded slowly as the required financial and personnel measures have proved to be contentious. No detailed plans have been prepared by Tribhuvan University for phasing out the Proficiency Level Certificate campus by campus nor one for phasing in institutions by the HSEB. Some progress, however, has been achieved and the HSEB now has over 400 private institutions teaching grades 11 and 12 affiliated to it, compared to around 220 in 1996, and has put into place an examination which is being taken by quite rapidly increasing numbers of students. Progress has also been made in designing and implementing the three-year degree programs. However, unless this re-structuring is also accompanied by a further rationalization of degree courses and specializations offered at the individual campuses, many class sizes will be very small and unit costs high.

2.23 Over the past two decades, the contribution of internally generated revenues in total University expenditure has undergone several changes. The share fell from 16 percent in 1978 to 9 percent in 1985 before gradually rising to 20 percent in 1993, when tuition fees were increased. Since then the share has again fallen to between 11 and 12 percent. Given the social composition of students described above (only 1 percent coming from the poorest 25 percent of households and 6 percent from the poorest 50 percent) it would appear justified to increase fees further and tie them to some index of costs while instituting a scholarship program for the poorer students. While in principle fee increases and scholarship programs are justified and could be put into place immediately, in practice these, and other, financing reforms are likely to more effective if they are implemented in the context of a clearly articulated vision of the future of university education in Nepal.

B. Levels and Trends in Public Education Expenditures

Sources of education expenditure

2.24 The National Education Accounts constructed by Hotchkiss et.al. (1999) for 1994/95 provide an approximate but illuminating framework for understanding the sources and uses of financial flows in the education sector. The accounts are based on budgetary data, the Nepal Living Standards Survey and the UNDP External Assistance Report. While this data is now five years old and some expenditure trends of

Government and donors have changed, it continues to provide interesting insights.[1] Total expenditure on education was estimated to be almost Rs. 10 billion, equal to 4.7 percent of GDP. Of this, households contributed 42 percent, Government, 38 percent and donors, 20 percent. Table 2.1 provides details of the distribution of total expenditure on education by source and by level of education.

Table 2.1: National Education Accounts by Use and Source of Funds, 1994/95. (percent)

Use of Funds	*Source of Funds*			*Total*
	Government	*Donors*	*Households*	
Primary	21.6	5.9	15.7	43.2
Non-formal	0.3	1.8	0.0	2.1
Secondary	8.4	0.3	22.8	31.6
Technical/vocational	0.4	5.6	0.0	6.0
Tertiary	7.0	6.4	2.9	16.3
Other	0.5	0.3	0.0	0.8
Total	38.2	20.4	41.4	100.0

Source: Hotchkiss et. al., 1999

2.25 Of total expenditures, 45 percent are for primary and non-formal education, 32 percent for secondary, 6 percent for technical and vocational and 16 percent for tertiary education. The distribution of expenditures by source varies significantly by level of education. In primary education, household expenditures are equal to 35 percent of the total and in secondary they fund 72 percent of the total. These shares contrast starkly to the 18 percent in tertiary education. Another way of presenting this is to say that a majority (55 percent) of household expenditure on education is for secondary schooling with 38 percent for primary schooling and only 8 percent for higher education. The high share of household expenditure in primary and secondary schooling requires some explanation: two thirds cover the costs of children attending public schools. These costs include registration fees, textbooks, private tutoring, clothes and school supplies. The average amount spent per child by households is Rs. 172 for public primary school, Rs. 708 for public secondary school and Rs. 1516 for higher education. In the case of primary and secondary schooling, one third of these totals is for books. Fewer than 14 percent of total education expenditure finances private institutions.

2.26 The largest share of government expenditure is for primary education (57 percent), followed by secondary (22 percent) and tertiary (18 percent). The distribution of donor finance in any single year is, typically, lumpy and subject to change. In 1994/95, it was almost equally distributed between primary, technical/vocational and tertiary education. Very little was provided for secondary schooling. The main divergence of donor funding from household or government priorities was in technical and vocational training, which was allocated 28 percent (compared with 1 and 0 percent by Government and households respectively). Donors are also significant funders of tertiary education, allocating 31 percent

[1] The Accounts are in the process of being updated for 1995/96 and 1996/97. Preliminary results indicate only small changes in the distributions.

of their funds to this subsector compared to allocations of 18 percent from government and 8 percent from households.

2.27 While some of the data used in constructing the accounts may not be totally accurate, for instance, most of the household expenditures on textbooks for primary schooling are eventually meant to be returned, and the donor distribution in a specific year may not mirror the distribution over time, the exercise does provide a useful picture of public and private expenditures. One particularly striking set of information is that for every Rs. 1 the Government spends in primary, secondary and tertiary education, households spend Rs. 0.7, Rs. 2.7 and Rs. 0.4, respectively. One of the questions posed in this review is the rationality of this pattern.

The level and trend of public education expenditure

2.28 The terms 'public expenditure' and 'government expenditure' are used interchangeably in this section and include those expenditures financed both through the Government's own sources and through donor grants and loans which are included in the budget. Some donors finance programs directly. In the education sector, the donor flows outside of the budget have been estimated to be around 9 percent of the total. Government expenditures in education as a share of gross domestic product (GDP) and of total government expenditure over the period 1981-1999 are described in Table 2.2.

Table 2.2: Government Expenditure on Education, 1980/81 to 1998/99. Selected Years

Education Expenditure	*1980/1*	*1985/6*	*1990/01*	*1991/2*	*1992/3*	*1993/4*	*1994/5*	*1995/6*	*1996/7*	*1997/8**	*1998/9***
As % GDP	1.4	2.0	1.8	2.0	2.5	2.4	2.4	2.6	2.7	2.7	2.6
As % TGE	9.4	11.1	8.8	10.9	13.4	12.8	13.3	12.9	13.9	13.1	13.1
Real Growth	4.9	17.5	6.7	-2.3	31.1	-3.9	13.6	8.0	10.6	5.5	5.3

Source: HMGN, Ministry of Finance (various years)
Note GDP is gross domestic product and TGE is total government expenditure
* Revised Estimates
** Provisional Estimates

2.29 Government expenditure on education as a share of GDP continually increased between 1981 and 1993, from 1.4 to 2.5 percent, apart from a brief period in the late 1980s. The share then remained constant to 1997 when it again increased, to 2.7 percent and has remained at around that level since. Compared to India, which spends 3.9 percent of GDP on education the effort is low, though it is above that for Pakistan (2.2 percent) and Bangladesh (2.3 percent). As a share of total government expenditure the trend in education expenditure is generally similar having increased from 9.4 to 13.4 percent between 1981 and 1993 and remained around that level for the following four years before again increasing to 13.9 percent in 1996/97. However, the allocations have since fallen back to 13.1 percent. Compared to other countries in the region, Nepal allocates a slightly above average share of total government expenditure to education, though it is of some concern that the budgeted share for 1998/99

is slightly below the average of the previous six years. Further, the share is below that in 15 of the 17 sub Saharan countries for which UNESCO has provided data for 1995 (UNESCO, 1998).

2.30 Total government expenditure is divided between the regular budget and the development budget which, in general, cover ongoing and new activities, respectively. The sharp division in the expenditure series between 1993/4 and 1994/5 is due to the transfer of teachers' salaries from the development budget to the regular budget (Table 2.3). Since 1994/5, education's share of the regular budget has remained constant at around 20 percent while the share of the development budget initially increased from 7.3 percent to 8.9 percent, then fell back to 6.1 percent and is budgeted at 7.9 percent for 1999/2000. While the overall trend in development expenditures is upward the year to year variations in share have been relatively large. While much of the development budget is donor supported and for specific time-bound projects, this degree of variation does suggest a limited amount of resource planning in the sector.

Table 2.3: Education Expenditure as a Share of Total Government Expenditure, 1990/91 to 1999/2000

Budget	*1990/1*	*1991/2*	*1992/3*	*1993/4*	*1994/5*	*1995/6*	*1996/7*	*1997/8*	*1998/9**	*1999/2000***
Regular	4.8	4.8	6.0	6.0	18.7	20.0	19.9	20.1	20.0	19.4
Development	10.9	14.5	17.8	18.0	7.3	7.0	8.9	7.9	6.1	7.9

Source: HMGN, Ministry of Finance (various years); HMGN, Ministry of Finance, 1998a
Note * Revised Estimates
** Provisional Estimates

Sources of public education expenditure

2.31 As described above, most donor funding for education in Nepal is incorporated within the budget. Table 2.4 describes the contributions to the regular and development budgets for education from donors and from the Government's internal revenue resources in 1998/99.

2.32 Of total budgeted expenditure on education, the regular budget received just under three quarters (two thirds in the previous year) with the development budget, supporting system expansion and improvement, receiving the rest. The regular budget is fully funded by the Government's internal revenues with no donor support. Conversely, donors support around two thirds of expenditure in the development budget. Of total donor support in 1998/99, 53 percent was grant aid and the rest, loans. Over the past few years there has been a significant increase in the proportion of donor funding in total education expenditure, from around just six percent in 1990/91 to 25 percent in 1996/97 (falling back to 18 percent in the following year). However, as

Table 2.4: Government and Donor Expenditures on Education, 1998/99. (Rs. millions)

	Government	*Donors*		*Total*
		Grants	*Loans*	
Regular	6403	--	--	6403
Development	797	803	700	2300
Total Expenditure	7200	803	700	8703

Source: HMGN, Ministry of Finance, 1999

indicated in Table 2.5, the share for education is still below that across all sectors combined (29 percent in 1997/98). While over the past decade or so Government has shown itself increasingly willing to borrow and use grant aid for education, the extent of this remains below that in many other sectors.

Table 2.5: Foreign Assistance, Total Government Expenditure and Education Expenditure, 1990/91 to 1997/98. (percent)

	1990/1	*1991/2*	*1992/3*	*1993/4*	*1994/5*	*1995/6*	*1996/7*	*1997/8*
Foreign Assistance								
In Govt Expenditure	25.4	29.5	29.9	34.4	31.5	30.7	29.6	29.3
In Education Expenditure	5.9	7.2	17.2	14.4	25.4	21.9	24.8	17.9
Percent Loans								
In All Sectors	72.8	81.4	64.6	79.3	59.4	66.2	60.2	67.2
In Education	74.8	71.6	19.6	73.3	65.7	64.7	52.3	65.9

Source: HMGN, Ministry of Finance (various years)

2.33 The net result of the increased aid flows for education is that the rising share of education in total public expenditure (at least to 1996/97), described above in Table 2.2, is a reflection of increased assistance from donors rather than a result of a higher share of internal-source Government expenditure for the sector. Expenditure on education from internal sources as a share of total expenditure from internal sources remained remarkably constant between the mid-1970s and mid-1990s as indicated in Table 2.6. The share has increased only in the past three years.

Table 2.6: Government Education Expenditure from Internal Sources, 1975 – 1998. (Rs. millions)

	1975/6	*1980/1*	*1985/6*	*1990/1*	*1995/6*	*1996/7*	*1997/8*	*1998/9*
Total Government Expenditure From Internal Sources	1408	2530	6306	17560	32353	35692	39661	42551
Total Education Expenditure From Internal Sources	208	353	892	1960	4696	5417	6403	7201
Education as % of Total Expenditure from Internal Sources	14.7	13.9	14.1	11.1	14.5	15.2	16.1	16.9

Source: HMGN, Ministry of Finance (various years)

Allocation by education expenditure by level

2.37 The allocation of Government educational expenditure by level has undergone significant changes since the early 1980s as indicated in Table 2.7.

Table 2.7: Allocation of Education Expenditure by Level. Selected Years. (percent)

	1980/1	*1985/6*	*1990/1*	*1992/3*	*1994/5*	*1996/7*	*1997/8*	*1998/9**	*1999/2000***
Primary	36.3	41.6	55.1	48.9	53.5	55.6	53.2	52.8	54.2
Non-formal	0.8	0.3	0.4	0.8	1.0	1.4	1.5	1.5	1.4
Secondary	25.2	17.7	16.0	15.6	17.1	22.4	21.8	25.0	23.0
Tech/voc	0.0	1.4	1.8	3.8	4.8	3.2	1.7	1.3	1.1
Tertiary	37.6	38.9	26.6	30.9	23:6	17.3	21.8	19.3	20.3

Source: HMGN, Ministry of Finance (various years)
Note * Revised estimates
** Provisional Estimates

2.38 The share for primary schooling, covering grades I–V, increased rapidly from just over one third of the total to over one half in 1990. Shares for secondary and tertiary education fell at roughly equal rates. Since 1990, the primary share has remained largely between 53 percent and 56 percent. The main change in shares in the 1990s has been the increase for secondary (from 15.6 percent in 1992/3 to 23.0 percent in 1999/2000) at the expense of tertiary (from 30.9 percent to 20.3 percent). This has resulted from, on the one hand, the 'free secondary education' policy and the gradual increase in the numbers of teachers in private secondary schools being paid for by Government and, on the other, the conscious decision to encourage Tribhuvan University to increase levels of private finance and the rate of cost recovery. Over the whole nineteen-year period there has been a very significant change in the

allocations, particularly in the shares for primary and tertiary. In 1980/1 these were 37.6 percent and 36.3 percent in favor of tertiary while in the allocations for 1999/2000 they were 54.2 percent and 22.3 percent in favor of primary. In the future, as places increase at a greater rate in post primary schooling, the share for secondary will need to increase. If primary education is not to be squeezed, an increased proportion of the resources for tertiary education will need to be generated through cost recovery and other internal sources of finance.

2.39 Total expenditure per primary school pupil has been increasing through the 1990s and in 1996/97 stood at Rs. 1270. At constant prices, this 'unit cost' was 65 percent higher than in 1990/91 reflecting both increases in real teacher salaries and changes in student:teacher ratios. For secondary schooling, expenditure per pupil was Rs. 1644 in 1996/7 and 54 percent higher than in 1990/1. In tertiary education, unit costs vary significantly by field of study ranging from Rs. 1390 in Management and Rs. 2124 in Law to Rs. 38,000 in Agriculture and Rs. 46,000 in Medicine. Dividing total tertiary expenditure in 1995/6 by total enrolments at Tribhuvan University (including classes 11 and 12) gives an average cost of Rs. 13,239. However, subtracting the costs of the four professional Institutes, which enroll just 4.6 percent the total, the expenditure per student was Rs. 7420. On that basis, unit cost ratios for primary, secondary and tertiary education are roughly 1.0:1.3:5.8. It is again worth repeating that 60 percent of enrollments in tertiary education are at the higher secondary level. Present arrangements for teaching this level of education appear to be financially inefficient.

2.40 Over the period 1990/91 to 1997/98, the annual average increase in education real expenditure was 8.1 percent compared to an average increase of just 3.1 percent in the previous five years. The highest growth rate, though from low absolute levels, was for non-formal education and there was little growth for technical/vocational education. The major sub sectors of primary, secondary and tertiary education increased annually by 9.7, 13.6 and 8.1 percent, respectively. The increase in overall expenditures has not occurred at a constant rate. If the large increase in 1992/93 is omitted the annual average increase in educational expenditure declines from 8.1 to 5.6 percent.

2.41 Disaggregating public expenditures on education between the regular and development budgets provides more detail of underlying trends. Recent Budget documents describe actual expenditures for 1996/97, revised estimates for 1997/98 and budgeted estimates for 1998/99 and 1999/2000. In each of these years, education expenditures were between 19.4 and 20.1 percent of total regular budget expenditures. Of total development expenditures, however, they fell over the initial three years from 8.9 to 7.9 to 6.1 percent increasing back to 7.9 percent in the allocation for 1999/2000. It is mainly the relative reductions in the development budget which have led to the decline in overall education expenditures from 13.9 to 13.1 percent of total government expenditure since 1996/97, described previously in Table 2.2.

Composition of development expenditures

2.42 While development expenditures tend to be only between one quarter and one third of the total public expenditures on education, their level and pattern are particularly important since they indicate current priorities and future claims on the regular (recurrent) budget. Since donors support around 75 percent of these expenditures, their pattern also reflects donor priorities. Table 2.8 describes the levels and distributions of development expenditures in the education sector between 1995/96 and 1998/99. The following points emerge:

(a) While the increases in education expenditure in the development budget have averaged over 8 percent a year in current prices, the sector's share in total development expenditure has fallen from 7.0 percent to 6.1 percent.

Table 2.8: Development Expenditure in Education, 1995/96 to 1998/99.
(Rs. million, current prices)

Project	*Financial Year*				*Source (%)*
	1995/6	*1996/7*	*1997/8*	*1998/9*	*HMG '97/8*
Ministry of Education					
Basic and primary education	668.4	814.0	696.9	614.4	7.8
Primary education development	112.7	251.2	356.1	213.7	10.0
Secondary education project	60.2	108.2	175.5	172.7	20.0
Other (4)	46.9	49.5	57.0	57.0	100.0
Technical Ed					
Tech. School and VT Council	201.6	151.7	83.9	55.5	46.0
Technical schools	49.9	54.1	41.9	45.7	87.0
Other (2)	0.0	5.7	7.4	8.1	100.0
University Grant Committee					
Tribhuvan University (9)	330.9	381.4	817.8	661.1	19.5
Other higher education (5)	1.3	7.8	12.7	8.5	100.0
Other					
Non-formal and total literacy	63.9	89.5	120.0	127.4	100.0
Free instructional materials	101.0	110.0	120.0	120.0	100.0
Nutrition	16.0	154.8	154.9	173.4	9.7
Other (1)	7.9	11.0	4.0	4.0	0.0
Total	1,698.3	2,196.2	2,659.4	(2261.5)	26.5

Source: HMGN, Ministry of Finance, 1998 and 1999
Note Figures in parenthesis indicate the number of individual projects within the category.

(b) For the four years as a whole, programs and projects which focus on primary education, including non-formal and literacy schemes, were allocated 60.0 percent of total development expenditure. Higher education in the form of Tribhuvan University was allocated 25.9 percent through the University Grants Commission and technical education 8.3 percent. The smallest share was 6.0 percent for secondary education. Within this short period, the share for the higher education sector increased from 19 percent to 31 percent mainly as a result of donor support for the Engineering Institute and for reform of the University's central administrative system while that for technical education fell from 15 percent to 5 percent. The reduced share for technical education reflects the ending of another significant donor supported project. The share to primary and secondary education through the Ministry of Education and for the non-formal and free materials programs has remained roughly constant at around 65 percent. Development expenditures, particularly those supported by donors, are lumpy and can vary significantly year to year. However, the share for secondary education appears to be below that required given the

large increase in primary enrolments over the past decade and the need to improve the very low levels of achievement.

(c) The Government directly funds around a quarter of the development budget for education from internally raised sources. The overall allocation of these resources is similar to the overall shares though the emphases within the allocations are different. In 1997/98, 27 percent of Government direct expenditures were allocated to the primary and secondary programs through the Ministry and 37 percent to the non-formal/literacy and free textbook programs. Twenty-five percent were allocated to the University Grants Commission and 12 percent to technical education. Another way of presenting the distribution of direct Government expenditure, is to note that 51 percent was required for counterpart funding to donor supported projects, 37 percent was allocated to the non-formal/total literacy and textbook programs and 12 percent to other small fully Government-funded projects. As a consequence, it is vitally important that Government and donors work together to design and implement projects in the most effective way. All additional funds must support complementary activities or a common program.

(d) The number of projects funded through the development budget increased from 24 in 1995/96 to 36 in 1998/99. All of the additional, relatively small, projects have been funded entirely by the Government. While the amounts of finance involved are small, each additional project requires scarce administrative resources and, in a situation in which the development budget in education is not keeping pace with the increase in the overall development budget, there is a danger that additional projects will reduce the level of funding to existing projects to a level below which they will be effective.

(e) Overall, for every Rs. 8 allocated for education directly by the Government, Rs. 7 is for the regular budget and Rs. 1 for the development budget. Donor support adds almost an additional Rs. 3, all for the development budget. Of these, roughly Rs. 2 are soft loans.

C. Discussion of Current Expenditure Patterns

2.43 Low participation rates, low retention rates and high examination failure rates are evidence that the public education system, which caters to ninety percent of the population and virtually all of the poor, is not functioning as effectively as is desirable or possible. To improve the situation will require both changes in the ways that the sub systems operate and more resources. The financial requirements are huge but the financial constraints are severe. There are three sets of issues:

(1) *Efficiency and effectiveness* - to what extent is the current distribution of public resources in education justified by arguments of increased equity and economic efficiency, and how much more effective can the system become with the existing level of resources?

(2) *Amount of additional resources* - how much more funding can the sector claim from Government, what is the possibility of increased donor funding and how might more private, household, expenditures be encouraged?

(3) *Allocation of additional resources* - how should any additional public resources be distributed within the system?

2.44 Underlying these questions are considerations of the appropriate roles of Government and households in *financing* education in Nepal and the role of the private sector in *providing* it. In no country in the world is the government the single provider and financier of a tuition-free education at all levels of the system. On the other hand, democratic governments do have the responsibility to limit the denial of education resulting from poverty and to ensure that overall provision is not too far below the socially optimal level.

2.45 Before considering the justification for, and likelihood of, additional public resources for education in the future, the first set of issues regarding the efficiency and effectiveness of the current allocations needs to be examined. Does the current pattern reflect the justifications which are made for public expenditures and the objectives of the Government? Within the allocations, are the resources being used effectively?

Efficiency and effectiveness

2.46 The arguments for allocating government resources to education are based largely on considerations of economic efficiency and equity. Summarizing, to the extent that some of the potential benefits of education are received by persons other than the individual and/or their guardians, there is justification for government subsidizing education and thereby increasing the demand for it. There is also some justification in cases where credit markets do not operate in ways which would allow funds to be borrowed for financing education. It is commonly held that the external benefits of schooling are relatively highest at the primary level and include the dissemination of economically useful knowledge to the non literate population, the creation of general social awareness within which beneficial social change is possible, the development of cultural awareness and increased social harmony and the adoption of behaviors, for example in health and family planning practices, which benefit the rest of society in both the short and long term. Higher education, it is argued, has fewer external benefits in comparison to the direct financial returns which accrue to the graduate - though the necessity of an intellectual elite to ensure leadership in the bureaucracy and business is widely recognized and there is some justification for governments to fund basic research. In between these two levels of education, secondary schooling is generally regarded as resulting in fewer externalities than primary schooling (compared to those accruing to the individual) but more than higher education.

2.47 What evidence exists on these issues in Nepal? While data from the Nepal Living Standards Survey have been used to measure the effect of primary education on farmers productivity in Nepal and found it to be positive (Prennushi, 1999), and conventional rate of return analysis has produced higher rates for this level of schooling than for others (Parajuli, 1998), no evidence exists on the economic impact which those who have received schooling have on those who have not (apart from other family members). However, several studies in neighboring India have demonstrated that behaviors leading to higher productivity have been adopted by farmers without a primary schooling as a result of close proximity to farmers who have been schooled (World Bank 1997). Turning to social outcomes, there is compelling data from both the recently completed Family Health Survey and from the Living Standards Survey to suggest that levels of female education are strongly associated with changes in social behavior

Table 2.9: Selected Fertility and Health Behavior by Women's Level of Education

	No Education	*Primary*	*Secondary*
Total fertility rate	5.1	3.8	2.5
Use of contraceptives (%)	26	31	45
Ideal no. of children	2.9	2.4	2.2
Under 5 mortality (per 1000)	149	99	61
Full set child vaccinations (%)	38	56	72
Chronic child malnutrition (%)	23	14	4

Source: HMGN, Ministry of Health and New Era, 1998

in Nepal. In Table 2.9 a number of measures relating to fertility and health behaviors are documented across women with different levels of education. The differences are significant. The reduction in fertility rate is similar for both primary and secondary schooling, though the incremental reduction in the ideal number of children is reduced most by a primary schooling. The incremental impact on infant and child mortality rates (under 5 years) and the percentage of children having had all vaccinations is similar. The reduction in chronic child malnutrition associated with schooling is similar for both levels of education. To the extent that a lower rate of population growth and more healthy children are regarded as socially and economically advantageous in Nepal, both primary and secondary education provide external benefits and justify some Government subsidization.[2]

2.48 The strength of the equity argument for public subsidies to education partly depends on the extent to which the subsidy is gained by the poorest groups. Who is benefiting from Government subsidies for education in Nepal? Table 2.10 presents the percentage of the population aged 15 years and over in each household income quintile who ever attended school and the percentage of children aged 6–14 years by household income quintile currently in school. These data indicate that in the past, members

Table 2.10: Percentage of Population Aged 15 Years and Over Whoever Attended School, and of 6-14 Year Olds Currently Attending School, by Income Group

Income Groups (by quintile)	*Ever Attended*	*Currently Attending*
1st	19	47
2nd	26	47
3rd	29	70
4th	39	70
5th	51	88

Source: Central Bureau of Statistics, 1996

[2] For a recent analysis of the impact of reduced fertility on levels of poverty see Eastwood and Lipton (1999).

of higher income groups have received a much greater proportion of Government subsidy in education than have members of low-income groups. A member of today's adult population was 2.7 times more likely to have attended school if as a child their family was in the highest income group than if it was in the lowest. The difference is narrowing. Currently the chances are 1.9 times higher. These probabilities relate to the individual child. However, asking the question of what proportion of all students, at each level of schooling, come from each household income group provides a different picture as shown in Table 2.11 in which data from the NLSS is again utilized.

Table 2.11: Participation in Public Schools by Household Income Groups (percent)

Income Quintile	Primary	Secondary	Tertiary
Bottom 20 percent	17	5	0.4
21-40 percent	19	10	1
41-60 percent	22	16	5
61-80 percent	23	24	13
81-100 percent	19	44	81

Source: NLSS, 1996

2.49 According to the Survey data, the share of all children currently attending public primary schools is roughly the same for each household income quartile. This is influenced by the higher number of children in lower income households, and the attendance in private schools by many children of the highest income group. As a result, of each Rs. 100 spent by Government on primary education, roughly Rs. 17 is spent on children from the poorest 20 percent of households. Since aggregate consumption in general in Nepal is highly unequal across households, the similar shares of expenditure on primary schooling have the impact of reducing inequality in consumption. This is much less the case for higher schooling levels. Participation in these is much more in favor of children from higher income groups. For each Rs. 100 spent by Government on secondary schooling, only Rs. 5 are spent on children from the poorest 20 percent of the population compared to Rs. 44 on children from the richest 20 percent. In tertiary education, the situation is even more marked. Out of every Rs. 100 spent by Government, the poorest 60 percent of the population benefit from just over Rs. 6 while the richest 50 percent benefit from Rs. 94.

2.50 Overall, the education subsidy as a share of household expenditure is higher for the poor than for the better off. However, in absolute terms it remains lower. This implies that the expenditures as a whole as they are currently allocated across levels of education and as access is currently rationed between income groups cannot be justified on the grounds that they increase equity. The greater the concentration of Government education expenditure on the lower levels, particularly primary, the greater the impact on increased equity. Current expenditures on higher secondary and tertiary education have a retrogressive effect on income distribution. These expenditures, apart from the small shares which subsidize the poor, cannot be justified by the objective of increasing equity.

2.51 Since almost all children in the highest income group are in school and the size of families decreases by income group, in the future, as long as the expansion of school places is at a higher rate than the growth of the age group, the marginal benefits will increasingly accrue to the low-income groups. This will be particularly the case for primary schooling. Increased *quality* of primary education is also particularly important for the poor. For children of higher income households, alternative*private*

primary schooling exists if the quality of government schooling is low. This alternative is not available for the poor. Their only chance is in government schools.

2.52 From this evidence, and other documentation of the outcomes of education in Nepal, public expenditure to provide *some varying* amounts of subsidy to each level of education is justified on the grounds of increasing social welfare through mitigating the effects of market failure. The evidence suggests (though not conclusively) that, on these grounds, the justification for subsidizing primary schooling is greater than for secondary schooling which in turn is much greater than for higher education. Similarly, analysis of the distribution of subsidies across income groups strongly indicates that the equity objective is best met by ensuring that universal access to a reasonable quality primary education is provided. Beyond that, in terms of the equity objective, there is a greater justification for the subsidization of secondary schooling than of higher education. Justifications for subsidizing higher education in Nepal are limited. To the extent possible, subsidies at this level should be shifted away from the institutions towards the few students from the poorest 50 percent of households.

2.53 The current level of resources could be used much more effectively even within the current pattern of distribution. Section A presented data on repetition and dropout rates for each level and also described the poor achievement scores in public primary schools compared to private schools and the very low pass rates at secondary, upper secondary and degree level. The current schooling system will need to embrace at least the need for reforms to increase effectiveness before donors are likely to expand their commitments, and quality will need to be improved before parents are willing to increase their expenditures in the public system, at whatever level of education.

2.54 Another aspect of the current level of overall funding is the way in which grants-in-aid to schools have become an entitlement for which no justification is required. Many secondary schools that receive grants have pass rates at the Secondary Leaving Certificate examinations of zero or close to zero. Further, one of the most striking conclusions from studies which have compared the composition of unit costs in public and private schools, is the much larger share in private schools for non-salary items. As the system shifts its emphasis from increasing access through the provision of more schools and teachers to a greater concentration on quality, and ensuring that those children who do not have access to private schools succeed in learning and moving to higher levels, considerations such as these will need to be considered together with ways of designing a funding mechanism to encourage good performance. As decentralization of decisionmaking in the education system develops, school management committees become empowered, and local governments and communities increase their involvement the opportunity and incentive for re-considering the basic funding mechanisms will emerge.

Additional resources

2.55 ***Government.*** Official estimates of economic growth for 1998/99 are 2.5 percent, which would result in an average rate over the past three years of 2.8 percent. Revenue growth in nominal terms was at a higher level than in the previous year, 14 percent, but well below that forecast. While regular budget expenditures increased at the projected 17 percent, development expenditures fell behind those projected, and below the previous years'. Overall, the experience of recent years and the results of revenue and expenditure projections suggest increases in real budgetary resources derived internally and externally of around five percent a year in the immediate future. *This is significantly below the increases which have been allocated to the Education sector over the past decade.* In 1998/99 the regular budget for Education was Rs. 6403 million and the Government's direct contribution to the development budget was Rs. 797 million. A fifteen percent increase over the next three years would yield around Rs. 1100

million, or US$16 million. As noted above, around half of the development expenditures funded directly by Government take the form of counterpart funding for donor - supported projects. An additional US$3 million over the next three years is already preempted by the counterpart funding for the Basic and Primary Education Project II. The extent to which the rest could be used to fund additional activities depends largely on increases in the teachers' salary bill which in turn are influenced by the level of new recruitment and the increase in real salaries. In all, Government's efforts would best be served by reviewing the effectiveness of the resources being funded through the existing regular budget, developing strategies to attract more donor funding and taking steps to increase the absorptive capacity of the system to utilize it effectively, and devising ways to encourage greater household contributions at the higher levels of the system.

2.56 ***Donors***. Development assistance contributes around three-quarters of the development budget and, as noted, half of the Government's direct allocations to this budget are counterpart funds. Both bilateral and multilateral donors are, in general, devoting increasing shares of assistance towards the social sectors, including for education. Increasingly, however, they are requiring a higher standard of project implementation and performance. The most recently supported project, in primary education (BPEP II), has two important characteristics. First, it is supported by a core group of donors each of which will provide finance for the project as a whole rather than for specific activities. Second, there is a general understanding that funding over a ten-year period could be available provided that project activities are effectively implemented. In the early years of this period the focus will be on primary schooling and in the latter it could switch towards lower secondary grades. This will require Government to conceptualize further the role and structure of the whole of the secondary cycle from grades 6–12 and resolve all of the issues involved in de-linking grades 11 and 12 from higher education.

2.57 ***Households***. Household expenditure in accessing public education and purchasing private education is high relative to overall public expenditures. Little of this, however, actually accrues to public institutions since tuition fees are not charged except at the University where they are Rs. 500–600 a year. In the same way that relatively low economic growth rates in the immediate future are likely to curtail the increase in Government revenues, increases in household income will also be small and for the majority of the population additional costs for education might reduce participation. However, the social composition of the student body in higher secondary schooling and the University show that these students are mainly from the wealthiest 25 percent of households. Further, the rapid growth of higher secondary private institutions in recent years indicates that many parents are willing to pay. There is no justification for the current situation in which higher education is subsidized to a greater extent than secondary schooling.

Distribution of additional resources

2.58 The first priority for Government in the education sector is to increase the effectiveness of current levels of expenditures. Beyond that, and prior to any additional expenditures, beyond those already planned for primary education, there is a need for policy analysis and decisions to be taken regarding the medium term structure of secondary education. Policy analysis might first concentrate on broad issues such as the desired/required proportions of the relevant age groups completing eight, ten and twelve years of schooling within various time periods. This would then set the framework for Government and donors to consider the financial requirements of secondary and higher education within a realistic phasing of their expansion. The financing of these levels will need to be a joint venture of Government and households with the level of subsidization lower at the University and targeted towards the small number of students from the poorest fifty percent of households.

2.59 Finally, there is the question of whether Government should add to its educational responsibilities and actively engage in providing job-related skill development. This is a complexissue which is currently under-researched in Nepal. Out of a population of 20 million, there are 9 million children below the age of 17. Perhaps two thirds of these (6 million) will have completed a primary or full elementary schooling by the time they enter the labor force. Total off-farm employment, by comparison, is about 2 million. In this circumstance there is a strong temptation to expand formal technical and vocational education. Worldwide experience, however, suggests that this is expensive and often not very effective. In general, on-the-job training by employers (public and private), and short apprenticeships combining formal and informal training are more cost effective if the institutional infrastructure to provide these are in place. In general, the scarcity of funds precludes a major technical and vocational educational effort by Government in Nepal. An exception, however, may be in the area of construction industry skills. Here, large amounts of foreign labor are currently used, skills development programs can be individually short and sequential, a regional labor market may exist and it is possible that the success of similar programs such as those in Sri Lanka could be replicated.

D. CONCLUSION

2.60 The first priority for Government in the education sector is to increase the effectiveness of current levels of expenditures. Overall, management of the education system is highly centralized and community interest groups such as parent-teacher associations are generally weak. The consequence is both a lack of accountability and little community feeling of school ownership. Where communities do show initiative is in starting schools which cover the first two or three years of primary school, but there is then the expectation that government will take over. Given the recent development of the education system compared to virtually all other countries, these characteristics are not surprising. The recent moves to strengthen decentralization through the transfer of additional powers to Village and District Development Committees, the devolution of more responsibilities to district officials plus the emergence of user groups across a range of activities from social forestry to savings and loans schemes suggest the beginnings of change. Experiences of other countries over the past decade to decentralize the management and financing of the education system, particularly in Latin America, could provide useful lessons. The new Basic and Primary Education Project will provide very useful lessons. Eighty percent of the Project's resources will flow according to priorities determined within the districts. Individual school improvement plans formulated by school-community groups are anticipated to be central to the planning process.

2.61 Prior to the expenditure of large amounts of additional resources, beyond those already planned for primary education, there is a need for policy analysis and decisions to be taken regarding the medium term structure of secondary education. Policy analysis might first concentrate on broad issues such as the desired/required proportions of the relevant age groups completing eight, ten and twelve years of schooling within various time periods. This would then set the framework for Government and donors to consider the financial requirements of secondary and higher education within a realistic phasing of their expansion. The financing of these levels will need to be a joint venture of Government and households with the level of subsidization lower at the University and targeted towards the small number of students from the poorest fifty percent of households. An essential complement to the required analytical work on the post primary education system will again be a required focus on issues of management and governance in the context of a more decentralized system of government and the need to capitalize on community initiatives.

III. HEALTH

Overview

3.1 In recent years the share of total government expenditure devoted to health services has increased but per capita allocations remain among the lowest in the world and indicators of health status are very low, even for the region. Public resources from both government and donors, while increasing, are likely to remain low relative to the huge needs until the economy records much higher, and sustained, rates of economic growth. In these circumstances, the overall challenges facing the government is to ensure that the relatively small amount of public resources is distributed across health service activities in a way which maximizes the government's equity objective and its responsibility to fund and often to provide those critical services which others cannot or will not. Within this overall objective there is a need to (a) ensure that the poor are not denied access to essential services because of their poverty or the absence of the required facility, (b) encourage private expenditures for publicly provided services from those who are able to pay, (c) develop an environment which encourages the provision of health services by the private and non government sectors, (d) allocate expenditures across activities in a way which accurately reflects the government's stated objectives, and (e) ensure that the publicly provided inputs are used more efficiently through measures which devolve decisionmaking to lower levels of government and encourage and empower a greater community role in defining the quality of services provided.

A. INTRODUCTION

3.2 At first sight, the National Health Accounts for Nepal suggest that the role of the public sector in providing health services is relatively small (Hotchkiss et. al., 1999). In 1994/95, 76 percent of all expenditures for providing and accessing health services are estimated to have been made by households, 13 percent by donors (both through the Government and directly) and 11 percent by the Government through internally generated resources. However, two thirds of the household expenditures were incurred as a result of attending a Government health facility. Around 24 percent covered the costs of treatment provided by private 'modern' and traditional providers and another 10 percentwas provided by non-government organizations and directly by donors. Overall, in spite of being directly responsible for only a small proportion of overall health expenditures, the public sector remains by far the major provider of health services. For the poor and for those living in relatively remote areas of the country, Government is usually the only provider. As a result, trends in the level, allocation and effectiveness of public funds in the health sector are of central importance for determining the availability of health services and the health status of most of the population.

3.3 The health sector is the highest spending sector for Government after education, electricity, transportation and, since 1994/95, local development. However, while substantial, and increasing, amounts of public money are being spent on health services in Nepal there is a common conception that both the quality and coverage of services are poor and that expenditures are having little impact on indicators of health status. In this context it is important periodically to examine the justifications for publicly subsidizing health services and to assess the level, patterns and effectiveness of these expenditures. This chapter aims to contribute to such an examination.

3.4 Recent reviews of the health status of the population indicate that while improvements have occurred in recent decades, the status remains very low. Among the five most highly populated countries

of South Asia – Bangladesh, India, Nepal, Pakistan and Sri Lanka – Nepal comes last or next to the last on every important indicator. For example:

- the infant mortality rate is 91/1000, compared to 65/1000 in India and 75/1000 in Bangladesh;
- the child malnutrition rate is 70 percent and immunization rates are well below those in India, Sri Lanka and Bangladesh;
- thirty-one percent of children under five years are underweight compared to 25 percent in Bangladesh and 7 percent in Sri Lanka;
- the maternal mortality rate is 6/1000 compared to 1.4/1000 in Sri Lanka;
- the expectation of life at birth is just 55 years which is well below that in India, Pakistan and Sri Lanka;
- comparisons of estimates of the overall burden of disease (discussed in detail below) with those made for India and China suggest that in Nepal they are high, particularly the burden resulting from infectious diseases, maternal and perinatal disorders and conditions resulting from nutritional deficiencies – all illnesses associated with countries at the first stage of the epidemiological transition; and
- health-related indicators such as access to safe water (48 percent) are well below those for Bangladesh (83 percent), India (63 percent) and Pakistan (60 percent).

3.5 Conventional arguments for allocating public resources to the health sector and subsidizing services are based on considerations of economic efficiency and equity. As in the case of education, to the extent that part of the potential benefits arising from health services are enjoyed by others in addition to the individual receiving the services, there can be justification for government to subsidize (to some degree) their provision and increase demand. For example, interventions to prevent and cure infectious diseases come within this category. Many of the interventions to improve the population's understanding of issues of general hygiene and the consequences of particular types of lifestyle again may have social benefits. Several of these interventions must, by their nature, be made available across the whole population making it almost impossible to charge a fee for them and unlikely that the private sector would offer them. At the other end of the spectrum, curative services for non-communicable illnesses have few benefits apart from for the patient and therefore, on these grounds, do not justify public subsidies. However, the absence of contributory insurance markets to cover the eventualities of rare ailments and expensive treatment (catastrophic risks) may provide some justification for publicly funded insurance or the direct provision of services for such treatment. Further, equity criteria such as assuring some minimum coverage of access to health care for the poor and focusing on interventions which preferentially benefit the poor may justify subsidization, though for what particular services and to what level will need to be decided. When the equity argument is used to justify public provision, there is a need to ensure that it is the poorest who do in fact benefit from the subsidy.

3.6 In the following section, these general justifications for the public subsidy of health services are made more specific within the context of a summary presentation of the results from a recently completed analysis of the burden of disease in Nepal and from the Nepal Living Standards Survey 1995.

Prior to that, however, there is a need to state clearly that the public sector and public expenditures in Nepal will not be able to provide for all of the health services required in the immediate future, even for the poor. Planning of the allocation of public resources needs to take place within a full understanding of the provision of health services in the non government, profit and non profit, sector. Further, there is a need to gain some understanding of the effects of Government expanding or contracting its own services on the behavior of private sector providers. Government can improve the health status of the citizens of Nepal not only by providing more public resources and allocating and using them more efficiently but also by taking measures, which will enable and encourage other providers of health services to expand their activities. Finally, in most societies, and certainly in Nepal, not all theactivities which can justify public funding on the criteria laid out above in para. 3.4 can be afforded. There is then an additional need to assess the cost effectiveness of the alternatives.

B. Status of Health and Priorities for Public Expenditure

The burden of disease and public expenditure priorities

3.7 As part of a program of analytical work in the health sector supported by the World Bank in Nepal over the past three years, existing sources of information on the morbidity and mortality patterns have been combined with the conclusions of expert groups to generate estimates of the burden of disease measured through the Disability Adjusted Life Years (DALYs) approach (see World Bank, forthcoming, *Operational Issues and Prioritization of Resources in the Health Sector*, hereafter referred to as *Operational Issues*). This approach to describing the health status of populations combines years of life lost through premature death with years of life lived with disability, using disability weights depending on the severity of the illness. In studies of this type, the composition of the resulting burden of disease tends to be disaggregated into three categories of diseases and conditions: (I) infectious, maternal and nutritional; (II) non-communicable and congenital; and (III) injuries and accidents. Among the key findings of the analysis undertaken are:

(a) Compared to estimates made for other developing countries, the overall current burden of disease in Nepal is high, especially from category I conditions. Allowing for different population sizes, the latter is five times the level for China and almost 50 percent higher than for India.

(b) Of the total burden of disease, category I diseases and conditions contribute 68 percent, category II, 23 percent, and category III, 9 percent.

(c) Of the total burden, premature mortality is responsible for much more than disability and over half of the total DALYs lost result from child deaths and a further quarter come from deaths of 15-44 year olds.

(d) In both of the above age groups, females have a higher burden indicating both discrimination against girls in health services and, perhaps, in the distribution of food, and high levels of maternal morbidity and mortality.

(e) The leading causes of DALYs lost by children under five are diarrhea, measles, respiratory infections and perinatal conditions.

3.8 Analyses of the burden of disease in India which have been undertaken recently suggest that that country may soon face what may be termed an epidemiological transition as the size of the disease burden caused by category II non-communicable diseases and conditions overtakes that associated with category I and the pattern begins more to resemble that found in advanced industrial countries. Projections made for Nepal, however, suggest that this transitional stage will be delayed for several years. It is estimated that the share of the total burden from these causes will increase from 23 percent in 1996 to just 29 percent in 2011.

3.9 What are the general implications of the burden of disease analysis in Nepal for health sector expenditures in general, and for public expenditures, including those supported by donors? At the beginning of this discussion, it is important to note that while the level and composition of the burden of disease can give a good approximation of the priorities for *total* spending on health, they do not automatically indicate priorities for public expenditures. The latter need to be justified either through market failures or through governments' poverty and equity objectives, as described earlier.

(1) In light of the dominance of infectious diseases and illnesses associated with maternal and child health, category I conditions will need to be given overwhelming first priority now and in the immediate future if the burden of disease is to be effectively reduced.

(2) The large proportion of the overall burden of disease contributed by young children suggests the need for a particular emphasis on child-related illnesses particularly resulting from vaccine preventable diseases, nutritional disorders and related conditions. Similarly, the high prevalence of illnesses associated with maternal and perinatal disorders suggests the need for effective safe motherhood programs.

(3) Not all category I diseases are associated with children and childbirth. Vector-borne diseases such as tuberculosis, malaria and kala azar prevail across the whole population. Other diseases such as hepatitis B and respiratory illnesses also affect seriously the adult population and need to be addressed. In addition, in many of these cases, there is a need for effective health education and social mobilization, and for environmental measures such as better access to safe drinking water and sanitary disposal of excreta.

The prevention of category I diseases and illnesses, in general, require comprehensive national programs of vaccination, treatment, surveillance, health education and environmental improvements. The costs of infectious illnesses are not limited to the individual patient. The composition of the burden of disease dictates that these illnesses require priority in overall health expenditures. They are also a priority for the allocation of public resources, given the externalities associated with these diseases and the public good nature of many of the interventions.

(4) Although category I diseases dominate the burden of disease, almost one quarter of the burden arises from non-communicable and congenital diseases and illnesses and the share will increase over time. Predominant illnesses include strokes and heart diseases, cancers and alcohol-related diseases, resulting in part from hypertension, diabetes and a set of lifestyle characteristics. Efforts both to prevent and cure these illnesses require resources, though not necessarily public resources. In general, economic efficiency arguments to justify subsidization would support the use of public resources in ways, which would prevent these illnesses occurring, rather than for curative treatment.

3.10 It is in tackling category I conditions, particularly the elimination of infectious diseases and improvement in maternal and child health conditions, that the economic rationale for public sector interventions are most valid and that the higher than proportional incidence for the poor provides an additional rationale on the grounds of equity. It is also from success in these areas that any major reductions in the burden of disease will result. However, one third of the burden of disease results from category II causes. While the argument for public sector interventions on grounds of economic efficiency are not so strong for these diseases and conditions (apart from those based on the absence of insurance markets for catastrophic risks), the equity argument may apply if these are included within the definition of the minimum coverage of access to health care. The upshot is that while all arguments suggest that the overwhelming priority in the allocation of public resources be given to the prevention and treatment of category I diseases, some justification exists for some level of subsidization of category II conditions, at least *for those economically most in need.* Operationalizing the equity criteria requires care.

Equity and public expenditure priorities

3.11 Arguments made in the framework of the concepts of economic efficiency provide the context for one set of rationales for justifying public expenditures in health care provision. The other rationale is based on considerations of equity through ensuring some minimum coverage of access to all citizens, and poverty reduction through providing preferential treatment to poor people. Many issues are involved. Three examined here in the context of Nepal are the degree to which charging the full cost of services would effectively deny access, the appropriate level of subsidy and the extent to which the poor, as opposed to the non-poor, make use of the subsidized services. Results from the Nepal Living Standards Survey 1995/96 provide some guidance on these issues.

3.12 Expenditures made by households to gain access to publicly provided health services vary substantially by income group from Rs. 470 a year for the poorest quarter to Rs. 5016 for the wealthiest quarter and expenditure as a share of total income for the lowest income group is less than half that for the highest group. The average cost of seeking treatment is Rs. 367 (from Rs. 183 in a primary health center to Rs. 637 in a hospital), which is equivalent to two weeks of per capita consumption. While part of the reason for the poor not accessing public facilities may be due to the derogatory way in which they are sometimes treated socially in such facilities, these data strongly suggest that the poor simply do not have the resources required to purchase necessary amounts of health care, or even to afford the expenses such as for travel to access them. Regression analysis demonstrated that along with distance to a health facility, household economic status is a significant determinant of whether or not to seek treatment even at the current level of subsidization. Without a significant degree of subsidization the poor would not have access to health services.

3.13 The incidence of poverty in Nepal is 23 percent in the urban areas and 44 percent in rural areas. Twenty-eight percent of cases treated in urban areas over the twelve months prior to the Survey were in public hospitals. The corresponding figure for rural areas was 16 percent. Conversely, 40 percent of rural cases had been treated at health centers and health posts compared to just 13 percent of the urban cases. Other data suggest that over a twelve-month period, almost five percent of the wealthiest quartile used public health facilities compared to less than three percent of the poorest quartile. Overall, even though the urban population made twice as much use of private facilities as the rural population, they benefited most from public healthcare subsidies because they sought medical treatment more often and used higher cost public facilities more than did the rural population. The available data suggest strongly

that the subsidization of higher level facilities such as hospitals benefits the higher income population disproportionately. If subsidization of health services is to be based on the rationale of equity, its pattern must be one which actually benefits the lowest income groups more than proportionately. For this to occur there will need to be greater targeting in the location of facilities with a greater focus on providing facilities in rural areas rather than spending a large proportion of public money on urban hospitals. In addition there is a need for means-based instruments of cost recovery for hospital-based treatment.

3.14 Considerations of economic efficiency and social equality, together with analysis of the disease patterns and burden of disease, provide guidelines but not absolute rules for the precise distribution of public resources. A further step in this regard would be analysis of the cost effectiveness of marginal increases in specific publicly financed interventions, allowing for any reduction in treatment in the private sector which might result. This is yet to be done in a way which can produce useful operational guidance. In the meantime, the rough pattern of desirable publicly financed interventions outlined above provides some direction. In the following sub-section, the levels, trends, distributions and efficiency of public health expenditures in Nepal are described. This is followed by an assessment of how these compare with the patterns suggested by the conventional rationale for public expenditure and subsidization, and patterns in the burden of disease, and a set of recommendations for change.

C. Levels and Trends in Public Expenditures in Health

An overview of the level of public expenditures

3.15 The aggregate need for health services in Nepal is great and beyond the levels which public resources can finance, now or in the immediate future. An examination of the existing distribution of public resources in the context of considerations of economic efficiency and social equity in the ability to access health care, and of the burden of disease, is necessary if the financing of the sector is to be more rationally based.

3.16 As described in the Introduction to this section, most of the resources spent on financing, providing and accessing health services in Nepal are provided by households. In 1994/95, households are estimated to have been responsible for 76 percent of total health expenditure. Thirteen percent was provided by donors and eleven percent directly by Government. However, of the household expenditures, two thirds were spent on accessing health services provided by the government or made as a result of using them, for example on purchases of medicines. Household expenditures on the private health sector are around one quarter of all expenditures (household plus public) on health.

3.17 Public health expenditures (Government plus donor grants and loans recorded in the Budget) are very low in absolute terms but have been increasing. Expenditures were equal to 3.5 percent of total government expenditure in 1991/92 and had increased slightly to 3.7 percent in 1995/96. The allocation further increased to 4.9 percent in 1996/97 and to 6.5 percent in 1997/98. In 1998/99 the budgeted share fell to 5.6 percent. The increase in the share has resulted from an expansion of real expenditure, which grew by 35 percent between 1991/92 and 1996/97 compared to a 29 percent growth in overall public expenditures. The share of health expenditure in total government expenditure and in GDP (1.26 percent) in Nepal is comparable with that in most other countries in the region, and higher than in Pakistan. In the immediate future, the main focus needs to be on improving the quality and effectiveness of this expenditure. In the longer term the regional comparisons provide little comfort. In the rest of the world only six countries, mainly small African countries, devote a smaller share of GDP to publicly financed health services than does Nepal.

3.18 The impact of the growth in public expenditures on health has been reduced partially by the high growth rate of population of around 2.4 percent a year. At constant prices, per capita health expenditures since 1991/92 have increased from Rs. 48 to Rs. 59. At current prices, per capita expenditure in 1998/99 was equivalent to $2.54 a year. This level of expenditure is very low, and only in five other countries in the world is it lower. Per capita allocations in many similarly poor countries such as Tanzania, Sierra Leone, Malawi, Niger and Uganda are higher and for sub-Saharan Africa as a whole they are twice as high. Further, while the share of health expenditure in total government expenditure has increased through the 1990s, that of water supply fell significantly from 5.1 percent to 2.9 percent between 1991/92 and 1996/97. There is considerable evidence within the region that clean water and sanitation are closely associated with health status. Indeed, it is possible that they have a greater impact than do health services.

3.19 A large portion of public expenditure on health is supported by external donors. Some donor assistance is allocated through the budget while some is not. Of budgeted health expenditure, almost 50 percent of the total including around two thirds of development expenditures have been contributed by donors in recent years and the share has been increasing. For example, in the 1997/98 regular and development budgets described in Table 3.1, out of a combined total of Rs. 3850 million the donor contribution was Rs. 1828 million or 46.7 percent including 67 percent of the development budget. Until recently, the Government's budget documents have seriously underestimated the extent of donor financing. Using the UNDP Development Co-operation Reports, Shah (1996) has suggested that over three-quarters of the financial contributions to the health sector by external donors and by international and local non-government organizations were not included in the Government budgets. For example, the budgets for 1994/95 and 1995/96 showed total external support of Rs. 416 million and Rs. 233 million, respectively. The corresponding figures reported by UNDP were Rs. 1628 million and Rs. 1354 million. Since the 1997/98 budget this situation appears to have largely been rectified and the inputs for only those projects, which are run directly by donors and NGOs, remain uncovered. However, an additional source of under-reporting of public expenditures on health is the omission of expenditures by ministries other than Health. These include Home, Defense, Education and Finance which together add an additional 10 percent to the total, mainly through hospitals and public sector employee insurance schemes. These expenditures benefit relatively few people.

3.20 While per capita allocations of public money to the health sector in Nepal are low in absolute terms and in comparison with those in countries with similar income levels, the appropriate response is not straightforward. Two other issues need to be considered; first the allocation between different activities within the sector and, second, the extent to which the existing allocations are utilized effectively.

The allocation of public health expenditure

3.21 Compared to most other ministries including Education, the proportion of total public resources for Health currently being allocated to the development budget is very high at 65-70 percent. Partly this reflects the substantial contribution made by donor funding (almost 50 percent of the total), all of which is recorded within the development budget. It also reflects, however, the tendency not to guarantee funding for some activities so as to be able to terminate them and the staff involved without the problems associated with regularized staff. This raises issues of project sustainability and of the extent to which Government is committed to continuing programs initially supported by donors.

3.22 The patterns of allocations to the separate levels of health provision within the regular and development budgets are somewhat different, as demonstrated in Table 3.1 where provision is differentiated between hospitals and health services (health centers, health posts and sub-posts). The data also demonstrate how quickly the patterns of expenditure, particularly in the development budget, can change. Of the 1997/98 allocations, 74 percent of the regular budget was allocated to health services (primary care) and 19 percent to hospitals while the development budget was divided almost equally. The division of total expenditures was 3:2 in favor of health services. In the allocations for 1999/2000, some significant changes can be seen. The allocation for health services in the regular budget has increased to 78 percent of the total and decreased to 16 percent for hospitals. More pronounced, the allocation for hospitals in the development budget has fallen from 45 percent to 31 percent. Overall, the shares have shifted to a ratio of 3:1. The relatively large allocation (and increasing share) of the regular budget to health services reflects the large, and growing, workforce in health posts and health centers.

3.23 Over the past four years, while the levels of absolute expenditures on primary care have increased, their share of total health expenditure appears to have initially fallen and then increased. Overall, in 1996/97, the allocation was 70 percent of the total. This fell to 59 percent in the following year and has since risen to 67 percent and then to 71 percent. The recent increases are a result of falling development expenditures on hospitals since 1997/98 together with a rapid increase in regular expenditures in the primary care sector. Over the two years 1997/98 to 1999/2000 these allocations increased by 43 percent.

Table 3.1: Size, Distribution and Sources of Regular and Development Budget Allocations for Health, 1997/98 and 1999/2000. (Rs. million)

	1997/98	*% HMG*	*% Donors*	*1999/2000*	*% HMG*	*% Donors*
(i) *All Health*						
Regular	1138	100.0	0.0	1557	100.0	0.0
Development	2711	33.7	66.3	2760	37.2	62.8
Total	3850	53.3	46.7	4317	59.9	40.1
(ii) *Hospitals*						
Regular	221	100.0	0.0	250	100.0	0.0
Development	1225	31.5	68.5	838	45.7	54.3
Total	1446	41.9	58.1	1088	58.2	41.8
(iii) *Health Services*						
Regular	847	100.0	0.0	1213	100.0	0.0
Development	1463	33.1	66.9	1838	31.1	68.9
Total	2280	58.6	42.0	3051	58.5	41.5

Source: HMGN, Ministry of Finance, 1999
Note 'Totals' also include some other small items of expenditure.

3.24 The relative size of the development budget in the health sector, its importance in influencing future recurrent expenditures and its inclusion of significant donor funds justifies some additional attention. Table 3.2 describes allocations by major program for each year between 1995/96 and 1999/2000. The total development budget increased rapidly over the first three years and then stabilized. The increase was mainly due to an expansion in donor support, which in 1997/98 was responsible for two thirds of the total. The main area of expansion to 1997/98 was support for the hospitals. Of the eight major hospitals funded from within this budget, three received very large amounts of donor funding in that year. In addition, one of the hospitals received almost 30 percent of the total development budget directly financed by Government. The implications of this upsurge in support for hospitals are not limited to current expenditures. It is likely to lead to increased demands for recurrent funding from the regular budget in the future. However, since 1997/98 the allocations to hospitals have begun to fall back while those for health services have continued to increase.

Table 3.2: Size and Distribution of Health Development Budget Allocations, 1995/96 – 1999/2000. (Rs. million)

Program	*1995/6*	*1996/7*	*1997/8*	*1998/9*	*1999/2000*
Total Budget	915	1,787	2,711	2,639	2760
Central	670	1,537	2,380	2.308	2410
District	245	248	331	331	350
Hospitals (8)	290	768	1,225	901	838
Health Services	585	968	1,433	1,683	1,838
Central (29)	346	728	1,112	1,262	1,498
District (18)	239	239	321	329	340
Other	37	50	52	54	84

Source: HMGN, Ministry of Finance (various years)
Note Numbers in parenthesis are numbers of individual projects.
Programs are divided into central and district administered ones.

3.25 The Health Services component of the development budget currently includes 47 separate projects. Eight of these were added in 1996 and one in 1997. Of the 29 centrally run projects, 19 are supported by donors and one of these, the IDA-supported Population and Family Health Project (PFHP) absorbs almost 40 percent of the total. Aggregated total expenditures in disease control projects in 1997 were Rs. 367,000 out of which the Government directly provided Rs. 142,385. These expenditures are just 13.5 percent of the total development budget for health and 15.6 percent of the Government's direct expenditure respectively. Apart from the PFHP, the largest single allocation within the budget is for 'medicine and instruments supply'. However, as a proportion of the total development expenditures the allocation fell from 11 percent in 1975 to under 5 percent in 1997. Two thirds of this item were donor supported in 1997.

3.26 A different format for disaggregating health public expenditures has been adopted in the World Bank's *Operational Issues*. Regular and development budget expenditures were combined and allocated between primary care, central regional and zonal hospitals, health policy and management and

traditional medicine for each year between 1991/92 to 1997/98. The percentage shares for the first, mid-year and final year of this period are described in Table 3.3, and the series has been extended to 1999/2000. These data illustrate further the various shifts in the distribution. Between 1991/92 and 1996/97, the share for primary care fell by almost twenty percentage point from 77 percent to 57 percent while that for the hospitals increased by 23 percentage points to around 37 percent. At the same time the share for policy and management was halved. Since 1997/98 the overall trends have been reversed. The allocations of the sub-set of donor assistance (as reported by UNDP) were also analyzed. To provide some sense of trend to these, given that the allocations are often lumpy and change between years, the percentage shares have been averaged over the periods 1991/92 to 1993/94 and 1994/95 to 1996/97, and

Table 3.3: Allocation of Total Health Expenditure by Major Programs, Selected Years. (percent)

Program	*1991/2*	*1994/5*	*1997/8*	*1998/9*	*1999/2000*
Primary care	76.8	63.1	57.2	64.7	68.9
Central, regional and zonal hospitals	14.6	30.3	37.5	29.9	25.2
Health policy and management	5.7	3.8	2.5	2.7	2.4
Traditional medicine	2.9	2.9	2.8	2.7	3.5

Source: World Bank (forthcoming), Table 4.6 to 1997/98
Ministry of Finance (various years), 1998/89 and 1999/2000

are described in Table 3.4. The trend in these distributions is rather different to that for the development budget as a whole. Apparently even during the period when the overall share for primary care was falling, donors were increasing their emphasis in this area and in policy and planning, maintaining it in immunization and disease control and in family planning, and substantially reducing it in hospitals and clinics. This difference in the pattern of donor and total expenditures suggests that aid flows to the sector

Table 3.4: Annual Average Distribution of Donor Health Expenditures by Program, Selected Years. (percent)

Program	*1991/92 - 1993/94*	*1994/95 - 1997/98*
Primary health car	30.3	37.9
Immunization and disease control	19.9	20.4
Hospitals and clinics	30.3	18.8
Family planning	8.8	9.8
Policy and planning	7.3	13.1

Source: World Bank (forthcoming). Background table.

are highly fungible. In response to the donors' own funding priorities, which favored primary health care, the Government in the early and mid-1990s shifted its own resources (relatively) out of this area and switched them to activities such as hospitals, which are not particularly favored by donors.

3.27 Overall, the changing allocations in public expenditures in health services until recently towards urban hospitals and away from rural facilities run contrary to the pattern of allocations which would be implied by the general considerations of the justifications for public expenditure. This has been the case particularly in the development budget. Certainly publicly funded hospitals must play an important role in providing facilities beyond primary care for the rural poor, and also for the Nepali middle class in cases of rare but expensive clinical care. However, given the strong public finance arguments for subsidizing infectious diseases and reproductive and child health programs, their overall importance in the overall patterns of mortality and illness, and the evidence from the Nepal Living Standards Survey that public hospitals are used more by members of higher income households than of poorer households, these changes in the relative allocations between primary health care and (particularly urban) hospitals would not seem to be justified. The allocations in 1998/99 and 1999/2000 budgets appear to reverse the trend, but the very large increases in the regular budget allocations for the health services subsector now raise the issues of long-term sustainability.

Internal efficiency

3.28 While allocations of public expenditure for health services may or may not reflect a desirable distribution implied by economic efficiency and/or equity arguments and the burden of disease, the effectiveness with which they are used is also relevant. One particular indicator is troubling, though the situation has improved. Over the past decade, significant shares of budget allocations (particularly from the development budget) have not been spent. Since 1990/91, expenditures as a proportion of allocations in the development budget have averaged 68 percent. While in recent years the proportion has been increasing it remains lower than in other ministries. It is difficult to justify further increases in allocations when existing budgets are underspent. Underspending is indicative of major inefficiencies in the operation of the sector.

3.29 For institutions to operate efficiently, at whatever is their overall level of resources, there is a need for the combination of physical infrastructure and inputs to be appropriate. Well-staffed health posts with no medicines or water supply will result in the staff being underutilized; appropriately built and equipped health centers with no staff will similarly result in the centers' underutilization. If the inputs which are put in place cannot function, they are being wasted. The Government has made great efforts in the past few years to expand the coverage of rural health facilities. For example, sub health posts increased from 200 in 1992 to 2597 in 1996. However, in the Health Facilities Infrastructure Status survey undertaken in 1996 for the World Bank health sector work, it was found that none of the health posts in the Far West Mountain region and only a quarter of those in the Far West Hills had a water supply. A lack of electricity, toilets and staff quarters was common while basic equipment such as thermometers was found to be absent in many facilities. Budget allocations for medical instruments and medicines were described above as having decreased significantly as shares of total expenditure. The survey also indicated that while vaccines and drugs for malaria, leprosy and tuberculosis were available in sufficient quantities, many other essential drugs such as antibiotics were not available for up to six months of the year. Shortages were particularly severe in the primary health centers. Staff vacancies and absenteeism are acute in many rural health facilities. The Long Term National Health Plan 1998 reported that a third or more of the sanctioned posts of health assistants, auxiliary nurse midwives and village health workers were vacant and the survey indicated that over a quarter of staff were absent. Reasons for under staffing are a mix of underfunding for posts and for training, reluctance of individuals to fill positions in remote areas and management weakness in staff deployment and supervision. In all these cases of inadequate facilities, medicines and staff there are major regional differences between, particularly, the Central and Terai regions and the Mid and Far West. Unfortunately, it is in these latter

regions where non-government services are least available and where the dependence on the public sector is greatest.

3.30 Overall, data on the availability and distribution of the inputs in health facilities suggest substantial inefficiencies in the use of available resources and the need for some re-distribution. Planned efforts to decentralize the administration of primary health care will hopefully have some beneficial effects in these areas, including a reduction in staff absenteeism.

Unit costs and composition

3.31 As part of the facilities survey described above, cost patterns were analyzed across different levels of facility. The lower the level of facility, the higher the share of salaries. In the regional and zonal hospitals, salaries absorb just over half of total expenditures while at the district hospitals the share is 80 percent and in the primary health centers and health posts it is 90 percent. One consequence is the small purchases of medicines at the health centers and posts. Only two percent of overall costs are spent on medicines compared to 17 percent in the regional and zonal hospitals.

Non-government health services

3.32 Three quarters of the total expenditures required to provide and access health services in Nepal are spent by individuals. Of these, over half are spent on accessing public facilities. Expenditures on privately provided care (for profit and not for profit) are roughly equal to expenditure by the Ministry of Health including that funded by donors. As stressed earlier, it is not sensible to develop strategies for the public provision of healthcare without considering the nature and potential of provision in the for profit and not for profit non-government sectors, and without understanding the likely reaction of these sectors to an expansion or contraction of public services.

3.33 Again, as part of the World Bank series of health sector studies, a review of health facilities provided by the private (for profit) sector and non-government organizations was undertaken. For the private sector, the picture emerged of a wide variety of services ranging from hospitals, nursing homes and diagnostic centers run by qualified doctors in urban centers, particularly in the Kathmandu Valley, to pharmacies providing over-the-counter drugs and 'advice', and to a large number of practitioners of indigenous systems of medicine and unqualified health workers working across the rural areas. The 'modern' private system is geographically concentrated with almost 80 percent of beds, 73 percent of health facilities and 43 percent of registered pharmacies located in the Central region. Levels of poverty, and a corresponding inability to pay, outside of this region have proved to be a disincentive for the private sector. Even within the Central region, access to these practitioners and particularly to the hospitals, is limited to the relatively high-income group. No consistent systems of cross subsidy exist to enable these for profit facilities to provide for the poor. At the other extreme, the survey demonstrated the lack of effective procedures to ensure a minimum of quality of care and to limit the potential abuses of rural pharmacies and unqualified health 'workers', which have been well documented across South Asia.

3.34 NGOs operating in the health sector are similarly geographically concentrated. A total of 256 are thought to be involved but of these sixty percent are operating in the Central region and just eight percent are located in the Mid-Western and Far Western regions. This concentration on easily accessible areas may be resulting in duplicating rather than complementing public and for-profit services. On the positive side, however, most NGOs focus on reproductive and child health and on the control of

infectious diseases and a third are involved in training community level workers. Networks of NGOs have been established and some formal linkages established with Government. There still remains the need for Government to link NGO services to the mainstream and to establish structures in which NGOs can be centrally funded to undertake service provision in areas where the Government faces particular difficulties.

3.35 Overall, from the survey it is clear that the non-government sector provides no panacea for Government to relieve itself of its main responsibilities for delivering public health measures and for ensuring that the poor receive treatment. However, some opportunities do exist. The large numbers of traditional healers spread throughout the country potentially offer the resources to promote good healthcare practices on a massive scale and to act as community based depots for all sorts of medications and contraceptive devices. For the modern non-government sector, ways need to be sought to encourage it to become more geographically diverse while the potential for the public sector to buy the services of the private hospitals for treatment of the poor and to contract out the delivery of 'packages of essential health care services' in specific underserved districts to NGOs, needs to be examined and piloted. Such options underscore the useful distinction between the rationale for the public *financing* of preventive health services and subsidies for the poor for curative care, and the *management and delivery* of those services. At the same time, the practicalities of developing or encouraging community based health insurance schemes could to be investigated.

Cost recovery

3.36 While an embryonic system of cost recovery in public health facilities does exist in Nepal, payments are generally low and highly uneven across institutions. The variations, in part, reflect the decentralized efforts in some districts – often pilot projects with donor support – to increase the level of cost recovery for health services and supplies of medicines. The Nepal Living Standards Survey provides information on individual expenditures incurred when accessing public (and private) sector health care. The aggregate amounts are significant and for public sector facilities appear to more or less match the publicly provided resources. By no means all of these revenues, however, accrue to the facility. In fact, levels of cost recovery are generally low but there are apparently significant differences between individual institutions according to data collected as part of the survey of unit costs. In some of the zonal hospitals and even primary health centers, cost recovery was almost 50 percent of recurring expenditures for outpatient treatment while in others the rate was less than 10 percent. At the healthposts covered by the survey, patients contributed on average Rs. 7, equal to around 15 percent of the total cost of treatment. However, at those health posts operating drug schemes, payments of around Rs. 25 were made. In turn, these health posts spent around 20 percent of their total expenditures on drugs compared to around three percent in those health posts not operating such schemes and dependent for supplementary income solely on outpatient registration fees. This implies that higher levels of cost recovery are possible but *require* a higher quality of service. Not surprisingly, individuals' expenditures increase at higher levels of facility. On average, they are twice as high in zonal hospitals as in district hospitals.

3.37 Developing a deeper understanding of both public and private sector health expenditures and financing by level of care, input mix, income group and rural-urban location wold greatly assist policy development and assessment of options to refocus public sector health financing priorities in Nepal. Two immediate steps are recommended. First, means-based instruments for cost recovery for hospital-based treatment need to be developed. These could include upper limits on total fees paid by individual families to guard against catastrophic risks. Second, fees for curative care in primary health care

facilities could be set by village health committees (with some Ministry guidance) in a manner which discriminates in favor of the poor. The results of the quite wide but disparate experimentation with cost recovery in Nepal needed to be collected to inform the design and implementation of a more comprehensive system.

D. Discussion of Current Expenditure Patterns

3.38 Before discussing further the current patterns of public expenditure in the health sector, and making recommendations for the future, it will be useful to present the primary messages resulting from the World Bank's recently completed study of the sector (Operational Issues). These are:

- the projected increase in population of 60 percent over the next two decades will place enormous pressure on already strained resources
- regional disparities in health indicators are among the highest in the world and the distribution of health care services provided by government, NGOs and the private sector do not reflect this
- the provision of health services must be designed to deal with the 'unfinished agenda' of infectious diseases and related illnesses.
- special attention is required to improve the health status of children and to target the poor, particularly in disadvantaged areas
- public spending on health care should concentrate on providing more and better primary care
- institutional weakness and ineffective program management are at the root of poor service delivery in the public sector
- service delivery by private and NGO providers remains largely unregulated and not integrated with that of the public sector.

3.39 It is again important to reiterate that the public sector and public expenditures in Nepal will not be able to provide all of the health services required in the immediate future, even for the poor. Planning the allocation of public resources needs to take place within a full understanding of the provision in the non-government, profit and non-profit, sector and of the effects of government actions on the behavior of that sector. Government can improve the health status of the citizens of Nepal not only by providing more public resources and allocating and using them more efficiently but also by takingmeasures which will enable other providers of health services to expand their activities.

3.40 Nepal is a poor country and one where economic growth rates are unlikely to be high in the near future. While internal sources of revenue generate very low levels of resources, equal to just 9-10 percent of GDP compared to an average of 14 percent across the least developed countries, it is unclear that these can be increased very significantly. The share of total government expenditures devoted to the health services was extremely low at the beginning of the 1990s. Since then it has increased and in 1998/99 had risen to 5.6 percent. As a share of GDP, expenditures are around 1.3 percent, which is double the share of ten years ago. Overall, publicly provided health services have moved from being very underfinanced, even in the context of Nepal, to having funding levels which are similar to those in countries in similar circumstances, at least in South Asia if not in other regions of the world. In the absence of high overall rates of economic growth, therefore, additional government resources for the health sector are unlikely to be significant. The immediate need is to increase the efficiency with which resources are used. The other funders of public health services are donors who contribute almost half of the total. Generally, the health sector currently receives a relatively high priority among donors. In 1997/98 it absorbed almost 12 percent of total donor support. In principle, simply on the basis of the low

health status indicators, strong arguments could be made for increasing this share. In practice, the ways in which resources are allocated between various activities and the efficiency with which they are used would qualify the strength of that argument. Any additional support to the sector would need to be directed to activities for which the criteria of economic efficiency and/or equity are applicable, which are likely to be cost-effective in producing a net reduction in the disease burden *and,* which are organized within an effective managerial, supervisory and policy framework.

3.41 Overall, there are three general conclusions regarding the future public financing of the health sector. There is a need for:

(a) *greater efficiency in the use of existing resources within the existing pattern of allocation.* While public resources for the health sector have increased over the past decade, there is a general belief that efficiency in the way that they are used has not increased. The results of the facilities survey described above indicate that inputs are not being optimally combined and are often wasted. This implies the need for major reforms in the deployment of staff, equipment and drugs which in turn requires increased institutional capacity for planning and program coordination at the center and in the districts;

(b) *more resources from all sources.* Only when progress in increasing efficiency has been achieved will additional resources be justified and more easily procured from Government, donors and patients. Conversely, if the absorptive capacity of the public sector remains low, pressure to increase budgetary allocations will be justifiably resisted, donors will not be prepared to increase support (and may reduce it) and patients will resist measures of cost recovery; and

(c) *a more rational allocation of both existing and increased resources.* Five interventions would address 65 percent of the total estimated disease burden in Nepal: the extended program of immunization, safe motherhood, improved nutrition, and programs to prevent and cure tuberculosis and leprosy. Adding in programs for malaria and hepatitis would cover 75 percent of the burden. Public expenditure on each of these can be justified on the grounds of market failures, resulting from externalities and public goods. In addition, the disease and illness levels reduced by these interventions would disproportionately benefit the poorest sections of the society. Current allocations do not reflect this situation and the trend, until very recently, at least of development expenditures, appears to be in the opposite direction with increased priority being given to curative services in urban hospitals. Calculations undertaken for the Operational Issues study indicate that interventions in these areas would require annual expenditures of around four US dollars per capita. While not all of these programs need to be, or indeed are, provided by the public sector, this requirement may be compared with the US$2.5–3.0 annual per capita *total* expenditure currently financed from public funds. Even with increases in Government funding and continued donor support, it is obvious that little would be available for clinical care and referral services. The main justification for providing such services is based on the lack of insurance markets and on considerations of equity. Given the concentration of poor people in relatively remote regions, and the lack of non-government provision in these areas, any increase in such care should be very tightly concentrated on these regions. Currently, this is not the case. Cost recovery measures tied to improved quality of service will need to be the main source of increased funds for such services in the better-off regions and in urban areas. The encouragement of a competitive and low cost private sector in urban areas would also enable public resources to be shifted to areas where they are more effective in reducing overall levels of illness and disease, and more accessible to the poor.

3.42 These priorities are, indeed, very similar to those outlined in the Government's Second Long Term Health Plan. This sets out a long-term vision of the health sector to be implemented in phases.

Initially the core programmatic focus of the plan should provide for: (i) reproductive and child health needs (including family planning, safe motherhood, EPI and the integrated management of childhood illnesses; (ii) communicable diseases including HIV/AIDS; (iii) nutrition; (iv) health promotion and information; and (v) strengthening intersectoral collaboration with agencies and activities which can have a major positive impact on the underlying causes of health problems (e.g., education can help change health behaviors while rural water supplies and sanitation services can radically reduce disease). In order to make progress on these core activities, the institutional capacity to deliver core health and population programs will need to be strengthened through: (a) public-private partnerships; (b) decentralization of the planning, budgeting and management of key aspects of key aspects of health and population programs to the district level (consistent with the Decentralization Act); (c) strengthening of district health care systems; (d) enhancement of the technical capacity of the Ministry of Health to support quality health and population programs; and (e) human resource capacity development and training.

E. CONCLUSION

3.43 Similar to all of the social services in Nepal, the development of a national health service is very recent and has had to take place within a country with low levels of national income and government revenues. Over the past forty years much has been achieved by government, donors and by a variety of other providers. In some ways this delayed start and the variety of experiences which the range of providers has been able to bring has been advantageous and there are many examples in the country of health provision which is innovative, cost effective and exemplary. This review, however, has highlighted some of the areas in which further attention is now required. First there is the need when planning the public sector to have a full understanding of the current provision and future plans of the private and non-government sectors. These currently provide one quarter of all health services. Second, the government needs to give further consideration to the limited objectives of publicly financing health care. Generally these are to provide for the poorest groups in general and for services which have wide societal benefits such as preventing and treating infectious diseases. In addition, though lower in importance, a case can be made for financing treatments of conditions, which are rare and expensive to treat, particularly in countries such as Nepal where insurance markets are thin. The economic and social circumstances of the population in Nepal, the evidence from the burden of disease and the very restricted amounts of public resources strongly suggest that the bulk of expenditure should be devoted to conditions which disproportionately affect the poor and have wide societal costs. And that remaining resources be focused on preventing and treating the non-communicable illnesses of the poor. Recent trends in the patterns of expenditure do not correspond as closely as they might to these principles. The use of government resources to provide treatment for non-communicable illnesses of those who can afford to pay needs to be restricted at this time. This does not imply that government should not provide services for the whole population but rather that the level of subsidy should vary across income groups. Finally, the converse situation might also be considered. That is, government might finance activities that are delivered by private and non-government bodies if that is more cost effective than providing the service directly.

IV. REMAINING ISSUES

4.1 The education and health sector financing needs are effectively infinite in Nepal even to provide basic provision. A school system was only established in the late 1950s and secondary education did not effectively emerge until the 1970s. Similarly, health and family planning systems were established only in the 1970s as a result of USAID and UN funding. Social indicators are very low, even compared to other countries in South Asia.

4.2 Efforts to reverse the previous neglect of the social sectors are hindered by the high unit costs of construction and other components of service delivery resulting from Nepal's physical environment and from the large growth rate of the population, particularly in the age range for which many social services are aimed.

4.3 The level of desirable public expenditures in the social sectors is, therefore, very high. Simultaneously, however, the Government revenue/GDP ratio is one of the lowest in the world at around 10-12 percent. In such a situation, where resources are extremely constrained relative to absolute needs, the practical relevant questions relate to the levels of absorptive capacity in the public sector, the role of government in providing and/or financing services, and priorities.

4.4 Absorptive capacity is affected by administrative constraints in areas such as procurement, construction and management but the most critical sources of constraint are systemic. These mainly relate to problems of staffing, and include supervision, recruitment and posting and while they are present across the public service as a whole, they are particularly acute in the labor-intensive education and health sectors. There is virtually no effective supervision of outreach health workers or of teachers, staffing decisions including postings are heavily influenced by politicians and other patrons such that, for instance the pupil:teacher ratios vary very widely between and within districts, and there are few incentives for good performance or penalties for poor performance. Many of these problems require changes across the whole of the civil service and many will take time to solve. However, it is particularly important for the education and health sectors that some initiatives are taken in these areas through altering supervision ratios and budgets, and vigorously attempting to implement the new procedures which aim to reduce the level of transfers and perhaps favor locally recruited staff.

4.5 Another aspect of absorptive capacity is the need to increase the productivity of existing inputs, such as teachers, by providing them with relatively low cost complementary inputs such as books, and health workers with medicines. With expanding salary bills and donor finance directed to discreet new activities, the regular budgets have become constrained at levels below which they can fund routine supplies, supervision travel and facilities maintenance. To turn this situation around in the context of limited financial resources requires prioritization of expenditures, reductions in the project portfolio and a reallocation of funds for recurrent activities.

4.6 More generally, there are two central issues which need to be considered more explicitly and discussed more widely. The first is the role of the social sectors in Nepal's overall development and poverty reduction strategy, and the second is the appropriate role which the government should adopt in their provision and financing. Universalization of basic education and a greater effort in the area of reproductive health (which indirectly would reduce population growth) are essential for the country's development strategy. A reduction in the causes of the major sources of the burden of disease, which affect the poor disproportionately, is also essential but may result more from increasing the cost

effectiveness of existing expenditures than from major additions. While a justification can be made for the expansion of secondary education and health care and, less strongly, for tertiary levels of provision in both sectors in terms of their impact on development and poverty, it is not clear that these interventions have a stronger impact on poverty alleviation than do increased supplies of clean water, small scale irrigation or minor roads. This leads to the second issue which is the roles of government and households in financing social services and the roles of government and the non-government sector in providing them. This review began by presenting the conventional arguments which are made to justify public expenditures on education and health. These largely center around social equity and economic efficiency, in the sense that there may be wide societal benefits from an activity, which would be lost if the demand for it depended on individuals having to pay the full cost. At issue is the *degree* of public subsidization and it is not clear on the grounds of economic efficiency that education and health services beyond a basic provision justify high levels. Subsidization based on equity considerations requires an effort in targeting. Once the justification has been made for the government to fund an activity, the issue remains of who is to provide it and how. As the process of decentralization further evolves in Nepal and government relationships with NGOs and the private sector strengthens, the opportunity to experiment and choose the most effective provider will increase.

4.7 Finally, there is a need to develop a more dynamic picture of the future evolution of the level and pattern of social sector public expenditures. A major determinant will be the changing age structure. Different age groups demand different types of education and health services. Projecting the sizes of the different groups, and estimating trends in enrolment and transition rates across the separate levels of schooling, and scenarios for health service demand and provision at the current levels of subsidy would provide a useful first estimate of overall social sector demands and allow a considered assessment of the feasibility of continuing the current levels or of changing them.

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