CHAPTER 1

1.0 Introduction

The Government of Tanzania is undertaking various initiatives towards poverty reduction and attainment of social and economic development. Founded within a broad policy framework, the Vision 2025, stipulates the vision, mission, goals and targets to be achieved with respect to economic growth and poverty eradication by the year 2025. To operationalise Vision 2025, the Government formulated the National Poverty Eradication Strategy (NPES), which provides overall guidance and framework for co-ordination and supervision of the implementation of policies and strategies of poverty eradication. The Poverty Reduction Strategy Paper (PRSP) was then formulated as a medium-term strategy of poverty reduction, in the context of the enhanced Highly Indebted Poor Countries (HIPC) initiative.

While the Government views the PRS as both an instrument for channelling national efforts towards broadly agreed objectives and as an integral part of on going macroeconomic and structural reforms, the focus to the PRS is threefold, namely, reducing income poverty; improving human capabilities, survival and social well-being; and containing extreme vulnerability.[1]

Tanzania is in its second year of the implementation of the Poverty Reduction Strategy (PRS). As part of the implementation of the PRS, a comprehensive poverty monitoring system was designed and operationalised to ensure the availability of timely and reliable information on poverty and facilitate assessment of projects under PRS for appropriate actions to be taken to achieve the objectives of the strategy.

Under the poverty monitoring system, four Technical Working Groups (TWGs) were formed to oversee distinct but interrelated poverty monitoring activities as follows:

i. Surveys and censuses, focusing on production and implementation of multi-year household survey programmes;
ii. Routine data, coordinating the routine data systems;
iii. Research and analysis, setting priorities for research and analysis of poverty;
iv. Dissemination, sensitisation and advocacy, working on dissemination, communication on data, and information generated by the poverty monitoring system, and advocacy.[2]

The preparation of this annual report on Poverty and Human Development is part of the activities of the Research and Analysis Working Group (R&AWG) described under the terms of reference in the Poverty Monitoring Master Plan. It is the first annual report since inception of PRS in 2000 as is one of the major outputs of the poverty monitoring system in Tanzania.

The report presents an overview of the status of the main poverty indicators, including their trends and magnitudes and a detailed analysis of various aspects of poverty and vulnerability. Significant efforts were made to analyse and present a comprehensive overview of poverty situation in Tanzania but the same has not been done for all PRS indicators and progress towards the implementation of all PRS priority sectors. This report will provide input to the PRS progress report, expected to give implementation details for each priority sector and PRS indicators. The report coincides with the release of results of the 2000/01 Household Budget Surveys (HBS) and the Integrated Force labour Survey (ILFS) thus providing definitive baseline for future PRS monitoring, and benchmarks for assessing the potential for achieving the PRS targets. The new data also offers an additional dimension of poverty, notably the regional diversity, extensively analysed in the report.

The analysis presented in this report was based almost exclusively on quantitative data. This was necessitated by the paucity of national wide qualitative evidence to support the analysis. The subsequent report will include the qualitative information that will be generated through the Participatory Poverty Assessment (PPA) currently in progress and other studies.

In preparing the report, attention was focussed on those areas that the Government committed to undertake further work, including the analysis of urban poverty and vulnerability. The group further identified issues considered important for a comprehensive representation of the status of poverty in Tanzania, not adequately addressed in the PRSP.

Thus the key thrust of this report centres around Rural-urban disparity; Regional differences; Urban poverty; Macro-micro linkage; and Vulnerability. The preparation of the report was done in stages. The first stage involved the setting of research priorities for the PRSP progress monitoring. A study commissioned in April 2001, to develop a framework of research questions to guide the focus of research and analysis relating to the PRS[3] was presented and discussed by researchers, policy makers, and Non Governmental Organisations (NGOs), and research areas and issues of priority were agreed upon.

The second stage involved the commissioning of various studies from early 2001, through the first quarter of 2002, which provided inputs:

- Study on Conceptualising Vulnerability in Tanzania: commissioned to Professor Seth Chachage and Dr. Rose Mwaipopo, (University of Dar es Salaam) with additional views on developing the framework for understanding vulnerability provided by Arthur Van Diesen (UNDP) and Alana Albee (DFID).
- Study on Regional Diversity of Poverty: commissioned to Dr. Cyril Chami in coordination with the Geographical Diversity Taskforce members: Arthur Van Diesen, Ernest Salla, Pim Van der Male, and Jane Mwangi (UNDP) and Ulrik Sorensen (UNICEF).

· Study on Urban Poverty: commissioned to Drs. F. Lerisse and A. Kyessi (University College of Land and Architectural Studies).

The process involved a number of consultations and extensive discussions on each study report.

The third stage were the weekly discussions and debates within the R&AWG which reviewed and provided overall guidance and advisory support on two major sources of data, namely the Household Budget Survey (HBS) and the Integrated Labour Force Survey (ILFS).

The last stage was the presentation of the draft report to a workshop of a wide range of stakeholders and comments were incorporated into the report.

This report has five chapters: Chapter 1: Introduction, Chapter 2: The status of poverty Chapter 3: The analysis of the linkage between macro policies and poverty at the macro level. Chapter 4: The analysis of various aspects of vulnerability, including key challenges, mainly HIV/AIDS, child labour, and governance. Lessons learnt, recommendations and conclusions are in the final chapter giving a synopsis of the PRS indicators in the context of the Millennium Development Goals (MDGs).

ENDNOTES:

[1] PRSP (2000)
[2] Poverty Monitoring Master Plan, 2001
[3] Mbilinyi, M. and Tsikata, Y. carried out a study to develop a framework of research questions relating to poverty reduction strategy.

CHAPTER 2

THE STATUS OF POVERTY

2.0 Introduction

Chapter 2 describes the current state of poverty in Tanzania. It does this in three parts. The first part of the chapter reports on all the PRS targets and indicators for which recent data are available. The availability of new data sets such as the 2000/01 Household Budget Survey and the Integrated Labour Force Survey has made it possible to set the definitive baseline for the PRS. Future Poverty and Human Development Reports will assess progress made against this baseline. Clustered according to the outline given in the PRSP, the chapter discusses the current status of the PRS indicators and the trends in these indicators over the 1990s. The trend analysis is important, as it gives an indication of the magnitude of the challenge to achieve the PRS targets. Where the data allow this, indicators are disaggregated by sex, by rural and urban strata and by poverty status. Subsequently, the data on status and trends are used to highlight policy implications. Pointers are given on how the policy framework might need to be adjusted on the basis of available evidence. Finally, issues are raised relating to the PRS targets and indicators, highlighting recommendations for adjustments in the poverty monitoring system.

While the focus of the chapter is on the PRS targets and indicators, it does not limit itself to a three-year outlook. The PRS is linked to policy documents with a more distant time horizon, such as the Vision 2025. The PRS is eventually expected to contribute to the longer-term aspirations of Vision 2025, which are broadly in line with the Millennium Development Goals. The chapter attempts to balance these short and long-term outlooks. In doing so, it will become apparent that a number of long-term developmental challenges are not yet sufficiently taken into account in the PRS. The most important one is the spread of HIV/AIDS, which risks are becoming a major obstacle for the achievement of the longer-term development aspirations of Tanzania.

The second part of the chapter looks in detail at urban poverty. The inclusion of a separate section on the status of poverty in urban areas was inspired by the Government's intention to develop a coherent and effective response to the problem of urban poverty, expressed in the 2001 PRS Progress Report.[1] The section on urban poverty highlights the characteristics of the urban poor and which specific problems they face. This section draws heavily on background work carried out for the Research and Analysis Working Group by Lerisse & Kyessi.[2]

The final section of the chapter looks in detail at the geographical diversity of poverty, looking in detail at regional differences in poverty status. Regional differences in individual indicators are described and analysed and composite measures are presented

as well. For the first time, this report presents a Human Development Index and a Human Poverty Index for the regions of Tanzania. This analysis is presented to deepen the understanding of regional differences in poverty status, to prepare the ground for more detailed poverty mapping in future reports, and to feed into the thinking about how regional differences in poverty status might be taken into account in the implementation of poverty reduction initiatives.

2.1 Magnitudes and Trends

2.1.1 Income Poverty

Highlights:

The 1990s have not brought significant net gains in the reduction of income poverty for the majority of the population. Income poverty has only significantly declined in urban areas. While the proportion of people living below the poverty line has decreased, their number has increased. Unless the rate of decline in poverty headcount ratios is accelerated significantly as a result of the PRS, it will be impossible to meet the very ambitious target of halving the proportion of people living below the poverty line by 2010. HIV/AIDS, which increasingly affects rural productivity, is an important obstacle for the reduction of income poverty. It is important to investigate the nature of economic growth and to determine how growth can be made to translate into real gains for the poor. Newly emerging data sets emphasise again that the focus of poverty reduction should be rural and that bold steps need to be taken to boost rural livelihoods.

a. PRS Targets:

- Reduce the proportion of the population below the basic needs poverty line by half by 2010
- Reduce the proportion of the population below the food poverty line by half by 2010
- Reduce the proportion of the rural poor by half by 2010
- Achieve an overall GDP growth of 6 percent by 2003
- Achieve an agriculture growth rate of at least 5 percent by 2003
- Expand investment
- Improve investment productivity
- Develop a private sector strategy by 2003
- Rehabilitate 4,500 km of feeder, district and regional roads in the eight poorest regions
- Upgrade from poor to fair quality about 7,000 km of such roads, with an emphasis on the twelve poorest regions
- Carry out spot and emergency repairs over an estimated 50,000 kilometres of roads in all districts, to ensure uninterrupted use of the roads.

b. Status and Trends:

i) Poverty headcount ratios:

The PRS aims to halve the proportion of the population living below the poverty line by 2010, both for the food and basic needs poverty lines and both in urban and rural areas. Table 1 shows how the poverty headcount ratios have developed between 1991/92 and 2000/01.

Table 1: Poverty headcount ratios 1991/92-2000/01

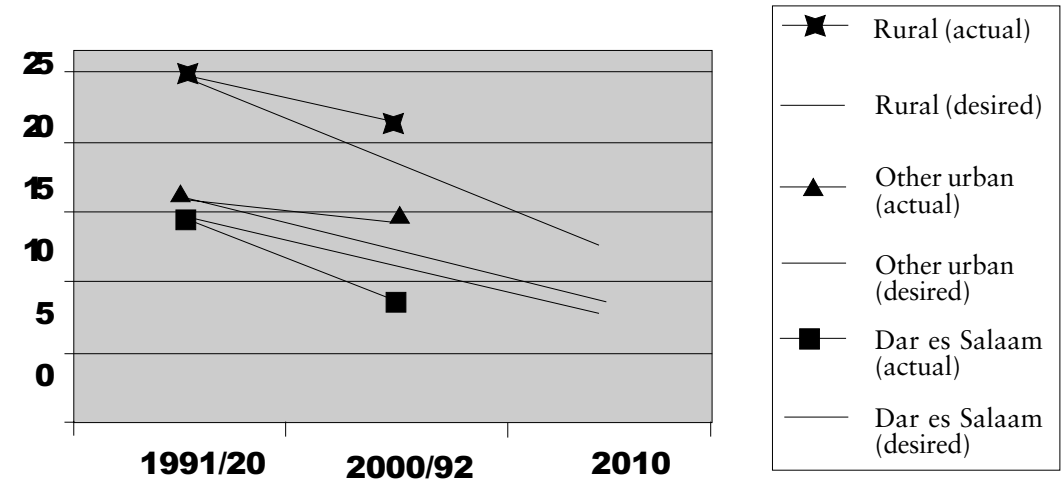
	Food		Basic Needs	
	1991/92	2000/01	1991/92	2000/01
Dar es Salaam	13.6	7.5	28.1	17.6
Other Urban	15.0	13.2	28.7	25.8
Rural	23.1	20.4	40.8	38.7
Total	**21.6**	**18.7**	**38.6**	**35.7**

Source: Household Budget Survey 1991/92 and 2000/01

The figures show that there has been very limited improvement of the income poverty status of Tanzanian households over the 1990s. It is only in Dar es Salaam that a statistically significant improvement is observed.

If we assess the trend in the headcount ratios during the 1990s against the Government's commitment to halve the proportion of people living below the food poverty line by 2010, it is clear that progress is not nearly as good as desired. The target is only likely to be reached in Dar es Salaam. The actual trend for Dar es Salaam is better than the trend required for the achievement of the 2010 target. In fact, the target was already nearly achieved in 2000/01. Progress towards the target is lagging behind significantly for other urban areas and even more so for rural areas. Particularly for the rural areas, where the majority of the population lives and where poverty is most widespread, this is a message of great concern. Given the observed trend, reaching the food poverty target in the rural areas and, as a consequence, for the country as a whole, by 2010 will be very challenging. This is illustrated in figure 1.

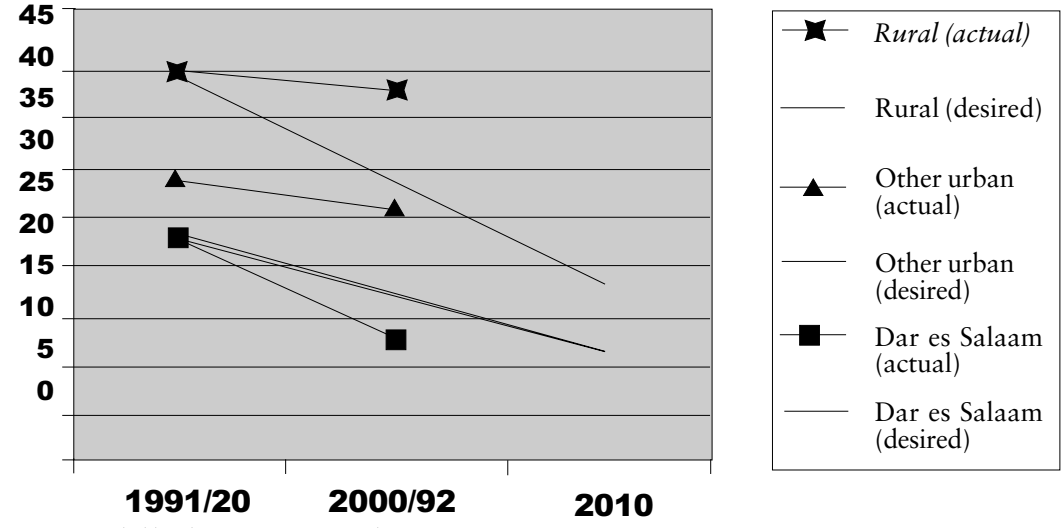
Figure 1: Poverty headcount - food poverty actual and desired trends



Source: Household Budget Survey 1991/92 and 2000/01

The trend for basic needs poverty is very similar, although the differences between the various strata are more pronounced here and progress in the rural areas is even more modest. Given the trend in the 1990s, it is highly unlikely that the target of halving basic needs poverty will be achieved in other urban and rural areas, and as a consequence for the country as a whole. If the trend observed over the 1990s persists, it is likely that the 2010 target will only be achieved in Dar es Salaam. This is illustrated in the following graph.

Figure 2: Poverty headcount - basic needs poverty actual and desired trends



Source: Household Budget Survey 1991/92 and 2000/01

A word of caution is required, however, in interpreting these trends. Firstly, it is important to remember that we do not have information on what happened with the poverty headcount ratios between the two last Household Budget Surveys, during the 1990s. In the graph above, it is assumed that the trend between the two surveys was linear, but in fact there might have been shorter-term movements of significance. If this is the case, simply extrapolating the trend to predict the level of poverty in 2010 is not warranted. It is useful to evaluate the observed trend against the overall macro-economic performance over the 1990s, which was rather poor in the first half of the decade and much more encouraging in the second half. Some argue that this could mean that there have been shorter-term movements in income poverty that confound the trend sketched above. It may be the case that income poverty worsened in the first half of the 1990s, in response to poor macro-economic performance. But this may have been compensated by real gains in the second half of the decade, resulting in the conclusion that the situation in 2000/01 is roughly similar to that in 1991/92. In the absence of trend data on income poverty, it is impossible to judge the value of this argument.

Through the establishment of a poverty monitoring system and more regular measurement of key poverty indicators in the years to come, the expectation is to build a more robust time series of indirect measurements of income poverty over the next decade. Secondly, the implementation of the PRS is obviously expected to accelerate poverty reduction, which is another reason to argue that a simple extrapolation of past trends is not a credible prediction of the poverty level in 2010. The point to emphasise, however, is that the acceleration of poverty reduction required to meet the target is very daunting. This is particularly clear when the impact of HIV/AIDS on rural productivity is considered. When mortality and morbidity increase as a result of HIV/AIDS, this has devastating effects on the chances of affected households to get out of poverty.

The targets for the reduction of income poverty in the PRS have been set in terms of the proportion of the population that lives below either of the two poverty lines. But it is important to also consider the actual number of poor people. If, for illustrative purposes, we assume a population growth in Tanzania of 2.5 percent per annum, the total population will have grown by almost 25 percent in the 9 years between the two surveys. This means that the decline in the proportion of people below the basic needs poverty line from 21.6 percent to 18.7 percent still translates into a higher absolute number of poor people in the country. The conclusion, therefore, is that the Government and its allies in the fight against poverty should by no means take the modest improvements in the proportion of people below the two poverty lines as a reason for complacency.

It is important to note that the most recent HBS reveals that inequality in Tanzania is growing. The description of trends in the previous section point clearly to growing differences in poverty status between the inhabitants of Dar es Salaam, other urban

areas and in rural areas, with Dar es Salaam making the most progress in poverty reduction, and the rural areas the least. But even within the various strata, inequality is increasing slightly, as shown by the Gini coefficient. Table 2 compares the Gini coefficient for all three strata in the 1991/92 and 2000/01 HBS.

Table 2: Comparisons of Inequality

	1991/92	2000/01
Dar es Salaam	0.30	0.36
Other urban	0.35	0.36
Rural	0.33	0.36
Total	**0.34**	**0.37**

Source: Household Budget Survey 1991/92 -2000/01

ii) Economic Growth:

Economic growth is a necessary (but not sufficient) condition for sustainable poverty reduction. Therefore, the PRS sets specific targets for economic growth. In 2001, Tanzania's GDP is estimated to have grown by 5.6 percent in real terms, up from 4.9 percent in the previous year.[3] This is already close to the 6 percent aimed for by 2003 in the PRS. The real GDP growth rate per capita for 2001 is estimated at 2.7 percent, compared to 1.6 percent in 2000. In 2001, the highest growth was recorded in mining and quarrying (13.5 percent). Relatively high growth rates were also seen in construction (6.7 percent), trade, hotels and restaurants (6.7 percent), transport and communications (6.3 percent). The agriculture sector grew at 5.5 percent in 2001, which is an improvement over the previous year, when the sector grew at only 3.4 percent. Given the importance of the agriculture sector, this has given a major boost to overall economic growth. The PRS target for agricultural growth by 2003 (5 percent) was already achieved in 2001. Within the agriculture sector, fishing grew the most, at 7.0 percent, followed by crops at 5.9 percent. Livestock and forestry and hunting showed a less impressive growth of 3.3 percent and 3.6 percent respectively.

The question is if the growth rates recorded now are sufficient to significantly reduce income poverty. Will they ensure that the ambitious target of halving the proportion of people living in poverty by 2010 is reached? This requires a detailed investigation of the nature of economic growth and the linkages between macro-economic developments and poverty reduction. This is the subject of chapter 3 in this report.

Attaining a satisfactory level of growth is one thing, but growth should be sustained too. In this respect, the targets set by the PRS related to investment, investment productivity and private sector development are also of importance. Chapter 3 will look into some of these issues.

iii) **ROADS:**

The PRS rests on the assumption that one of the major obstacles to a reduction in income poverty is the road network. A good road network will ensure better and cheaper access to markets and a range of services. Road construction and rehabilitation is therefore seen as an integral part of addressing income poverty. In 2000, the Government conducted comprehensive studies on the road network, which revealed that virtually all 27,550 km of feeder roads are earth tracks or gravel roads in poor condition, needing either rehabilitation or spot improvement to ensure access to markets. Only 8 percent of the district road network (20,000 km) is in good condition, with the remainder in fair or poor condition, requiring rehabilitation. Only 20 percent of the regional road network is in good condition, whereas 40 percent is fair and 40 percent poor. Subsequent reports will endeavour to track progress against the PRS targets in the road sector.

c. Policy Implications:

The evidence emerging from the two Household Budget Surveys emphasizes again that the prime focus of poverty reduction should be rural. For the PRS, reflection is needed to consider how the efforts to promote pro-poor growth, particularly in rural areas can be enhanced. The Rural Development Strategy (RDS) and the Agriculture Sector Development Strategy (ASDS), which have recently been put in place by the Government, are expected to contribute in that direction. Rural and agricultural development strategies with a clear strategic view, endorsed at all levels and backed up by sufficient resources are crucial for a substantial reduction in rural income poverty. Given the threat that HIV/AIDS poses for rural productivity, the PRS, RDS and ASDS should all incorporate measures to fight this pandemic and its impact.

The growing inequality in Tanzania, both within and between strata, can only lead to the conclusion that the economic growth achieved in Tanzania over the past few years has promoted a more equal distribution of wealth. Economic growth has favoured urban areas and particularly Dar es Salaam. Within all strata, those who are relatively better off have gained more from economic growth than those who are less well off.

d. Issues Related to Targets and Indicators:

In the course of analysing the 2000/01 HBS, a serious methodological challenge encountered was that the Consumer Price Index (CPI) could not be used to re-estimate the 1991/92 poverty lines for 2000/01. In fact, this also gave rise to doubts about the way in which the original poverty lines for 1991/92 were set. To ensure that the results of the two surveys are compatible, it was necessary to re-set the poverty lines for 1991/92 and therefore to revise

the headcount figures for that year. This has serious implications for the baseline of the PRSP and target setting. For the next PRS Progress Report, the targets may be reconsidered in light of the revised 1991/92 figures, which should also announce the new baseline for 2000/01, the starting year of the PRSP.

2.1.2 Employment

Highlights:

As a result of the economic reforms that took place during the 1990s, employment in the Government and parastatals sectors declined, while employment in the private formal sector increased. Employment in traditional agriculture declined during the 1990s, although agriculture remains the main source of livelihood for the vast majority of the population. Of utmost concern is the high rate of unemployment among the youth, which is highest for those between 15 and 34 of age in Dar es Salaam, followed by those in other urban areas.

a) **PRS Targets:**
Although the PRSP does not set explicit targets for employment, it is clear that employment is a crucial dimension of the reduction of income poverty. Reaching income poverty targets depends on sustained economic growth, which creates employment and widens economic opportunities. Views expressed during the preparation of the PRS emphasised the need to address the problem of unemployment among youth, especially in urban areas. The PRSP includes a targeted Government intervention, with an annual allocation of Tshs. 100 million to support demand-driven skill development and to assist the vulnerable groups.

b) **Status and Trends:**
The most recent estimates of the employment and unemployment are from the Integrated Labour Force Surveys (ILFS) for 2000/01. The trend is obtained through a comparison of the 2000/01 survey data with those for 1990/91 Survey. The 2000/01 Survey used both the national definition and the international definition of unemployment, but the 1990/91 Survey used only the standard/international definition.[4] This analysis makes use of both the 1990/91 and 2000/01 surveys using a cut-off age of 15 years and above.

i) **Employment**
While the proportion of employed persons in the labour force has decreased by 1 percent, the employment to population ratio increased from 70 percent to 76 percent during the decade of the 1990s. These results might be an indication of a decline in the dependency ratio.

Using the standard definition, Table 3 shows that the high concentration of employment is in rural areas, having 82.7 percent of the total employment. A similar proportion of employment was observed in 1991/92, where 84.4 percent of those employed were in rural areas. The table also shows that generally both male and female are equally employed, although more females are engaged in employment in rural areas.

Table 3: Percentage distribution of employment by sex and by urban- rural (Standard definition)

Sex	1991/92			2000/02		
	Urban	Rural	Total	Urban	Rural	Total
Male	9.1	41.0	50.1	8.7	40.7	49.4
Female	6.5	43.4	49.9	8.6	42.0	50.6
Total	**15.6**	**84.4**	**100**	**17.3**	**82.7**	**100**

Source: ILFS 1990/91 and 2000/01

In terms of employment by sector, the 2000/01 survey distinguished six different sectors, namely Government; Parastatals; Traditional agriculture; Informal sector; other private; and Housework. The 1990/91 Survey had a similar distinction with the exception of the housework sector. Table 4 shows that employment in the Government and parastatals sectors declined from 3 percent to 2 percent and from 1.7 percent to 0.5 percent in 2000/01, respectively. It also shows that, employment in the private formal sector increased from approximately 3 percent to 5 percent in 2000/01. The results further show that, employment in the private informal sector has declined only marginally. While employment in traditional agriculture sector remains the highest, it declined from approximately 84 percent to 81percent in 2000/01.

Table 4: Percentage distribution of employment by sector

Sector	1990/91	2000/02
Government	2.93	2.04
Parastatals	1.66	0.46
Traditional agriculture	83.72	80.96
Informal sector	8.78	8.51
Other private	2.91	4.47
Housework	-	3.55
Total	**100**	**100**

Source: ILFS 1990/91 and 2000/01

The surveys also distinguished employment by status, looking at those in paid employment, self-employed, and employed on the own farm (traditional agriculture). The results of the survey reveal that the composition of employment by status changed during the 1990s. The proportion of paid employment declined from 9 percent to 7 percent, and the proportion of those working on their own farm declined from 84 percent to 77 percent in 2000/01, while the proportion of those in self-employment increased from 7 percent to 9 percent in 2000/01.

The results of the HBS summarised in Table 5 also show a substantial decline in the importance of agricultural activities over the 1990s.[5] They further show that in urban areas, employment by government and parastatals declined, while employment in the informal sector/self employment increased.

Table 5: Economic Activity of Adults by Stratum and Year of Survey

Facility /service	Dar es Salaam		Other urban areas		Rural areas		Mainland Tanzania	
	91/92	00/01	91/92	00/01	91/92	00/01	91/92	00/01
Farming/livestock/fishing	2.3	3.0	43.0	26.9	83.4	75.8	72.8	63.2
Employee - government	8.7	3.8	9.1	5.1	2.1	1.2	3.4	1.9
Employee - parastatals	12.7	3.1	3.2	1.6	0.6	0.2	1.8	0.6
Employee - other	9.7	16.0	4.1	9.6	1.0	1.9	2.0	4.1
Self-employed with employees	17.3	5.9	13.3	4.5	2.0	1.0	4.5	1.9
Self-employed without employees	1.1	18.1	0.5	16.7	0.2	2.9	0.3	6.1
Unpaid family helper in business	4.8	10.5	4.7	13.0	1.1	7.5	1.8	8.5
Housewife/house maker /household chores	21.6	19.2	10.1	11.2	1.0	4.0	3.6	6.2
Student	14.7	8.6	6.4	4.3	5.7	2.0	6.3	2.8
Not active	7.2	11.6	5.4	7.2	2.9	3.5	3.5	4.6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Household Budget Survey 1991/92-2000/01

The pattern of employment observed in the two surveys, especially the decline in the importance of agricultural activities in the rural areas is an indication of a shift by the rural population towards non-farming activities.

ii) **Unemployment**

A comparison in the status of employment between 1990/91 and 2000/01 used the standard definition of unemployment since the former survey did not use the national definition.

Table 6 shows that the unemployment rate is highest in Dar es Salaam, where it increased from 22 percent to 26 percent in 2000/01, followed by other urban areas, where the unemployment rate increased from 6 percent to 10 percent during the same period. It also shows that unemployment in rural areas remained unchanged during the 1990s, although obviously the

concept of unemployment is more relevant in urban than in rural areas. It further reveals that while female unemployment declined in Dar es Salaam, it increased sharply for males in Dar es Salaam and other urban areas. Female unemployment in other urban areas was more than doubled in 2000/01.

Table 6: Unemployment rates by sex and by geographical location

Sex/Location	Dar es Salaam		Other Urban		Rural	
	1990/91	2000/01	1990/91	2000/01	1990/91	2000/01
Male	11	19	4	8	2	2
Female	39	35	7	15	2	2
Total	22	26	6	10	2	2

Source: ILFS 1990/91-2000/01

The unemployment rate is also high for youth aged between 15 and 34, especially those living in urban areas. Table 7 shows that the rate of unemployment is highest for youths in Dar es Salaam when compared to the aggregate rate of unemployment. The rate is similarly higher for other urban areas when compared to the aggregate level. In rural areas, youth unemployment is generally low, but we have to keep in mind that the lack of economic opportunities for young people in rural areas doesn't easily manifest itself as 'unemployment'. The high rate in youth unemployment in urban areas is of utmost concern and should be given due attention in the PRS.

Table 7: Unemployment rates by age and by geographical location

Age/Location	Dar es Salaam		Other Urban		Rural	
	1990/91	2000/01	1990/91	2000/01	1990/91	2000/01
15-17	66	47	23	19	5	6
18-19	50	51	16	24	4	3
20-24	37	47	11	16	2	3
25-29	18	29	4	15	2	2
30-34	12	20	1	8	1	2
35-39	8	10	2	4	1	1
40-44	2	6	1	3	1	1
45-49	5	8	2	5	2	1
50-54	2	8	1	2	0	1
55-59	0	7	0	5	1	2
60-64	0	7	0	3	0	1
65-69	0	9	3	0	1	1
70+	13	10	1	3	1	2
Aggregate	22	26	6	10	2	2

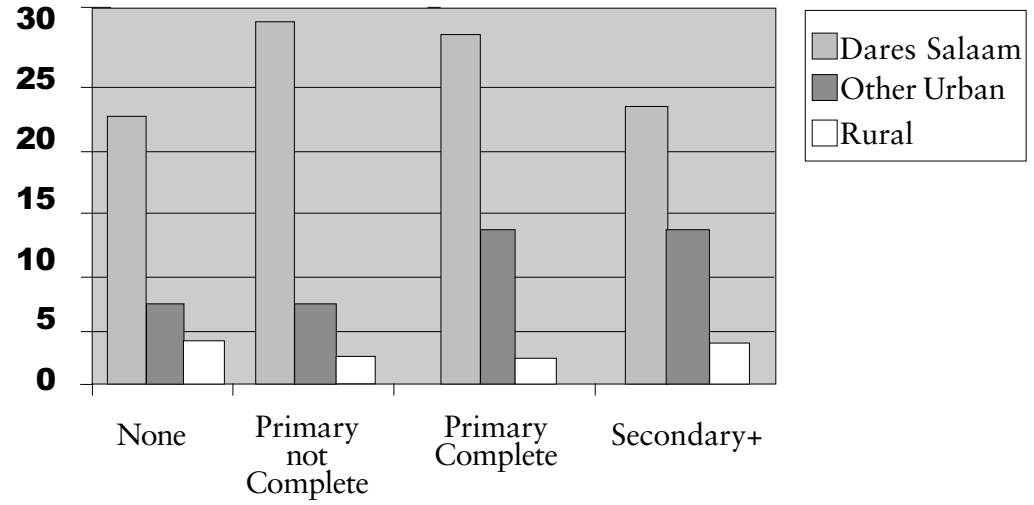
Source: ILFS 1990/91-2000/01

Overall, unemployment in the country has increased from 3.5 percent in 1990/91 to 5 percent in 2001/02. However, using the national definition, which was used only in the 2000/01 Survey, the unemployment rate was 13 percent in 2000/01. Using this definition, unemployment rates are 46 percent, 27 percent, and 8 percent for Dar es Salaam, other urban, and rural areas respectively.

Both the 1990/91 and the 2000/01 Surveys captured unemployment by level of education but because the coding classification for the 1990/91 was different from that used in 2000/01, comparisons are difficult to interpret. The 2000/01 Survey facilitated a comparison between rates of unemployment using both national and standard definitions.

Figure 3 indicates that the unemployment rate is highest among those with primary education and living in Dar es Salaam while in other urban areas, unemployment is higher for those who have completed primary and secondary education and above. In rural areas, education levels do not appear to influence the rate of unemployment, again highlighting the limited use of the concept of unemployment in rural areas.

Figure 3: Unemployment rate (percentage) by level of education in 2000/01 (Standard definition)



Source: ILFS 2000/01

c) Policy Implications

Figures on employment and unemployment presented in this section show that there is a lack of economic opportunities for the poor. In urban areas, this manifests itself in a substantial number of unemployed people and more specifically unemployed youth. In rural areas, it shows in widespread poverty. A major challenge for the PRS is to enlarge the range of viable economic opportunities for the poor in rural as well as urban areas. This should become a much more specific objective of the PRS, underpinned

by well thought out strategies, to complement the Agriculture Sector Development Strategy and the Rural Development Strategy.

The high levels of unemployment among people with primary education in urban areas suggest that their skills are insufficient to allow them to find gainful employment. Similar concerns exist for secondary graduates. It is thus critical for the education system to equip people with skills that will enable them to actively participate in income generating activities. In the medium term also action plans and programmes to promote skills for the unemployed youth should be put in place.

d) Methodological Issues

The analysis of employment and unemployment used the 1990/91 and 2000/01 Labour Force Surveys and the standard definition used in 1990/91. There is still a considerable amount of confusion about employment figures because of the different definitions used for reporting in different publications.

Another methodological issue is the cut-off age for the labour force. For the Poverty and Human Development Report, the results of the Labour Force Surveys were analysed using age 15 as cut-off point. The 2000/01 ILFS report will use age 10 as cut-off point. However, since a significant proportion of the population between ten and fifteen years are still schooling, using age 15 as cut-off point gives more accurate and meaningful results. Thus, the results in this report differ from those presented in the Integrated Labour Force Survey Report. It is recommended that consensus should be built on these methodological issues, so that future reporting on employment figures is consistent.

2.1.3 Education

Highlights:

The education sector is one of the first to show some real results of the PRS: enrollment rates are showing an impressive rise. There is, however, a large group of children whose right to education is at risk because they are 'over-age' and cannot presently be accommodated in primary schools. It is crucial that complementary education schemes such as COBET are expanded dramatically to cater for them. As enrollment levels rise, the quality of education remains a concern, which is growing because of the extra strain the increased enrollment puts on the system. The impact of HIV/AIDS on the teaching staff further complicates this. The PRS should now start paying more attention to the quality aspect. There remain gender inequities in the education system, although gender parity in primary education at the national level has almost been achieved.

a) **PRS Targets:**

- Reduce illiteracy by 100 percent by 2010
- Increase gross enrollment rate in primary schools to 85 percent by 2003
- Increase net enrollment rate in primary schools to 70 percent by 2003
- Reduce the drop-out rate in primary school to 3 percent by 2003
- Increase the proportion of children successfully completing primary education; specifically, increase the proportion of children passing Standard VII examination to 50 percent by 2003
- Increase transition rate from primary to secondary school to 21 percent by 2003
- Increase the enrollment rate in secondary schools to 7 percent by 2003
- Achieve gender equity in enrollment rates in primary and secondary schools

b) Status and Trends:

i) **Illiteracy Rate**

The PRSP sets a very ambitious target of eradicating illiteracy by 2010. The latest available estimates on the literacy status of Tanzanians are from the 2000/01 Household Budget Survey. This survey asked respondents of 15 years and older about literacy in English, Swahili, or any other language. As shown in Table 8, it found that in Tanzania, 28.6 percent of the population cannot read and write in any language. There is more illiteracy among women (36.0 percent) than among men (20.4 percent). Dar es Salaam shows the lowest proportion of illiteracy (8.7 percent of the population). The highest level of illiteracy is found in the rural population (33.1 percent). Rural women are the population group with the highest incidence of illiteracy (41.2 percent, compared to 23.9 percent for rural men). Illiteracy among parents has important consequences for the education of their children, as illiterate parents are less likely to be able to provide support to their children in the education process. As such, high illiteracy rates among rural adults, in particular women, form an obstacle for other education targets.

Table 8: Illiteracy rates by sex and by urban-rural

	Illiteracy rate for adult males	Illiteracy rate for adult females	Total illiteracy rate
Dar es Salaam	5.7	11.7	8.7
Other Urban	8.5	19.0	14.2
Rural	23.9	41.2	33.1
Total	**20.4**	**36.0**	**28.6**

Source: Household Budget Survey 2000/01

It is very difficult to provide a trend analysis of illiteracy rates, as the measurement of illiteracy is approached differently in various surveys.[6] However, given the substantial proportion of Tanzanians over 15 years of age who cannot read and write, particularly in rural areas and among women, the PRS target of universal literacy by 2010 seems very challenging, unless major efforts are put in place to promote adult literacy. The current efforts to boost enrollment levels in primary and secondary education are commendable, but it will take many years before these efforts lead to significant changes in the adult literacy rate. Recent developments in adult literacy programmes do not inspire hope that the target will be met. Enrollment in both functional literacy and post-literacy classes has shown a substantial decline in recent years, according to the Ministry of Education's routine data collection system. Total enrollment in functional literacy classes has dropped from 1.7 million in 1997 to just 0.8 million in 2001. Enrollment in post-literacy classes has dropped from 0.8 million in 1997 to 0.2 million in 2001. There is also a steep decline in teaching staff for adult literacy programmes. The intention in the PRSP to expand adult education programmes is yet to translate into results.

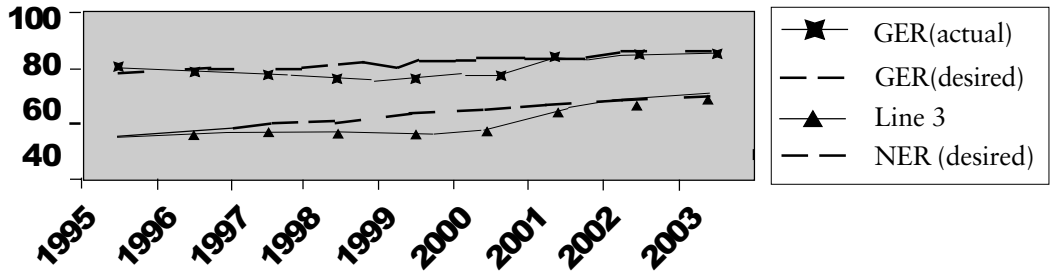
ii) **Primary School Enrollment Rates**

Over the 1990s, only very limited progress was made with efforts to boost the enrollment of children in primary education. From the early 1970s, there was a rapid increase in enrollment as a result of efforts aimed at achieving universal primary enrollment. Enrollment peaked in the early 1980s, then fell back and stabilised at a level that was more or less maintained for the entire 1990s. There were only very modest year-on-year improvements over the decade. In 1990, the net enrollment rate was 54.2 percent according to the Ministry of Education's routine data collection .[7] By 1999, it had risen to 57.1 percent.

As a result of the abolition of fees for primary education, a move that was introduced in the PRSP in 2000, a significant increase in enrollment figures can be seen since the year 2000. There is a targeted enrollment drive, which accompanies this abolition of fees, which aims to enrol younger children first, preferably as they reach the appropriate age for Standard I (seven years of age). In 2001, the net enrollment rate reached 65.5 percent, up from 58.8 percent in 2000. The increases in the last two years are by far the largest for over a decade. The conclusion is that the move to abolish primary school fees was a welcome one and has led many parents to enrol their children in primary school. The PRSP target for net enrollment is 70 percent by 2003. If the increase in enrollment in recent years can be sustained and enhanced into 2002 and 2003, it is quite likely that the target will be met.

The gross enrollment rate for primary education shows a similar trend to the net enrollment rate. From a level of around 77 percent throughout the 1990s, it reached 84 percent in 2001. With the current emphasis on enrolling children in primary schools at the right age and assuming good promotion rates, the gap between net and gross enrollment rates should gradually decrease. The projections of the Ministry of Education indicate that the gross enrollment rate will increase to a maximum of 123.7 percent in 2006, after which it will come down to 101.5 percent in 2010. The PRS target of a gross enrollment rate of 85 percent by 2003 is definitely within reach.

Figure 4: Primary net and gross enrollment rates actual and desired trends



Source: Ministry of Education and Culture, Basic Statistics in Education (various years)

It is worth noting that the longer term Millennium Development Goal for education is to achieve universal primary enrollment by 2015. The target for 2015 for net enrollment is 100 percent. If the recent gains in enrollment can be sustained, Tanzania is in a good position to achieve this goal.
An important issue to raise is that the current enrollment drive is aimed at younger children, ensuring particularly that children aged 7 or 8 are enrolled in Standard I. Out-of-school children who have passed that age are expected to be catered for through complementary basic education schemes, such as COBET and ACCESS. The reach of these programmes is, however, still very limited. UNICEF estimates indicate that there may be up to 1.5 million children aged 9 to 13 who are at risk of loosing out on their right to education because they cannot currently be accommodated in primary schools. To ensure that these children can claim their right to education, the COBET programme would need to be expanded dramatically.

In primary education, enrollment rates for boys and girls are very similar. In 2001, the female net enrollment rate was 65.2 percent and the male rate 65.8 percent. The gross enrollment rate was 82.7 percent for girls and 85.4 percent for boys, indicating that boys tend to enrol at a slightly later age and stay in school until a later age. The 2000/01 Household Budget Survey allows us to look at rural-urban differences in enrollment patterns. It finds

that enrollment is substantially higher in Dar es Salaam and other urban areas than in rural areas. Whereas the net enrollment rate for rural areas recorded in this survey was 56.0 percent, other urban areas recorded 71.4 percent and Dar es Salaam 71.0 percent. The gross enrollment rate shows a similar pattern.

The HBS also allows us to look at the proportion of children aged 7-13 who are studying by poverty status. This shows an interesting correlation

iii) **Drop-Out and Completion:**

Once children are successfully enrolled in primary schools, at the right age and in the right grade, the focus shifts to ensuring that they learn, that they stay in school, that they move up through the system without too much repetition and that they pass examinations at the end of primary education. The PRSP also set targets in these areas. The PRS aims to reduce the drop-out rate to 3 percent by 2003, without specifying the Standard to which this target applies. The Ministry of Education's figures show 2001 drop-out rates varying between 2.73 percent between Standard III-IV and 8.9 percent for Standard IV-V. The development in drop-out rates over the last five years is mixed, with modest increases for some Standards for some years and modest decreases in other years. It should be noted, however, that drop-out rates as reported by the Ministry might be underestimates, because of complex, lengthy procedures to be followed before a child is struck off the school register.

It is informative, therefore, to carry out a cohort analysis on the pupils who enter primary school in a given year and see how many complete primary school seven years later.[8] This reveals, for example, that whereas roughly 650,000 pupils entered primary school in 1993, only roughly 450,000 sat for their Standard VII exams in 1999. This means that about a third of the pupils who entered Standard I didn't complete Standard VII. Between the early 1980s and the late 1990s, this cohort analysis shows significant variation in the proportion of Standard I entrants who make it through to the end of primary education. Over the years, between about one fifth to one third of Standard I entrants do not complete Standard VII and there is no significant improvement in this rate over the years. Reasons for dropout are many and not only linked to the cost of education. They include, among others, low quality of the education process, weak governance, management and accountability structures, and the lack of a conducive school environment. Stress on the household economy because of the impact of HIV/AIDS may be another factor of increasing importance.

It is too early, therefore, to cry victory over the recent achievements in enrollment. The challenge remains to keep the newly enrolled children in school until they reach Standard VII.

At the end of primary school, children sit for the Primary School Leaving Examination (PSLE). Traditionally, the pass rate for this examination is very poor, which is an indication of the problematic quality of the education process. The PRS aims to increase the proportion of children passing Standard VII examination to 50 percent by 2003. There have been some improvements in the pass rate in the last few years. In 1997, only 20.1 percent of pupils who sat for their PSLE passed the examination. In 1999, the pass rate dropped to 19.3 percent, but since then it has increased to 22.0 percent in 2000 and 28.6 percent in 2001. Still, it is unlikely that the pass rate increases to the level desired in the PRSP by 2003, unless major changes are made in the pass mark.

It is important to note that there are significant differences in pass rates for boys and girls. 36.2 percent of the boys who sat for PSLE in 2001 passed the examination, compared to only 21.4 percent for girls. So, although it appears that gender parity has more or less been achieved in primary education when it comes to enrollment, this should not lead us to believe that gender inequities have been eradicated. Girls tend to drop out at a higher rate than boys in the higher Standards and even those girls who do stay in primary school until the end perform less well. Gender issues in primary education, therefore, continue to deserve the attention of policy makers.

iv) **Transition to Secondary School and Secondary Enrollment:**

Perhaps even more important than the pass rate at the end of primary school is the proportion of children that subsequently enrol in secondary school. This transition rate is traditionally very problematic, given the very low number of secondary schools. In 2000, only 21.7 percent of primary school leavers were selected to enter Form I. Although low, this is a substantial improvement on earlier years and the transition rate is finally reaching similar levels again to the early 1960s. In 1963, the transition rate stood at 29.2 percent dropping drastically, particularly in the seventies and eighties, when it reached an all-time low of 3.4 percent in 1984. This is closely linked to the major boom in primary enrollment rates in the seventies and eighties, when the expansion at the primary level was not matched with corresponding investments in secondary education. Now that the country is again seeing dramatic increases in primary enrollment, it is of crucial importance that this is matched by an expansion of secondary

education facilities, to avoid a large proportion of primary school leavers being denied the opportunity of secondary education in years to come.
Tanzania's gross enrollment levels for secondary education are among the lowest in the world. Total enrollment in all six Forms of secondary education was 289,699 in 2001, compared to a total primary enrollment of 4,845,185. Secondary enrollment is no more than about 6 percent of primary enrollment. But secondary enrollment is gradually increasing and 2001 saw a 10.6 percent increase in total enrollment compared to 2000. This is made possible by a gradual expansion of secondary education facilities. The number of secondary schools (public and private) has increased from 721 in 1997 to 927 in 2001, whereas the number of streams in secondary schools has risen from 5909 in 1997 to 8270 in 2001. Although these gains are commendable, it is clear that the investment in secondary education will have to be accelerated to cater for the expected increased number of primary school leavers from 2006 onwards.

v) **Gender Equity Enrollment Rates**

Gender equity in enrollment is not a major issue in primary education in Tanzania on average, but it is an issue at secondary and tertiary levels. In addition, there are substantial differences by region and district. In 2001, the girl-boy ratio at primary school was 0.97, indicating that gender parity in enrollment had almost been achieved. It is interesting to note that the recent enrollment drive has led to a relatively higher intake of young boys than in earlier years, leading to a slight deterioration in the girl-boy ratio. In 1999, for example, the girl-boy ratio was 0.995. In secondary education, in Form I, the girl-boy ratio in 2001 was 0.96, but in Form VI, the ratio was as low as 0.51. This means that in the highest Form of secondary school, boys outnumber girls by 2 to 1. The overall girl-boy ratio in 2001 for secondary education was 0.86. But this average hides a variation from 0.96 in Form I to 0.51 in Form VI.

The real gender issues in education are not related to enrollment. Emphasis should rather be put on addressing the performance of girls and avoiding drop-out of girls during the final stages of primary education and throughout secondary education. This means addressing issues related to gender relations in the classroom and in the curriculum.

c) Policy Implications

Education is one field where it can be said with confidence that the PRS has made a difference. By abolishing fees for primary education and encouraging enrollment of all children who reach the appropriate age for primary school, substantial increases in

enrollment ratios can be seen over the past few years. But enrollment levels are not an aim in themselves. We expect children, once they are enrolled, to stay in school, study in a positive learning environment, do well at examinations and have an opportunity to continue into secondary education. The increased levels of primary school enrollment put a tremendous strain on the education facilities and unless sufficient investment is made to ensure the quality of primary education is maintained and enhanced, pupils and parents might be disappointed with the education process, resulting in a loss of the gains made so far. In the context of the PRS, this means that it would be good to set some specific targets related to the quality of the education process and to monitor progress towards those targets in the poverty monitoring system. Important steps towards the enhancement of the quality of education would be to ensure smooth disbursement of the capitation grants and promoting greater involvement of parents and communities in school management.

As efforts to boost enrollment focus on younger children, there is a substantial number of older out-of-school children who risk loosing out. Increasing resources to complementary basic education schemes such as COBET and ACCESS is vital to avoid a 'lost generation' of over-age children, who have missed out their right to education. UNICEF estimates that it will cost between US$70-75 million over 5 years to accommodate all eligible children in COBET. More specific attention to these issues in the PRS would be desirable.

An important finding of the 2000/01 Household Budget Survey is that enrollment for children in the poorest households may have declined over the 1990s. More detailed studies may need to be carried out to investigate if the recent abolition of fees is helping to curb this worrying trend and to provide policy recommendations for the PRS.

Investments in secondary education need to be increased if we want the secondary level to be ready for the greatly increased number of primary school leavers in four years' time. The current rate of increase in facilities is insufficient.

Gender issues in education remain of concern, even though gender balance has almost been achieved at primary level and progress is reasonable at secondary level. Measures to reduce dropout of girls, particularly at higher rates and to boost girls' performance should be put in place. This, however, reaches beyond the realm of the education sector and relates to social and cultural values towards girls and young women, especially at or after puberty.

The illiteracy target set by the PRS - eradicating illiteracy by 2010 - will not be achieved with the strategies that are currently in place. If policy makers see this target as a priority, the decline in adult education provision of recent years has to be stopped and reversed. Any efforts to boost adult literacy should focus on rural areas, and on women in particular.

d) Issues Related to Targets and Indicators

Trend analysis for illiteracy rates is complicated due to the different approaches to the issue in different surveys. The Surveys and Census TWG should work towards standardisation of the measurement of illiteracy in its multi-year survey programme.

As enrollment levels are rising, quality aspects of education are becoming increasingly important. Specific targets should be set for the PRS in this area and the poverty monitoring system should be adapted to monitor progress towards these targets.

Specific studies need to be considered by the Research and Analysis TWG to investigate equity issues in education. These studies could focus on obstacles to participation in education for children of the poorest households and factors that cause dropout and poor performance among girls.

2.1.4 Survival

Highlights:

The 1990s have shown no substantial progress in the reduction of infant and under-five mortality. There are even indications that there may have been a slight increase in infant and under-five mortality rates in recent years, probably related to HIV/AIDS. The PRS targets for infant and under-five mortality are therefore very challenging. To achieve them, a holistic approach to children's right to survival is called for: addressing poverty as well as HIV/AIDS, malaria and other infectious diseases. Immunisation levels on average are encouraging, but there are still large disparities, which require a more targeted approach to the delivery of preventive and curative health services. HIV prevalence rates are showing a worrying upward trend, particularly for women over 25 years of age. HIV/AIDS is a threat to the attainment of all the PRS targets and this needs more recognition in the PRS. It is paramount that the institutional set-up to address HIV/AIDS is further strengthened and that co-coordinated action is taken. Data on the proportion of births attended by trained personnel show that access to reproductive health care has not improved over the past decade. This is worrying, given the importance of these services both to ensure safe motherhood and to contain the spread of HIV/AIDS.

a) PRS Targets:

- Reduce infant mortality rate from 99 per 1,000 live births to 85 per 1,000 by 2003
- Reduce infant mortality rate from 99 per 1,000 live births in 1999 to 50 by 2010 and 20 by 2025 as per Vision 2025

- Reduce under-five mortality by half from 158 per 1,000 live births by 2010 and to 127 per 1,000 by 2003
- Increase the percentage of children under 2 years immunised against measles and DPT from 71 percent to 85 percent by 2003
- Contain sero-positive prevalence rate in pregnant women from 5.5-23 percent (1996) to 6-27 percent in 2010
- 75 percent of districts covered by an active AIDS awareness campaign
- Reduced maternal mortality by half from 529 per 100,000 to 265 per 100,000 by 2010
- Reduced maternal mortality from 529 per 100,000 live births (1996) to 450 by 2003
- Increased coverage of births by trained personnel from 50 percent to 80 percent
- Restored life expectancy to 52 years by 2010
- Malaria in-patient case fatality rate for under-five children decreased from 12.8 percent (1997) to 10 percent by 2003 and 8 percent by 2010.

b) Status and Trends:

i) Infant and Under-Five Mortality

Infant and under-five mortality rates are not only good indicators of the well-being of young children, they can also serve as a proxy for the overall level of welfare in a country. Infant and under-five mortality rates in Tanzania are typically measured through Demographic and Health Surveys (DHS) and through the Census. Data on mortality rates are also collected through the National Sentinel Surveillance System under the Ministry of Health, but this system is, as yet, unable to provide national estimates.

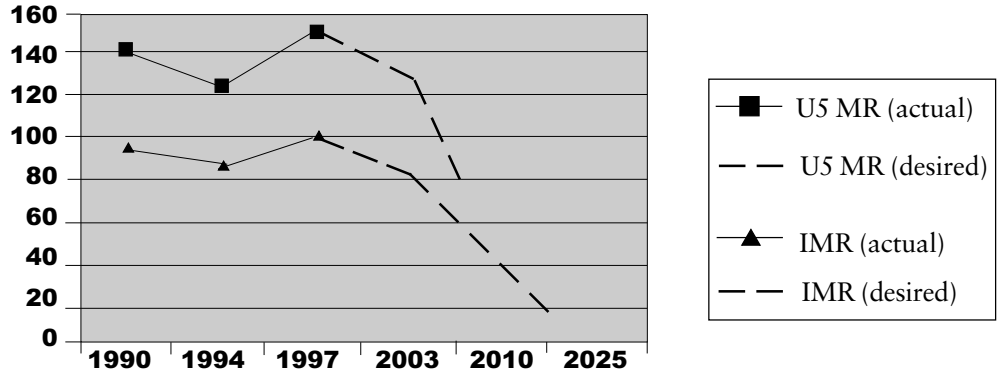
Analyses of the trends in infant and under-five mortality rates since the 1960s reveals that there was a significant drop in these rates between 1960 and 1985. But since the late 1980s the rates have been stagnant.[9] An analysis was carried out using the time series of infant and under-five mortality data provided by three surveys carried out in the course of the 1990s - the 1991/92 DHS, the 1996 DHS and the 1999 Tanzania Reproductive and Child Health Survey (TRCHS).[10] This analysis shows that infant and under-five mortality has not declined over the 1990s and that there may have been a small increase in recent years. An increase is apparent particularly in urban areas, but there are doubts about the urban estimates of the 1996 survey. There are several possible explanations for the lack of progress since the mid 1980s, but it is likely

that HIV/AIDS is one of the major contributing factors. HIV/AIDS combines with other threats to the health of infants and young children, including communicable diseases and poverty, to push up morbidity and mortality rates. A comprehensive approach is necessary to manage all these risks and protect children's right to survival in a holistic manner. Given that HIV/AIDS is jeopardising gains made earlier in the reduction of infant and under-five mortality rates, the targets set in the PRS seem rather challenging. Starting from a baseline of 99, the PRS aims to reach an infant mortality rate of 85 by 2003 and to reduce this further to 50 by 2010 and 20 by 2025. The targets for the under-five mortality rate are similar: from a baseline of 158, a reduction to 127 is sought by 2003 and to 79 by 2010.

Figure 5 gives the actual and desired trends for infant and under-five mortality.[11] The trends clearly illustrate that it will be extremely challenging for Tanzania to meet its ambitious goals for the reduction of infant and under-five mortality. Containing the spread of HIV/AIDS is of paramount importance if progress is to be made on the mortality targets. Malaria and other infectious diseases are general health problems in Tanzania, but pose particular risks for small children. Reducing income poverty is also important, as widespread income poverty affects all aspects of children's health and survival by limiting access to food, basic amenities and health services.

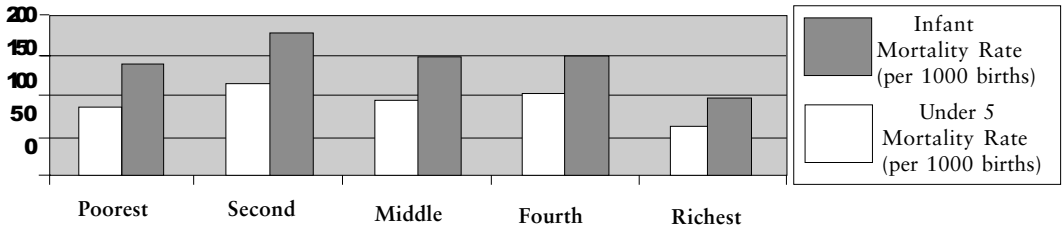
There is evidence that children of the richest quintile are significantly less likely to die in infancy and early childhood as compared to the national average, though mortality rates are generally high for all income groups.[12] It is interesting to note that the infant and under-five mortality rates are not the highest among the poorest quintile, but in the second poorest. In fact, the poorest quintile scores best, after the richest quintile.

Figure 5: Infant and under-five mortality actual and desired trends



Source: DHS 91/92, DHS 96, TRCHS 99

Figure 6: Infant and under-five mortality rate by poverty quintile



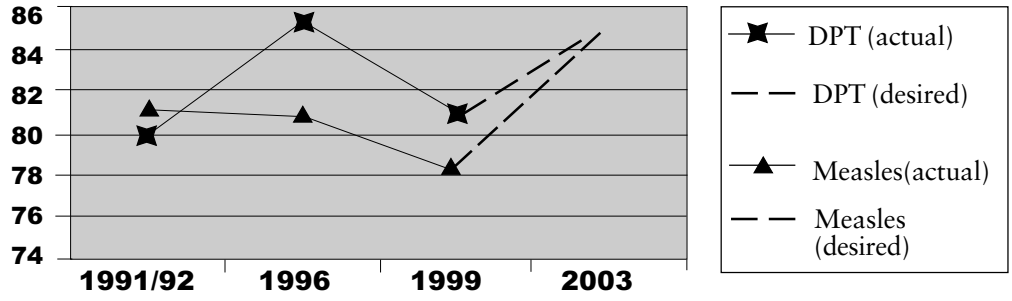
Source: Gwatkin et al, 2000

Infant and under-five mortality rates are significantly higher for boys than for girls (118.0 against 97.2 for infant mortality and 171.8 against 149.8 for under-five mortality according to the 1999 TRCHS). There are also substantial rural-urban disparities. In the 1999 TRCHS, rural areas recorded an infant mortality rate of 113.4, compared to 88.8 in urban areas. For under-five mortality, the corresponding figures were 166.8 and 144.7.

ii) **Child Immunisation:**

The level of child immunisation in Tanzania is traditionally high when compared to other countries in Sub-Saharan Africa and has remained high throughout the 1990s. Data on immunisation rates are available through surveys (DHS 91/92, DHS 96 and TRCHS 99) and routine data collection by the Ministry of Health. As the routine data collection relies on population estimates, surveys are generally thought to be more reliable. The actual trends in DPT and measles immunisation derived from the three surveys mentioned above is shown in the Figure 7 and compared to the desired trend to reach the 2003 target.

Figure 7: DPT and measles immunisation actual and desired trends

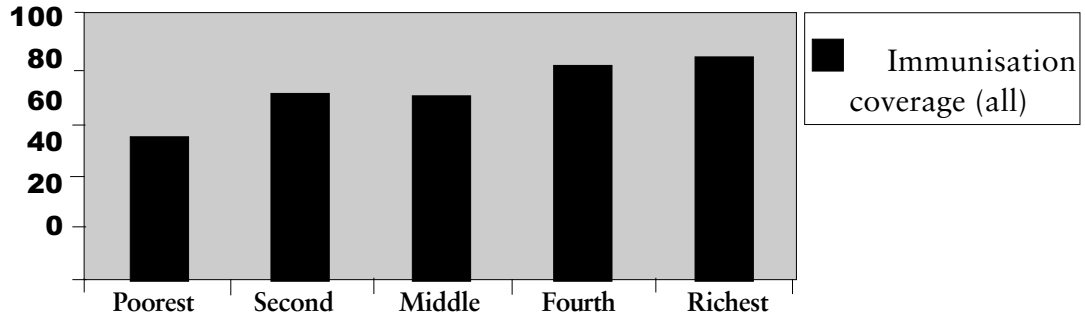


Source: DHS 91/92, DHS 96, TRCHS 99

The chart shows a modest decline in the immunisation levels in 1999, but the target should certainly be within reach for both DPT and measles immunisation. In fact, the targets almost lack ambition, especially for DPT, which already registered an 85 percent immunisation rate in the 1996 DHS.

Given that the overall immunisation levels are already high, more attention may need to be paid to tackle disparities in the coverage of immunisation. As we have seen with other indicators, there are significant rural-urban disparities. In the 1999 TRCHS, rural areas recorded rates of 79 percent for DPT immunisation and 75 percent for measles immunisation. For urban areas, the corresponding figure was 90 percent for both DPT and measles. There are also large variations between districts, with some districts recording rates below 50 percent and others above 95 percent.[13] Furthermore, there are also significant differences in immunisation rates of children from households with different poverty status. The 1996 DHS shows that children from the poorest households had a measles immunisation rate of 66.9 percent, whereas those from the richest households recorded a rate of 94.9 percent. Children from the richest households are 1.5 times more likely to have received all relevant immunisations than children from the poorest households. Differences in immunisation coverage by income quintile are shown in Figure 8. The immunisation rates of boys are slightly higher than those of girls, but the differences are small, with a difference of 5 percentage points for DPT immunisation and 4 for measles. The substantial disparities in immunisation coverage should lead to the conclusion that the health system should be more responsive to performance, providing stronger support for districts with low coverage.

Figure 8: Immunisation coverage (all)



Source: Gwatkin et al, 2000

iii) HIV/AIDS

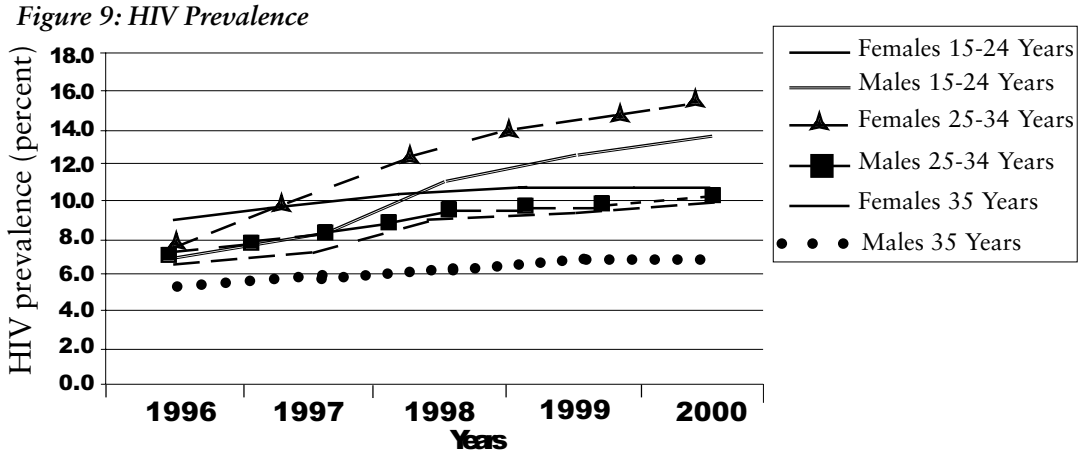
The magnitude of HIV/AIDS infection in Tanzania is frightening. According to the National AIDS Control Programme (NACP), a total of 11,673 AIDS cases were reported from 20 regions of Tanzania mainland in 2000, bringing the cumulative total to 130,386 cases since 1983. However, NACP estimates that these figures account for only one fifth of the actual cases, implying that the total cumulative number of cases could be as high as 660,000. The statistics further indicate that the most affected population category is the age group of 20-44, the most productive age cohort of the population. Recent

studies also indicate a rising rate of infant mortality in urban areas, which is likely linked to HIV/AIDS.

The PRS aims to contain the spread of HIV/AIDS and sets, as a target that the infection rate among antenatal clinic attendees observed in 1996 should not be exceeded by 2010.[14] This target is in line with the Millennium Development Goal on HIV/AIDS, which aims to halt and reverse the spread of HIV/AIDS by 2015.

Just how challenging the PRS target is becomes clear when trends in HIV prevalence in Tanzania over the 1990s is considered. The prevalence rate of HIV has steadily increased over the 1990s, rising from 5.5 percent in 1992 to 9.9 percent in 2000. The gender-gap in HIV prevalence has also widened. In 1992 the prevalence rate was 5.3 percent among male blood donors and 5.9 percent in female blood donors. In 2000, the corresponding figures were 9.2 percent and 13.3 percent. The highest prevalence rate is in the 35 to 39 age group for males and the 25 to 29 age group for females, confirming the common finding that women tend to get infected at a lower age than men. There is also a wide disparity in infection rates in districts and regions. In Mpwapwa district, for example, only 1.5 percent of 1,075 donors were found to be HIV positive. In Kilombero district, on the other hand, 35.3 percent of 1,671 samples were found to be HIV positive. The regions recording prevalence rates of over 10 percent are Kagera, Arusha, Rukwa, Mbeya, Iringa and Morogoro. The rates are lowest (under 5 percent) in Lindi, Dodoma and Kigoma.

Figure 9: HIV Prevalence



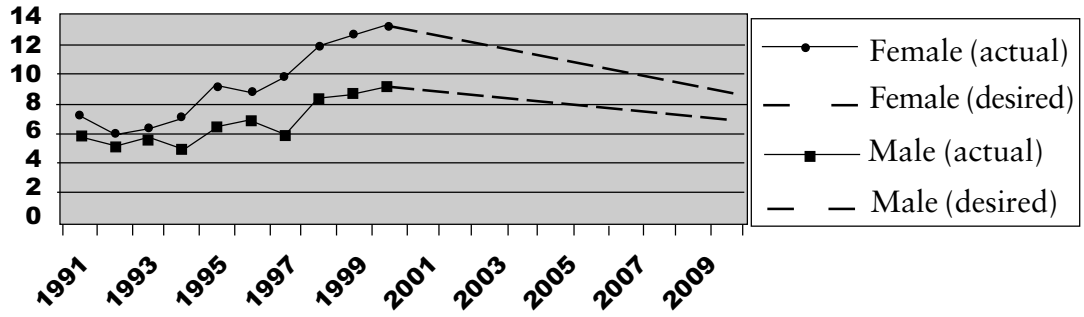
Source: NACP, 2001

Figure 9 summarises the trend in prevalence rates for various male and female age groups between 1996 and 2000. It shows that prevalence has risen most dramatically for women in 25 to 34 of age group (where the

prevalence rate has nearly doubled between 1996 and 2000) and among women of 35 years of age and over. Interestingly, the level for women between 15 and 24 years of age has remained at more or less the same level between 1998 and 2000. This inspires some hope for the national target of a 25 percent reduction in HIV infection rates among 15-24 year old by 2015, a target set in the context of the International Conference on Population and Development.

Given the steady increase in HIV prevalence observed among blood donors, and the significant increases particularly for women aged 25 and over, the PRS target of reducing HIV prevalence to the 1996 level by 2010 seems very challenging indeed. Figure 10 illustrates this. But achieving the target is as challenging as it is compelling, as HIV/AIDS is the single greatest threat to the country's socio-economic development, as well as to its citizen's individual survival and well-being.

Figure 10: Female and male HIV prevalence actual and desired trends



Source: DHS 91/2, DHS 96, TRCHS 99

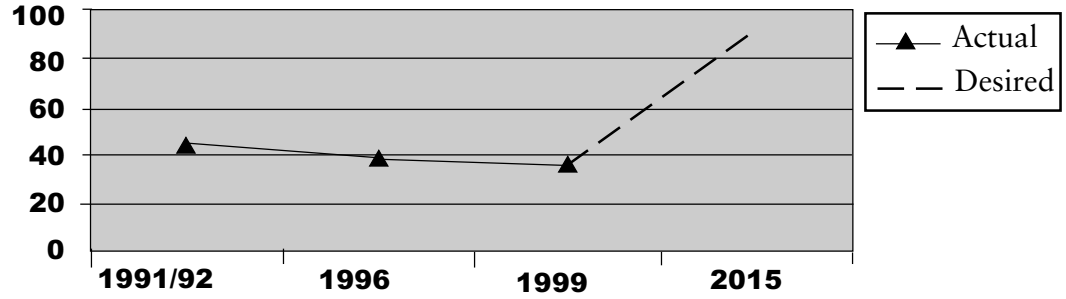
The PRS also sets a target to cover 75 percent of the districts with an active AIDS awareness campaign. No data are available to assess progress towards this target, given the lack of a clear definition of the indicator.

iv) **Maternal Mortality:**

The PRS aims to reduce maternal mortality from its rate of 529 per 100,000 live births to 450 by 2003 and 265 by 2010. This is in line with the International Conference on Population and Development's aim to halve maternal mortality by 2000 and halve it again by 2015. Yet, the maternal mortality rate is difficult to measure and track over time. As maternal mortality is statistically speaking a rare event (occurring in less than 1 in 100 deliveries), survey based estimates of this rate generally have large confidence intervals. This makes it hard to judge if different estimates in different surveys are due to real changes or to sampling error. The latest nationally representative estimate for maternal mortality is from the 1996

DHS and refers to the period 1987-1996. A baseline figure for the PRS will not be obtained until the 2004 DHS is carried out. An estimate that can help us assess changes over the PRS implementation period cannot be obtained until the 2009 DHS is implemented. Even then, it will be hard to assess the extent to which real changes have occurred and even harder to assess if these changes are in any way related to the implementation of the PRS. Therefore, although it is an important indicator to monitor, the maternal mortality rate is not an appropriate indicator to assess short-term changes occurring as a result of the PRS.

Figure 11: Proportion of births attended by skilled personnel actual and desired



Source: DHS 91/2, DHS 96, TRCHS 99

In the absence of regular, reliable data on maternal mortality, a proxy indicator - the proportion of births attended by a skilled doctor, nurse or midwife - can help us track progress in the provision of reproductive health care, an important determinant of maternal mortality. In Tanzania, this indicator shows a worrying decline over the 1990s, falling from 44 percent in 1991/92 to 36 percent in 1999. A reversal of this trend is necessary if reproductive health targets for 2015 are to be met and a substantial reduction in maternal mortality is unlikely in the absence of this reversal. The actual and desired trends for the proportion of births attended by a skilled doctor are indicated in Figure 11.

There are great disparities between rural and urban areas. In the five years preceding the 1999 TRCHS, a medically trained person, such as a doctor, nurse or midwife, attended 77 percent of births in urban areas while this was the case for only 26 percent of rural births. Education of the mother also matters: only 19 percent of deliveries by women with no education were attended by skilled personnel, while women with secondary education or higher were assisted by skilled personnel in 80 percent of deliveries. The disparities by poverty quintile, analysed from the 1996 DHS, are equally large. In the poorest quintile, a medically trained person attended 27 percent of births. For the richest quintile, the figure was 81 percent.

v) **Life Expectancy:**

The PRS aims to restore life expectancy at birth to 52 years by 2010. The last reliable nation-wide life expectancy figures were based on the 1988 Census. The Census to be carried out in 2002 will provide us with the first update on life expectancy since 1988. It is assumed that the 2002 Census findings will indicate a drop in life expectancy as a result of HIV/AIDS, but there is no consensus on how many years of life expectancy have been lost as a result of the pandemic. The next Poverty and Human Development Report will investigate life expectancy and other demographic indicators in more detail, using the 2002 Census findings.

There is some evidence on changes in life expectancy from the National Sentinel Surveillance System and the Adult Mortality and Morbidity Project of the Ministry of Health. This project carries out a census at regular intervals in a number of sentinel sites and is therefore able to report on changes in indicators such as life expectancy for those sites. Table 9 gives life expectancy at birth for men and women in Dar es Salaam, Hai and Morogoro, in 1995 and 1999. This table shows a slight decrease in life expectancy in Dar es Salaam and Hai and a slight increase in Morogoro. All this indicates, at this stage, is that trends in life expectancy may be quite different in different parts of the country, depending on the level of HIV prevalence and other relevant factors.

Table 9: Life expectancy in NSS/AMMP sites - 1995,1999

	1995		1999	
	M	F	M	F
Dar es Salaam	50	49	48	49
Hai	54	58	52	57
Morogoro	43	45	45	46

Source: AMMP/NSS, Ministry of Health

vi) **Malaria:**

The PRS includes some targets on the malaria case fatality rate for children under five. As yet, the Ministry of Health Management Information System has not been able to calculate values for the relevant indicators.[15] Future reports will analyse trends in this indicator, if data become available.

c) Policy Implications:

The stagnation of the decline in infant and under-five mortality rates since the 1980s is very disconcerting. At least to some extent, this lack of progress to reduce infant and under-five mortality can be attributed to the impact of HIV/AIDS. The PRS puts forward a package of priority activities to achieve the ambitious targets it has set for these

indicators. But it is hard to see how the targets can be reached unless major breakthroughs are made in containing the spread of HIV/AIDS, containing malaria and other infectious diseases and drastically reducing income poverty. Children's right to survival has to be approached in a more holistic manner, paying attention to all those risk factors. More emphasis is needed on HIV/AIDS in the PRS, in particular to show how the pandemic threatens the achievement of all the targets set out in the strategy.

Immunisation is one of the areas that clearly illustrate that the PRS ought to be fine-tuned to start addressing disparities. While the overall immunisation rate for Tanzania is already fairly high, the national average hides significant disparities, between rural and urban areas, and between districts, according to poverty status. Ways should be found to boost the provision of preventive and curative health care services to children from poor households, in disadvantage districts, in rural areas.

The HIV/AIDS pandemic poses tremendous challenges for the country, not just because of the level of human suffering it causes for individuals and those close to them, but also because of its wider impact on development. It can be safely predicted that none of the PRS targets will be met, unless the spread of HIV/AIDS is contained and curbed.[16] In this light, the place of HIV/AIDS in the PRS needs to be reconsidered and its profile rose. Promoting HIV/AIDS and health awareness in them are not sufficient to make a significant impact. In fact, research shows that awareness levels on the topic are already reasonably high. Seven challenges need addressing if the spread of HIV/AIDS is to be halted and reversed in Tanzania:

- Gender inequalities and inequities that lead to a higher prevalence rate amongst women
- Stigma and denial
- Access to critical information and means of protection, especially for those most at risk (in particular young women and men)
- Empowerment for people to protect themselves and others
- Effective co-ordination of a multi-sectoral response to HIV/AIDS - this includes addressing institutional issues that block progress towards a co-coordinated response
- A clear understanding of how HIV/AIDS risks to affect the achievement of targets set for each sector and the development of plans to mitigate the impact of HIV/AIDS
- Adequate resource allocations to address all of the above

The proxy indicator for reproductive health care - the proportion of births attended by medically trained personnel - shows a worrying downward trend over the 1990s. If the maternal mortality rate is to be reduced significantly, access to good quality reproductive health care needs to be boosted, specifically for poor rural women with a poor education status. A stronger push by the Ministry of Health on this priority is urgently required and needs to be backed up by adequate resources.

d) Issues Related to Targets and Indicators:

Regarding the infant and under-five mortality rates, it is important that consensus is reached in the Surveys and Census group about the figures to be used as baseline and the way in which mortality rates should be compared over the years and across surveys. It is also necessary to engage in awareness raising about the way in which infant and under-five mortality rates are measured in a survey. Stakeholders should understand that the measurement of these indicators is always retrospective. The 2002 Census will provide estimates on the mortality rates between 1998-2002; the 2004 Health Survey will cover the years 2000-2004. An accurate assessment of how the mortality rates have changed during the first three years of implementation of the PRSP cannot be carried out until the second half of the current decade. Even then, a measurement of actual change in the rates over a short period of time is fraught with methodological difficulties. The infant and under-five mortality rates, although important indicators, are not the most suitable to measure short-term changes in response to policy measures. If monitoring of short-term change is an explicit purpose of the poverty monitoring system, other indicators will have to be included, which are more sensitive to short-term changes.

The HIV/AIDS target in the PRS is currently set in terms of the HIV prevalence rate among antenatal clinic attendees. However, due to weaknesses in the sentinel surveillance system for antenatal clinic attendees, trend analysis using this indicator is currently impossible. Efforts need to be made to strengthen this surveillance system. In the meantime, the recommendation would be to use the HIV prevalence of blood donors for target setting and trend analysis. Research should be carried out under the Research and Analysis Working Group to promote a better understanding of the challenges posed by HIV/AIDS for the attainment of the PRS targets. This could in turn inform improvements to the PRS to address the HIV/AIDS crisis with more vigour.

The target of covering 75 percent of districts with active AIDS awareness campaigns cannot be monitored in the absence of a clear definition of the indicator. Also, given the remarks made in the previous section, the PRS may need to shift its attention from awareness alone to addressing gender issues, access to information and means of protection and empowerment. To monitor progress with these efforts, other, more informative indicators could be included. Examples would be the incidence of unprotected sex (as measured in the DHS survey), number of condoms distributed through various channels, and the incidence of condom stock-outs at health facilities.

For reasons outlined above, the maternal mortality ratio is not an appropriate indicator for PRS monitoring. It is proposed here that the poverty monitoring system should rather focus on the proportion of births attended by skilled personnel as a proxy indicator of reproductive health care. A target would need to be set for this indicator. The accepted international target for 2015 is to have skilled attendants at 90 percent of births.

2.1.5 Nutrition

Highlights:

Little progress has been recorded with the reduction of under-nutrition rates for children over the 1990s. There are important disparities in the level of under-nutrition between rural and urban areas and between children from poorer and richer households. For example, the children of the poorest 20 percent of households are four times as likely to be severely underweight than the children of the richest 20 percent of households. An adequate programme to reduce nutritional problems for children would need to focus on the reduction of income poverty, the control of disease, the improvement of access to safe water, hygiene and sanitation, the enhancement of community capacity to monitor the growth of children and take corrective action, and support for changes in feeding practices and underlying gender issues.

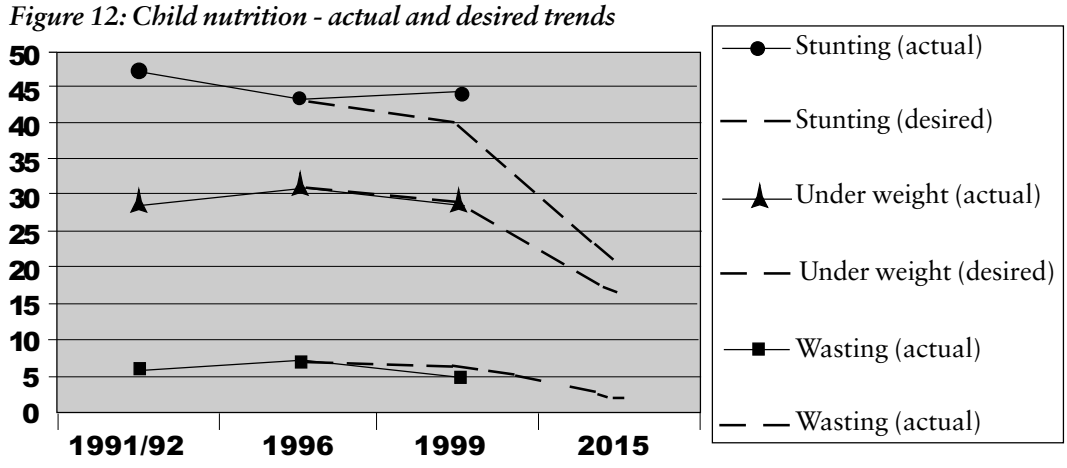
a) **PRS Targets:**
- Reduced prevalence of stunting from 43.4 percent to 20 percent
- Reduced prevalence of wasting from 7.2 percent to 2 percent

b) **Status and Trends:**

Three indicators for children's nutritional status are commonly used: stunting (height-for-age), wasting (weight-for-height) and underweight (weight-for-age). Two of these indicators, stunting and wasting, were originally selected for the PRS and targets for these indicators were set, but the PRS does not indicate a target year. Whereas stunting measures chronic under-nutrition, wasting is reflective of acute under-nutrition. Weight-for-age is a summary measure, which gives an overall indication of nutritional status, but does not allow differentiation between chronic and acute problems.

Children's nutritional status is routinely measured through the anthropometrics module of demographic and health surveys, providing estimates for 1991/92, 1996 and 1999 in Tanzania. The survey results show that very little progress was made in improving the nutritional status of children over the 1990s. Stunting remains a very wide-spread problem, with 44 percent of children under five moderately stunted in 1999. Acute nutrition problems were found in 5 percent of under-fives in 1999. Twenty-nine percent of under-fives was moderately underweight. The trends over the 1990s are illustrated in Figure 12.

Figure 12: Child nutrition - actual and desired trends



Source: DHS 91/2, DHS 96, TRCHS 99

There are large disparities in children's nutritional status between rural and urban areas. Children in rural areas are almost twice as likely to be stunted than those in urban areas, indicating that chronic under-nutrition is widespread in rural areas. The incidence of wasting is similar in rural and urban areas in 1999, indicating that the problem of acute malnutrition was an equal risk to rural and urban children. Gender differences in nutrition indices are very slight. As expected, a household's poverty status is clearly correlated with the nutritional status of the children in that household. For example, the children of the poorest 20 percent of households are four times as likely to be severely underweight than the children of the richest 20 percent of households.

c) Policy Implications:

It is clear from the trends over the 1990s that the PRS will have to bring a major breakthrough if the nutrition targets are to be met. The PRS will have to pursue the nutrition targets along four lines:

- Reducing income poverty, particularly in rural areas: as seen above, the nutritional status of children is closely correlated with the poverty status of their households. Reducing income poverty is, therefore, a prerequisite for improving nutritional status.
- Controlling diseases: major childhood illnesses such as malaria, respiratory infections and diarrhoea contribute to poor nutritional status and vice versa.
- Supporting changes in inappropriate feeding practices and underlying gender issues: the gendered division of labour and the work load that women must carry are important explanatory factors for children's nutritional status, as they prevent many women from following appropriate feeding schedules. Intra-household allocation of resources and control over these resources is equally important. Malnutrition

does not only occur in households with insufficient resources, but also in those households where insufficient resources are allocated to feeding and care for children.

- Boosting community capacity to monitor children's nutritional status and take corrective action: community-based growth monitoring is potentially a very powerful tool for communities to identify nutritional problems and deal with them. Over 4,000 villages are included in programmes for growth monitoring, but support for front-line health workers who need to facilitate the process is insufficient.

d) Issues Related toTargets and Indicators:

It is important that a target year is set for the nutrition indicators in the PRS. Here, it is assumed that the target year is 2015, which given the level of the targeted change would be compatible with the Millennium Development Goal (MDG) for food security.

For completeness and for compatibility with MDG monitoring, it is advisable to add the proportion of children with low weight-for-age to the indicators and targets in the PRS.

2.1.6 Water

Highlights:

There has been an increase in the use of improved sources of drinking water in rural areas over the 1990s. In Dar es Salaam, however, the proportion of households using improved water has fallen in the same period. Other urban areas report little change. In spite of the overall improvement, nearly half of the households in mainland Tanzania and over half of rural households still use drinking water from sources that can be considered unsafe. In order to reach the PRS target for 2010, the rate of improvement in rural areas will have to accelerate considerably. This can only be achieved if adequate resources are allocated to rural water provision.

a) PRS Targets:

- Facilitate an increase in the provision of adequate, safe and clean water in rural areas to 55 percent by 2003
- Facilitate an increase in the provision of adequate, safe and clean water in rural areas to 85 percent by 2010

b) Status and Trends:

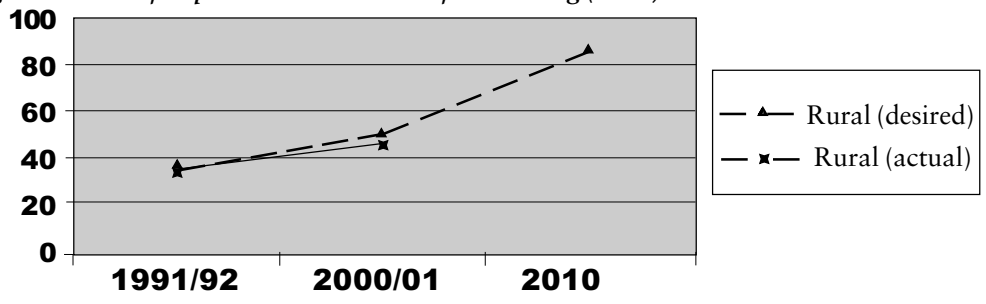
An analysis of trends in the provision of adequate, safe and clean water is complicated for three main reasons. Firstly, there is a lack of consensus on the definition of 'adequate', 'safe' and 'clean' water. All three concepts are subjective to a degree. Secondly, household surveys most typically ask respondents about their source of drinking water

and the distance to that source. Judgments on adequacy, safety and cleanliness need to be made based on this. Thirdly, while many surveys investigate households' access to water and the type of source, they do so using different questions and different categories of answers. In the absence of a routine data system that provides a consistent time series for water indicators, the only option is to work with the existing survey data sets.

In a recent study, trends on water and sanitation were analysed using data sets from 1978 - 2001.[17] The study recommends considering all piped water, water from protected wells and covered springs as 'safe', or 'improved' water. Using this definition, the study finds that use of 'improved' water has increased over the 1990s, from 46 percent of households in the 1991/92 HBS to 55.5 percent in the 2000/01 HBS. In rural areas, use of improved sources increased from 35 percent to 46 percent of households during this period. Most of this improvement is due to increased use of protected wells and springs, rather than piped water. In urban areas outside Dar es Salaam, there has been little change in the use of 'improved' water. In 1991/92, 84 percent of households in urban areas outside Dar es Salaam used 'improved' water and in 2000/01 this had risen to 88 percent. In Dar es Salaam, however, the proportion of households using 'improved' water has fallen from 97 percent to 94 percent over the 1990s. This is due to a drop in the use of piped water from 93 percent to 86 percent, which was only partly compensated by an increase in the use of protected wells and springs.

Figure 13 shows the desired and actual trends in the use of 'improved' water by rural households, using the HBS data sets. The Figure indicates that the actual trend is lagging slightly behind the trend required to meet the 2003 target. If 55 percent of rural households are to be using 'improved' sources by 2003, this proportion should have been 50 percent in 2000/01. Instead, it was only 46 percent. The target for 2010 is much more ambitious and reaching this target of 85 percent will only be possible if the rate of improvement between 1991/92 and 2001 accelerates considerably. It is hoped that the expanded resources available for the water sector through the PRS will enable this acceleration. Resource allocation will have to prioritise rural water provision, in line with the PRS.

Figure 13: Use of improved water sources for drinking (rural) actual and desired trends



Source: HBS 1991/92, HBS 2000/01

There are some obvious shortcomings in concentrating target setting and monitoring in the water sector on households' use of 'improved' water sources only. There are several other factors, which, from the point of view of the poor, are of importance too. One is the distance people (most often girls and women) have to cover to reach their water source. Another is the affordability of water, particularly in urban areas where most people buy their water, but also increasingly also in rural areas as communities start bearing the costs of water provision. A third aspect is the quantity of water available. If water has to be hauled over long distances, is prohibitively expensive or is otherwise in limited supply, people's access to clean water may still be inadequate, even though they use an 'improved' source. Furthermore, the cleanliness and safety of water obtained from 'improved' sources is an issue up for discussion. Most people who use piped water and can afford it routinely boil the water before use as the safety of the water is dubious. Finally, the way water is stored and handled once it is in the household is another potential source of contamination and deserves attention.

Not all of these issues can be investigated and monitored on a regular basis. However, the Household Budget Surveys shed some light on the distance to the water source in the dry season. A comparison between data from the two surveys reveals that there has been very little change in distance to water sources over the 1990s. In 1991/92 in urban areas, 87.8 percent of households travelled 1 kilometre or less to their dry season water source. This declined to 86.9 percent in 2000/01. In rural areas, there was a slight increase from 68.8 percent to 70.1 percent. Given sampling errors and the difficulties of accurately estimating distances, this can be interpreted to mean that there was virtually no change in distance to a dry water source over the 1990s.

Once data on use of 'improved' water sources are disaggregated, significant disparities emerge. The differences between rural and urban areas are striking. In rural areas 54 percent of households still use water sources for drinking which can be considered unsafe. In other urban areas, outside Dar es Salaam, this is the case for only 12 percent of households and in Dar es Salaam for only 6 percent. There are also large disparities between regions, which are highlighted later in this chapter. Comparing female and male-headed households reveals that female-headed households are more likely to use 'improved' water sources than male-headed households, although the difference is small (59.8 percent against 54.2 percent). The real gender disparities related to water are to do with the workload involved in fetching water and managing water in the household, but these aspects are not investigated in the surveys relied on. Analysis of the Household Budget Survey figures also indicates that there is a correlation between a household's poverty status and the type of source used for drinking water. Poor households are less likely to use an 'improved' source than non-poor households. This shows both when comparing households above and below the basic needs poverty line and when comparing households by expenditure quintile.

Other interesting findings revealed by an analysis on water and poverty based on the two Household Budget Surveys, which deserve to be explored further are :[18]

- Households which are remote from the village centre are less likely to use improved water sources
- Households headed by elderly people are less likely to use improved water sources
- Households headed by widows are less likely to use improved water sources
- Households headed by people with no education are less likely to use improved water sources
- Children living in households within 15 minutes of a water source are more likely to attend school than those in households who live over 2 hours from a water source

c) Policy Implications

Nearly half of the households in mainland Tanzania and over half of rural households still use drinking water from sources that can be considered unsafe. There are great disparities, particularly between urban and rural areas, and the PRS was, therefore, right in focusing its efforts on increasing the use of 'improved' sources in rural areas. It is important that this prioritisation is reflected in budget allocations. Most likely, the target set in the PRS for 2010 is too ambitious and may need to be adjusted downwards. While access to safe water is particularly an issue in rural areas, it is important to note the failure of urban water supply, particularly in Dar es Salaam, which can be seen in the figures.

Given the large disparities between rural and urban areas, between individual regions and between population groups, it would be appropriate to design a more targeted approach to the expansion of access to safe water within the PRS, which is reflected in resource allocation.

An issue that is not addressed in the PRSP is the productive use of water, particularly for livestock and for agriculture. Given the importance people attach to the availability of water for productive use and its potential as a cause for conflict, the PRS may need to take this issue on board in future revisions.

d) Issues Related to Targets and Indicators

The Ministry of Water and Livestock Development is encouraged to reconsider the targets set for the water sector in the PRS, in the light of newly available trend data for the 1990s. A comparison between Government's own targets and the MDG for water could be helpful in this respect.

In order to adequately monitor progress with the improvement of people's access and use of safe drinking water, it is of paramount importance that consensus is reached and maintained about the choice and definition of key indicators. It is recommended that the design of water-related questions as used in the 1999 Tanzania Reproductive and Child Health Survey, the 2000/01 Household Budget Survey and the 2002 Census

is used for all future surveys. The only modification to be made is to add a category to recognise the growing importance of water vendors.

The lack of a routine data system in the water sector complicates monitoring of achievements in the sector. The Ministry of Water and Livestock Development and the Local Government Reform Programme are urged to work together closely to ensure that water indicators are adequately covered in the Local Government M&E System. This would contribute to a more consistent and complete time series of estimates for key water indicators.

At the moment, only households' use of 'improved' sources for drinking water is monitored through household surveys. To inform decision making more adequately, it may be necessary to broaden the monitoring exercise to take other aspects relevant to poor people's access to and use of water: distance, affordability, quantity and quality of water are all of importance, as well as management of water in the household. The study conducted by the Ministry of Water and Livestock and Water Development with WaterAid and EASTC recommends the use of the following water indicators in future surveys:

- Households using improved drinking water source as main source
- Households taking 30 minutes or less to fetch water (reach the source, collect water and return home)
- Households using improved drinking water source/taking 30 minutes or less to fetch water as main source in dry season or when main supply breaks down
- Household monthly expenditure on water (including water vendors)

Apart from this, it may be worthwhile investigating the scope for specific studies on water and poverty under the Research and Analysis Work Programme and an analysis of the findings on water in the PPA. The use of water for productive uses and conflicts around water might be a fruitful area of further research.

2.2 Urban Poverty

Highlights:

Although poverty in urban areas is of concern, much higher levels of poverty are observed in the rural areas. In addition, income poverty has declined more rapidly in urban areas over the 1990s, particularly in Dar es Salaam. Within urban areas, attention must be paid to specific poor and vulnerable groups, such as those who live on streets, petty traders in the informal sector with limited capacity to earn reasonable income to sustain their livelihoods, urban dwellers in areas without adequate social infrastructure, and those who live under poor and marginal conditions.

a) **PRS Targets**

The PRSP recognizes that while poverty is less acute in urban areas, there are specific problems related to poverty and vulnerability in urban areas. However, no specific targets and strategies for reducing urban poverty are stated in the document. Thus, national PRS targets on income poverty and non-income poverty are used to measure and guide the achievement of targets for the urban poor.

b) Status and Trends

Results of the HBS reveals that poverty in urban areas is substantially lower than in the rural areas. Poverty levels in Dar es Salaam are even much lower. Not only is the incidence of poverty comparatively lower in urban areas but also depth of poverty is more limited in Dar es Salaam and other urban areas. The trend from 1991/92 to 2000/01 suggests that the incidence of poverty is declining faster in Dar es Salaam than in other urban and in rural areas.

The 1991/92 poverty level in Dar es Salaam was not significantly different from other urban areas, but declined more sharply during the last ten years than in other urban areas.

Poverty Profile in Urban Areas

While the results of the 2000/01 household budget survey indicate that poverty has declined in urban areas over the last ten years, especially in Dar es Salaam, there are some "clusters" of people in urban areas who remain poor and vulnerable. These "clusters" can be traced by an analysis of poverty profiles, especially taking into account livelihoods, living conditions, access to land, and access to social services. The recent surveys, mainly the HBS and the ILFS, and the Participatory Poverty Assessments (PPA) carried out in various urban areas reveal some of the characteristics of these clusters.

c) Urban Informal Sector

In recent years, there has been an increase in the number of people without salaried employment in urban areas. Unemployment levels (related to the formal sector) rose steeply, and despite a relatively favourable environment, the private sector has not developed as fast as expected.[19] The results of the ILFS 2000/01 indicate that unemployment in urban areas increased during the nineties from 22 percent in 1990/91 to 26 percent in 2001 in Dar es Salaam, and from 6 percent to 10 percent in other urban areas. The survey also revealed alarming high rates of youth unemployment in urban areas.

Trade liberalization that promoted growth of trade in urban areas has stimulated migration into urban areas, which together with the high level of unemployment

accounts for the growth of the informal sector. The informal economy, popularly referred to as petty traders or machingas, consists mainly of male youth aged between 20 and 29. About 92 percent of these have primary level education with no formal skills training. Most of these traders have had no formal employment prior to engaging in petty trading, and even those who were employed, none received more than Tsh. 16,000 per month.[20] In terms of their economic capability, most of these traders cite lack of adequate capital, lack of business premises, and frequent harassment by the city councils as their main problems.

Other informal sector activities undertaken by poor urban dwellers include sand mining, quarrying, and lime making to support the growing construction in urban areas. A study carried in Dar es Salaam revealed that sand mining involves people of all ages and gender. The majority of the people involved in these activities have only primary education (about 71 percent).[21] Most of the people involved in the extraction of sand, limestone and coral were found to have low purchasing power, no saving, cannot get formal employment, suffer from job insecurity and have limited alternatives on top of lacking capital. Most do not own land and use very rudimentary work tools.[22]

Some studies have also revealed the increasing number of children involved in the informal sector activities in urban areas. There is an increasing number of street children, which is attributed to poor and often abusive environments coupled with intra-familial tensions and lack of good educational opportunities that push these children to seek for alternative ways of life.[23]

d) Living Conditions

The living conditions in urban areas provide an indication of the identification and location of the poor and vulnerable groups. Poor people have limited access to land and housing in urban areas thus ending up living in unplanned, marginal and risky areas.

Although the census results for this year are not yet available, there are indications that urban population exceeds the capacity of urban infrastructure and funding to provide adequate social services to all the urban dwellers leading to poor provision of social services in high-density suburbs.

The recent study on urban poverty showed that more than 60,000 people were estimated to be living in 5,700 houses in valleys in Dar es Salaam, which exposes them to the risks of floods and diseases.[24] No estimates are available for the people living in risky areas in other urban areas.

Overcrowding in terms of occupancy rate is among the indicators of poverty in urban areas. The 2000/01 HBS shows a high level of overcrowding in rooms of residence for urban dwellers, especially in Dar es Salaam.[25] Table 10 shows the share of households occupying a single room.

Table 10: Number of households in a single room

Area	1991/92	2000/01
Dar es Salaam	24.7	30.0
Other	16.9	20.8

Source: Household Budget Survey 1991/92-2000/01

The table shows that almost one third of the households in Dar es Salaam are accommodated in single rooms. In other urban areas, the proportion increased from 16.9 percent to 20.8 percent in 2000/01.

There has also been an increase in the number of people without dwelling places, especially children living on streets. Although the number of people living on the streets in Dar es Salaam is estimated to be between 15,000 and 20,000 (ibid), no reliable estimates exists for these groups in other urban areas.

(e) Land and House Ownership

Ownership of land in urban areas is limited to a small proportion of urban dwellers due to both high land prices and low access. The household budget surveys reveal that the percentage of urban dwellers that do not own land has increased dramatically. Table 11 summarises land ownership among urban households.

Table 11: Land ownership among urban households by percentage

Area	Percentage of households who do not own land	
	1991/92	2000/01
Dar es Salaam	71.0	98.6
Nine Municipalities	43.4	96.5
Other towns	20.9	95.5

Source: Household Budget Survey 1991/92-2000/01

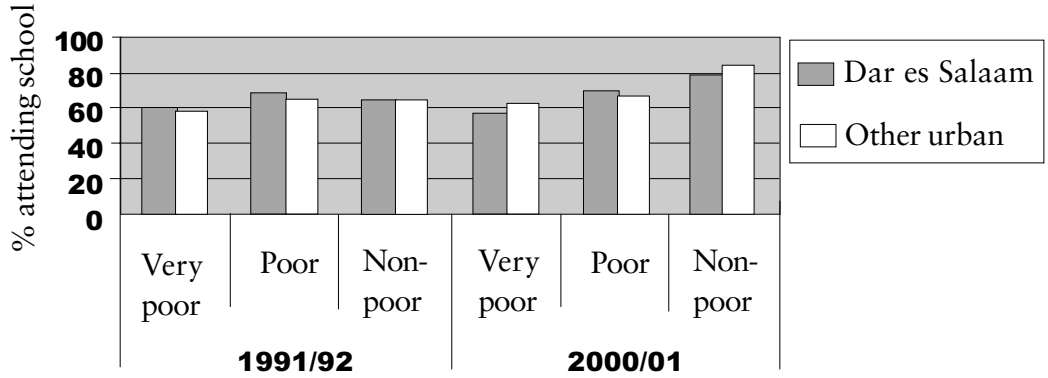
The Table indicates that an increasing proportion of households in urban areas do not own land. While no direct correlation could be statistically established between urban poverty and land ownership, it is unlikely that poor people are able to own land in urban areas. The majority of the urban poor in Dar es Salaam, approximately 44 percent possess no evidence to authenticate land ownership.[26] However, land ownership data is not consistent with data on house ownership generated by the same survey. The survey shows that house ownership among Dar es Salaam households has decreased only marginally from 36.9 percent, while it increased from 50.9 percent to 58.6 percent in other urban areas during the same period.

(f) Access to Social Services

There are noticeable differences in access to social services between the poor and the non-poor. In education, poor households are less likely to send their children to

school than the non-poor. Evidence from the household budget survey indicates that while about two thirds of children aged seven to thirteen are attending school, only half the children in the poorest households attend school.[27] Figure 14 shows the percentage of children attending school by poverty status.

Figure 14: Percentage of children attending school by poverty status



Source: Household Budget Survey 1991/92-2000/01

The figure shows that poor people have less access to education opportunities than the non-poor across all strata. While the increase in enrollment was highest for non-poor households, enrollment in Dar es Salaam declined for the very poor.

The small number of schools relative to demand limits the opportunity of the urban poor to access quality education. For example, the number of primary schools in Dar es Salaam was 167, while the required number is between 400-500. A similar situation is also experienced in other urban areas resulting in overcrowding in classrooms (between 100 to 200 pupils).[28] Apart from overcrowding poor physical infrastructure, shortage of teachers, inadequate educational facilities also contribute to low enrollment and low attendance to schools. Poverty-stricken households also find the costs of uniforms and other indirect costs a big burden. The low levels of education translate into lack of employment opportunities and low income, leading to poor housing conditions, poor dietary intake, unsafe water, and poor health status.[29]

The PPA 2002/03 results further support the poor conditions of the marginalized dwellers in terms of health due to lack of adequate clean water, low intake of food, and low access to health care. Prevalence of diseases such as malaria and communicable diseases due to poor environmental sanitation was found to be high in some suburbs in Dar es Salaam.[30]

Poor health is also linked to low income, which make individuals unable to afford the user fees charged by hospitals and dispensaries.

A reliable supply of water is also crucial for urban livelihood. The HBS shows that, the proportion of households using piped water declined in Dar es Salaam during the

nineties, from 93 percent to 86 percent, but increased from 73 percent to 76 percent in other urban areas. The use of water from other protected sources increased from 4 percent to 8 percent in Dar es Salaam and from 11 percent to 12 percent in other urban areas. The decline in the use of piped water in Dar es Salaam is explained by constraints in the capacity of the City water infrastructure relative to the size of population, forcing people to resort to other sources of water as shown by the two fold increase of unprotected sources in Dar es salaam, from 1.8 percent to 3.6 percent in 2000/01. The PPA in some municipalities showed that unplanned suburbs face serious water shortages, which results into frequent outbreak of diseases such as cholera and diarrhoea; places heavy workload on women and children who wait for long hours in queues due to distant sources; and high costs of water that constrain their ability to afford other essentials.

(g) Policy Implications

Much higher levels of poverty are observed in the rural areas than in urban areas. While national targets on poverty reduction cut across all strata, the achievement of those targets heavily depend on the extent of poverty reduction in the rural areas. Thus, it is prudent to argue that the focus of poverty reduction, both in terms of policy formulation and resource allocation must continue to be on rural areas. However, within urban areas, there is need to target specific poor and vulnerable groups such as unemployed youth, petty traders in the informal sector with limited capacity to earn a reasonable income to sustain their livelihoods, those who live on streets, urban dwellers in areas without adequate social infrastructure, and those who live under poor and marginal conditions.

2.3 Regional Differences in Poverty Status

2.3.1 Introduction

The previous sections focused on the status of the main poverty indicators from the Poverty Reduction Strategy (PRS). The emphasis of the analysis was on the poverty status at national level. Where data allowed, the analysis looked at disparities between men and women, urban and rural areas and between households with different levels of income poverty. This provided important evidence regarding the diversity of poverty in Tanzania. It showed that, while poverty is widespread in Tanzania and affects the large majority of the population in one way or another, it manifests itself differently and varies in intensity. This section considers another aspect of the diversity of poverty, by analysing differences in poverty status at sub-national level. More specifically, it looks at differences in poverty status between regions.

There are several good reasons to analyse the status of poverty indicators at sub-national level. With better information on the geographic differences in the status of poverty, awareness can be raised on this issue and policies and strategies can be better

focused making them more effective both in terms of impact and in use of limited resources. Data and analysis at the sub-national level could also guide resource allocation to local authorities and facilitate planning at that level. This is particularly important given the local government reform process, which is currently in progress.

A first effort to document differences in poverty by region was the Poverty and Welfare Monitoring Indicator (PWMI) ranking produced by the Vice Presidents Office (VPO) in 1999. The results of this ranking exercise were later included in the PRSP.

The completion of the Household Budget Survey 2000/01(HBS), which generated regional estimates on many poverty indicators, offered a new opportunity to look more closely at differences in the poverty status at regional level. The data of the HBS have been key to the preparation of this chapter. In the longer term, when the data set of the 2002 Census is available, poverty differences between sub-regional areas (such as districts and wards) can be measured and mapped in Tanzania.

This section is aiming to contribute to increased awareness on regional differences in poverty status and to further the discussions among policy makers, planners and researchers in government, in the private sector and among development partners. The chapter builds on a report on the geographic diversity of poverty, commissioned by the Research and Analysis Working Group in 2002.[31]

2.3.2 Methodology

The choice of methodology to assess regional differences in the status of poverty depends on the purpose of the assessment. If the assessment is undertaken to inform planning, policy or strategy development within a sector, more detailed information on single indicators is required. If an assessment is undertaken for purposes of awareness raising and advocacy on the overall regional status of human development within a country, carefully chosen composite indices may be sufficient. Allocation of resources might be informed by using several methodologies, depending on the purpose of the resource allocation. For conditional grants tied to a particular sector, the best approach would be to assess the status of the relevant sectoral indicators. For unconditional grants, an overall impression of the level of human development expressed in a composite index could be appropriate.

For the purpose of this report two methodologies have been chosen. The single indicator approach, based on the PRSP indicators, and the closely related Human Development Index (HDI) and Human Poverty Index (HPI)[32] , based on the same methodology.

Single Indicator Approach

The single indicator approach used here is based on the PRSP, which defines poverty as a function of income and non-income human development attributes. Using this definition poverty is measured and monitored through indicators grouped in 7 clusters[33]:

1. Income Poverty
2. Human Capabilities
3. Survival
4. Social well being
5. Nutrition
6. Extreme Vulnerability
7. Conducive development environment.

At the time of writing this report, data for cluster 4 was not available. For cluster 6 data available at regional level was not reliable enough to include and the PRSP indicators chosen for cluster 7 are not applicable at the regional level. As a result 28 indicators are included in the analysis presented in this section.

For each indicator Table 12 gives the performance and the ranking by region. The ranking reflects the performance of the regions with rank 1 being the worst and rank 20 being the best performer. A region for example with a better primary net enrollment ratio will rank higher than one with a worse primary net enrollment ratio. In this report there has been no attempt to produce composite indices by cluster since it tends to obscure the detail required for policy making and planning. It also opens up a discussion on the methodologies and weighting used to arrive at the composite index. This falls outside the scope and purpose of this report. It is noted, however, that in some cases policy making does require composite indices, particularly when multiple, related, indicators are being assessed or when an overall impression of the level of development of parts of the country. As the detail in the single indicator rankings is rich, a summary of the single indicator performance by region is also presented in Table 13 and in Map 1.

The Human Development Index (HDI)

The HDI is a summary measure of human development. It measures the average achievements in three basic dimensions of Human Development, in this case by region.

- A long and healthy life, measured by life expectancy at birth[34]
- Knowledge, measured by adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrollment (with one-third weight)
- A decent standard of living, as measured by GDP per capita (PPP US$)

In this report monthly consumption expenditure per capita (HBS00/01) was used to measure the standard of living dimension of the HDI. Data on consumption expenditure from the HBS are considered to be more reliable than the available regional GDP estimates. More importantly, consumption expenditure data is a direct measure of the standard of living and therefore reflects the situation at the household level better than the GDP.

A further difference with the standard calculation of the HDI is the use of only the primary gross enrollment, instead of combined primary secondary and tertiary gross enrollment. Data for tertiary gross enrollment are not available and data for secondary enrollment will cause distortion of the picture at regional level since many secondary students do not study in their region of origin. Furthermore the Poverty Reduction Strategy (PRS) focuses on primary education, by using only primary gross enrollment data the PRS is better informed.

More details on the calculation of the HDI are included in a technical note in the annex.

Box 1: HIV/AIDS and Life Expectancy

Life expectancy figures used in this report date from the 1988 census. It is believed that since then HIV/AIDS has had a significant impact on the life expectancy in Tanzania, the impact is likely to be spread unevenly geographically. This is supported by findings from the Adult Mortality and Morbidity Programme, which has conducted annual censuses in their project districts (Hai, Morogoro and Dar es Salaam). Life tables calculated based on their 1995 and 1999 census indicate that life expectancy at birth in Dar es Salaam and Hai has dropped by two years, whereas there was a slight improvement in Morogoro. Further indication of the impact of HIV/AIDS has been identified in the age specific mortality probability, which shows significantly higher levels in the reproductive age groups for both men and women.

The Human Poverty Index

While the HDI measures average achievement, the HPI measures deprivations in the three basic dimensions of human development captured in the HDI:

- **Lack of a long and healthy life:** vulnerability to death at a relatively early age, as measured by probability at birth of not surviving to age 40.
- **Lack of knowledge:** exclusion from the world or learning and communications, as measured by the adult illiteracy rate.
- **Lack of a decent standard of living:** lack of access to overall economic provisioning, as percentage of the population not using improved water sources and percentage of children under five who are underweight (combined in an un-weighted average)

Details on the calculation of the HPI can be found in the technical note.

2.3.3 Regional Status of Poverty by Single (PRSP) Indicators General Findings

The advantage of the single indicator approach is that it gives a detailed view of the performance of individual regions per indicator. The level of detail can reveal both

strengths and weaknesses of the regions and facilitates a more balanced perspective on the overall performance of the regions. It also has the potential to contribute to more effective planning of (sectoral) interventions.

The most obvious way of analysing single indicator data is by looking at ***inter-regional disparities***. By looking at the data itself, rather than the ranking, the depth of the disparity is revealed. From this perspective it is also possible to explore possible correlations between indicators. The national primary net enrollment ratio (PNER), for example, of Tanzania (57 percent in 2000) is considered to be low compared to neighbouring countries like Kenya, Malawi and Uganda (Situation analysis of children in Tanzania 2001, UNICEF). The regional data however shows that PNER in Lindi is 14 percentage points below the national average, while Kilimanjaro has a PNER of 80.5 percent, more than 23 percentage points higher than the national average and already within the PRSP target of 75 percent PNER by 2003. Some studies indicate that the reason for such large disparities can be found in differences in household per capita expenditure levels (Al-Samarrai and Reilly, 2000:30-31). This is supported by the performance of Lindi (consistently poor) and Kilimanjaro (consistently fair) on the indicators in the income poverty cluster.

A second perspective on analysing single indicator data is looking at ***the performance of a single region on a range of different indicators***. This allows for an analysis of the strengths and weaknesses of a region and also allows for analysis of correlation between indicators. An interesting case in point is Iringa Region, which ranks among the best 5 on 11 indicators and among the worst 5 on 9 indicators. A closer look at the performance shows that Iringa scores particularly well in the income poverty and human capabilities (education) cluster. Weak performance of Iringa is concentrated in the nutrition and survival cluster. An explanation of the good performance of Iringa in the income poverty cluster can be found in the methodology used in the HBS 00/01 to establish household expenditure levels. The survey computed the value of own produce used for consumption and included that in the 'consumption' expenditure for the household. Therefore, predominantly self-sufficient regions like Iringa and also Kagera score particularly well in this cluster, with Iringa consistently among the best 5 for all income poverty cluster indicators. Looking at the other indicators, however, reveals a more balanced picture. Iringa and also Kagera are faced with serious issues particularly related to health, with Iringa recording the highest rate (14.7 percent) of children severely underweight and the lowest life expectancy at birth of Tanzania mainland. The poor nutrition status of children in Iringa, despite favourable conditions for cultivating food crops, is believed to be linked to low levels of awareness on care for children among parents.

Table 12: Regional Rankings by Single Indicator

Indicators Cluster I: Income Poverty	Arusha	DSM	Dodoma	Iringa	Kagera	Kigoma	Kilimanjaro	Lindi	Mara	Mbeya	Morogoro	Mtwara	Mwanza	Pwani	Rukwa	Ruvuma	Shinyanga	Singida	Tabora	Tanga	Tanzania Mai	Source
Basic needs poverty headcount ratio (%)	38.8	17.6	34.3	28.9	29.0	38.0	31.3	53.0	46.0	21.0	29.4	38.0	48.0	46.2	31.0	41.3	42.0	55.0	26.0	36.5	36.0	HBS
Rank	13	1	9	4	5	11	8	19	16	2	6	12	18	17	7	14	15	20	3	10	n.a.	2000/2001
Rural Basic needs poverty headcount ratio (%)	42.8	n.a.	36.3	30.0	19.2	42.9	31.9	56.9	43.9	21.5	32.1	39.4	46.8	48.2	35.0	43.7	41.3	50.2	32.2	37.9	37.2	HBS
Rank	13	n.a.	9	4	2	14	5	20	16	3	6	11	17	18	8	15	12	19	7	10	n.a.	2000/2001
Food poverty headcount (%)	25.1	7.5	13.0	10.3	18.0	21.0	11.1	33.3	36.0	8.3	14.0	16.9	30.0	27.5	12.0	27.4	22.0	28.0	9.0	11.4	19.0	HBS
Rank	14	1	8	4	11	12	5	19	20	2	9	10	18	16	7	15	13	17	3	6	n.a.	2000/2001
Rural food poverty headcount (%)	28.1	n.a.	14.0	10.6	5.4	25.2	11.4	36.1	35.0	9.2	15.1	17.0	22.8	29.7	14.6	29.0	14.6	27.2	7.9	11.6	17.6	HBS
Rank	16	n.a.	8	5	2	14	6	20	19	4	11	12	13	18	10	17	9	15	3	7	n.a.	2000/2001
adults (age15-60) not active (%)	28.5	39.9	16.4	9.9	8.0	8.9	20.5	15.6	13.4	14.9	16.6	13.7	14.6	18.1	11.0	9.5	10.3	19.6	16.3	15.3	15.3	HBS
Rank	19	20	13	4	1	2	18	11	6	9	14	7	8	15	5	5	3	17	16	12	10	2000/2001
Indicators Cluster II: Human Capabilities																						
Girl/Boy ratio in primary education	0.9	1.1	0.9	0.7	0.8	0.9	1.0	0.9	0.7	0.9	1.0	1.2	0.8	0.7	0.8	0.7	0.9	0.9	0.7	0.8		
Rank	11	2	11	20	15	11	4	11	20	11	4	1	15	20	15	20	11	11	20	15		BEST 2000
Girl/Boy ratio in secondary education	0.92	0.81	0.87	0.78	0.76	0.95	1.09	0.87	0.67	0.83	0.86	1.19	0.75	0.79	0.71	0.94	0.75	0.87	0.69	0.89		
Rank	5	12	9	14	15	3	2	8	20	11	10	1	17	13	18	4	17	8	19	6		BEST 2000
Transition rate from primary to secondary	8.2	14.3	11.9	17.4	9.4	9.6	7.3	12.4	9.8	14.0	14.8	14.9	18.3	12.7	19.3	8.3	19.1	9.1	12.8	15.3	12.4	BEST 2000
Rank	19	8	13	4	16	15	20	12	14	9	7	6	3	11	1	18	2	17	10	5	n.a.	
Literacy rate of population 15+	78	91	86	81	64	71	85	58	76	79	72	68	85	61	68	84	55	71	65	67	71	HBS
Rank	6	1	14	4	17	9	2	19	7	5	8	11	15	18	12	3	20	10	16	13	n.a.	2000/2001
Primary net enrolment ratio	53.0	71.0	57.5	76.1	58.9	48.0	80.5	43.8	62.0	68.8	60.5	59.5	52.2	56.3	61.0	63.0	46.2	61.3	55.4	50.1	58.7	HBS
Rank	15	3	12	2	11	18	1	20	6	4	9	10	16	13	8	5	19	7	14	17	n.a.	2000/2001
Primary gross enrolment ratio	84.1	98.7	86.9	102.5	80.5	80.1	104.4	67.6	88.7	99.7	87.2	83.3	75.1	79.7	83.2	89.4	68.0	94.5	81.3	78.4	84.9	HBS
Rank	10	4	9	2	14	15	1	20	7	3	8	11	18	16	12	6	19	5	13	17	n.a.	2000/2001
Drop-out rate in primary school	3.2	6.5	6.7	2.2	5.5	5.8	3.3	5.3	3.0	27.3	6.0	4.8	3.3	13.5	26.2	3.1	15.9	1.8	1.4	4.4	5.4	
Rank	6	15	16	3	12	13	8	11	4	20	14	10	8	17	19	5	18	2	1	9	n.a.	BEST 2000
% of students passing Std. 7 with grade A,B,C	20.8	16.3	15.3	22.5	16.5	16.8	17.5	24.9	35.3	19.5	18.5	14.4	21.0	19.1	29.0	28.3	22.1	18.0	22.8	29.8	28.7	
Rank	10	18	19	7	17	16	15	5	1	11	13	20	9	12	3	4	8	14	6	2	n.a.	BEST 2000
Rural population with access to safe water (%)	48.0	n.a.	60.0	51.0	28.0	74.0	75.0	11.0	30.0	66.0	62.0	44.0	45.0	23.0	48.0	46.0	37.0	59.0	13.0	41.0	46.0	HBS
Rank	8	n.a.	5	7	16	2	1	19	15	3	4	12	11	17	9	10	14	6	18	13	n.a.	2000/2001
Prevalence of diarrhoea in under fives	14.8	10.0	14.7	12.0	20.3	25.2	9.6	13.0	11.0	18.7	12.9	11.2	7.8	4.7	22.2	7.4	7.3	18.2	18.5	13.5	12.4	
Rank	14	6	13	9	18	20	5	11	7	17	10	8	4	1	19	3	2	15	16	12	n.a.	DHS 1996

Indicators Cluster III: Survival		Arusha	DSM	Dodoma	Iringa	Kagera	Kigoma	Kilimanjaro	Lindi	Mara	Mbeya	Morogoro	Mtwara	Mwanza	Pwani	Rukwa	Ruvuma	Shinyanga	Singida	Tabora	Tanga	Tanzania Mai	Source
Infant mortality rate																							
		81	105	132	131	130	115	67	140	125	124	126	138	115	114	131	113	110	96	101	106	115	
	Rank	2	5	18	16	15	10	1	20	13	12	14	19	11	9	17	8	7	3	4	6	n.a.	DHS 1999
Under 5 mortality rate																							
		129	173	222	220	219	192	104	236	211	209	211	233	191	190	222	188	183	157	166	176	191	
	Rank	2	5	18	16	15	11	1	20	13	12	14	19	10	9	17	8	7	3	4	6	n.a.	DHS 1999
life expectancy at birth																							
		57	50	46	45	45	48	59	47	47	47	46	46	48	48	45	49	50	55	53	49	50	
	Rank	2	6	17	20	19	11	1	14	13	12	15	15	10	9	18	8	5	3	4	7	n.a.	Census 1988
HIV infection rate among blood donors																							
		14	9	4	15	20	4	7	4	9	17	17	8	8	13	12	10	9	8	7	9	9	
	Rank	16	9	2	17	20	1	4	3	11	19	18	8	6	15	14	13	12	7	5	10	n.a.	NACP 2000
<2 immunisation rate for DPT																							
		85	91	91	94	92	95	100	93	85	94	82	92	74	90	82	90	64	70	94	87	81	
	Rank	15	10	9	3	7	2	1	6	14	5	17	8	18	12	16	11	20	19	4	13	n.a.	DHS 1996
<2 immunisation rate for measles																							
		81.7	94.2	89.1	94.2	90.8	86.6	98.1	92.5	76.7	87.5	82.1	78.0	69.2	86.7	70.6	90.3	56.4	70.3	79.4	83.0	84.1	
	Rank	13	3	7	3	5	10	1	4	16	8	12	15	19	9	17	6	20	18	14	11	na	DHS 1996
<5 in-patient malaria fatalities																							
		na	na	34.2	27.7	42.4	47.1	na	na	41.8	35.7	41.5	30.6	40.7	30.3	na	39.7	37.1	36.7	44.6	na	37.7	
	Rank	na	na	10	7	18	20	na	na	16	11	17	9	15	8	na	14	13	12	19	na	na	HSA 1999
Births attended by skilled health worker																							
		36.9	86.7	32.9	36.8	19.6	22.9	55.9	47.8	30.4	44.4	44.4	40.5	30.9	51.1	36.2	68.3	25.7	34.5	48.7	25.9	na	
	Rank	10	1	14	11	20	19	3	6	16	7	8	9	15	4	12	2	18	13	5	17	na	DHS 1996
Indicators Cluster IV: Nutrition																							
Stunting moderate & severe (%)																							
		38.7	30.6	48.1	70.5	41.6	52.5	33.5	58.6	32.6	46.9	52.7	58.0	33.8	51.7	42.0	53.5	31.3	38.6	25.7	55.3	43.8	
	Rank	8	2	12	20	9	14	5	19	4	11	15	18	6	13	10	16	3	7	1	17	n.a.	DHS 1996
Wasting moderate & severe (%)																							
		7.2	8.1	8.0	6.2	10.8	7.6	5.6	7.0	8.4	6.2	4.1	5.9	7.6	11.2	9.7	5.2	6.8	7.0	4.4	4.9	n.a.	
	Rank	12	16	15	7	19	13	5	10	17	8	1	6	14	20	18	4	9	11	2	3	n.a.	DHS 1996
Underweight moderate & severe (%)																							
		35.1	22.2	34.2	48.2	36.0	43.1	21.0	41.4	18.9	20.8	25.5	35.6	27.0	34.3	30.5	29.4	27.8	28.4	14.2	36.2	29.4	
	Rank	14	5	12	20	16	19	4	18	2	3	6	15	7	13	11	10	8	9	1	17	n.a.	DHS 1996
Underweight severe (%)																							
		9.2	4.2	7.5	14.7	11.2	7.6	4.0	13.4	5.7	6.8	7.3	8.7	6.3	8.4	9.7	7.1	5.0	9.8	2.7	8.1	7.9	
	Rank	15	3	10	20	18	11	2	19	5	7	19	14	6	13	16	8	4	17	1	12	n.a.	DHS 1996
Low birth weight (%)																							
		3.9	9.0	7.2	10.1	3.4	4.5	3.2	5.5	4.6	5.4	8.3	7.6	1.9	4.9	4.0	11.5	3.5	3.1	6.7	5.4	n.a.	
	Rank	6	18	15	19	4	8	3	13	9	12	17	16	1	10	7	20	5	2	14	11	n.a.	DHS 1996
Summary table																							
Frequency among best 5		6	15	2	12	5	5	22	5	7	10	6	4	6	1	3	10	6	7	14	7		
Frequency among worst 5		4	4	5	9	10	6	2	12	10	3	5	5	8	9	10	5	9	8	6	5		
Balance Best - Worst		2	11	-3	3	-5	-1	20	-7	-3	7	1	-1	-2	-8	-7	5	-3	-1	8	2		

A third way of interpreting the single indicator data is looking ***for trends or patterns***. The last row in Table 12 shows the frequency with which regions have ranked both among the best and worst 5 for all indicators included in this analysis and the balance after deducting the frequency for the worst 5 from the frequency for the best 5. Based on this, ***Dar es Salaam*** and ***Kilimanjaro region can be considered least deprived***, consistently scoring among the best five for most PRSP indicators, with a limited number of inclusions among the worst 5. Kilimanjaro ranks among the best 5 for 22 and Dar es Salaam for 15 out of a total of 28 indicators included in this analysis.

For other regions, the picture is mixed. ***Tabora*** and ***Mbeya*** rank among the best 5 for many indicators. Tabora performs particularly well on indicators in the nutrition cluster with the lowest levels of stunting and underweight of Tanzania mainland. Tabora region also consistently ranks among the best 5 for most indicators in the survival cluster with low levels of infant mortality and among the highest life expectancy at birth (53yrs). Tabora ranks among the worst performers 6 times (particularly on indicators in the human capability cluster with very low girl/boy ratios for primary and secondary education and low levels of access to safe water). Mbeya performs well particularly in the income poverty cluster with 2nd lowest basic needs and food poverty headcount ratios of the country. High primary enrollment ratios and good access to safe water (66 percent) for the rural population also contribute to the overall performance of Mbeya. Performance on a few indicators gives reason for concern: the high drop out rate for primary school, high incidence of diarrhoea cases and high prevalence of HIV infection among blood donors (17 percent).

Regions consistently ranking among the worst 5 on the PRSP indicators include Kagera, Lindi, Pwani and Rukwa, with Pwani, Lindi and Rukwa also recording a very limited number of inclusions among the best 5 performers. Based on this, ***Pwani, Lindi*** and ***Rukwa can be considered most deprived***. Performance of Pwani region is particularly poor on indicators in the income poverty and human capability cluster with the 3rd lowest literacy rate (61percent) and among the highest basic needs and food poverty headcount ratios (46.2 percent and 27.4 percent respectively). This is more than 10 percentage points higher than the national average. The performance of Lindi is particularly poor on indicators in the income poverty cluster, with the 2nd highest basic needs and food poverty headcounts of Tanzania mainland (53 percent and 33 percent respectively). Lindi also has the poorest record for access to safe water in rural areas (only 11 percent) and primary net enrollment ratio (only 43.8 percent). Rukwa's performance in the survival and human capabilities cluster is particularly poor with low life expectancy at birth (45yrs) and high incidence of diarrhoea cases (22 percent).

Kagera performs poorly particularly on the indicators in the survival and nutrition cluster. The summary table indicates performance among the worst 5 for 10 indicators

out of 28. Kagera has the lowest level of attended births of the country (only 19.6 percent) and the highest prevalence of HIV infection among blood donors (20 percent). The balance, however, of best and worst 5 frequency is -5, which is caused by the relative good performance of Kagera in the Income Poverty cluster. Like Kagera, Lindi also ranks among the best 5 for 5 PRSP indicators. Lindi performs among the best when it comes to immunization (DPT and Measles), attended births, HIV rate and performance of standard 7 students. The good performance on immunization and attended births might be attributed to the attention in the form of special health programmes because of its poverty status. Evidence for this, however, is not available.

Map 1: Best and worst performers by single (PRSP) indicators

Frequency ranking among best/worst 5

Region	Best	Worst	Balance
Kilimanjaro	22	2	20
DSM	15	4	11
Tabora	14	6	8
Mbeya	10	3	7
Ruvuma	10	5	5
Iringa	12	9	3
Arusha	6	4	2
Tanga	7	5	2
Morogoro	6	5	1
Mtwara	4	5	-1
Singida	7	8	-1
Kigoma	5	6	-1
Mwanza	6	8	-2
Mara	7	10	-3
Dodoma	2	5	-3
Shinyanga	6	9	-3
Kagera	5	10	-5
Lindi	5	12	-7
Rukwa	3	10	-7
Pwani	1	9	-8

Source: PHDR, Repoa 2002

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations

Note: This map is generated with the Tanzania Socio-economic Database (TSED), National Bureau of Statistics, 2002

2.3.4 Regional Status of Poverty by Human Developemt Index(HDI) and Human Poverty Index(HPI)General Findings

Table 14 reflects the average regional achievement in the three dimensions of Human Development: a long and healthy life, knowledge and a decent standard of living. The table also includes the value of the HDI for Tanzania Mainland.

Table 13: HDI

Human Development Index		Life expectancy at birth (years)	Adult literacy rate (% age15 and above)	Primary gross enrolment ratio	Mean monthly consumption expenditure per capita (000 Tsh)	Life expectancy index	Education index	Expenditure index	Human development index (HDI) value
HDI rank		1988	2000	(%) 2000	2000				
1	Dar-es-Salaam	50	91	98.7	21.9	0.417	0.935	0.849	0.734
2	Kilimanjaro	59	85	104.4	11.2	0.567	0.914	0.327	0.603
3	Mbeya	47	79	99.7	12.6	0.367	0.858	0.395	0.540
4	Arusha	57	78	84.1	10.3	0.533	0.800	0.283	0.539
5	Iringa	45	81	102.5	11.2	0.333	0.881	0.327	0.514
6	Ruvuma	49	84	89.4	9.6	0.400	0.857	0.249	0.502
7	Mtwara	46	68	83.3	12.4	0.350	0.730	0.385	0.488
8	Tabora	53	65	81.3	10.4	0.467	0.704	0.288	0.486
9	Singida	55	71	94.5	6.9	0.500	0.788	0.117	0.468
10	Morogoro	46	72	87.2	10.0	0.350	0.770	0.268	0.463
11	Pwani	48	61	79.7	10.5	0.383	0.672	0.293	0.449
12	Tanga	49	67	78.4	9.3	0.400	0.707	0.234	0.447
13	Mara	47	76	88.7	8.0	0.367	0.802	0.171	0.447
14	Dodoma	46	66	86.9	8.5	0.350	0.729	0.195	0.425
15	Kigoma	48	71	80.1	7.3	0.383	0.740	0.137	0.420
16	Kagera	45	64	80.5	9.0	0.333	0.694	0.220	0.416
17	Mwanza	48	65	75.1	8.1	0.383	0.683	0.176	0.414
18	Lindi	47	58	67.6	9.5	0.367	0.611	0.244	0.407
19	Shinyanga	50	55	68.0	8.0	0.417	0.593	0.171	0.394
20	Rukwa	45	68	83.2	6.7	0.333	0.730	0.107	0.390
	TANZANIA	50	71	84.9	10.1	0.417	0.756	0.273	0.482

The first observation that can be made when analysing the values of the HDI is the large gap between Dar es Salaam ranked 1 and Kilimanjaro ranked 2. This is mainly caused by the contribution of the expenditure index, which is much higher for Dar es Salaam than for any other region. There is also a marked gap between Kilimanjaro and the rest of the regions. In the case of Kilimanjaro its achievement in the life expectancy at birth and education levels contribute to its high overall HDI. The good performance (within top 5) of Arusha can mainly be attributed to a high life expectancy index. Mbeya and Iringa perform well overall because of relatively high expenditure and education indices.

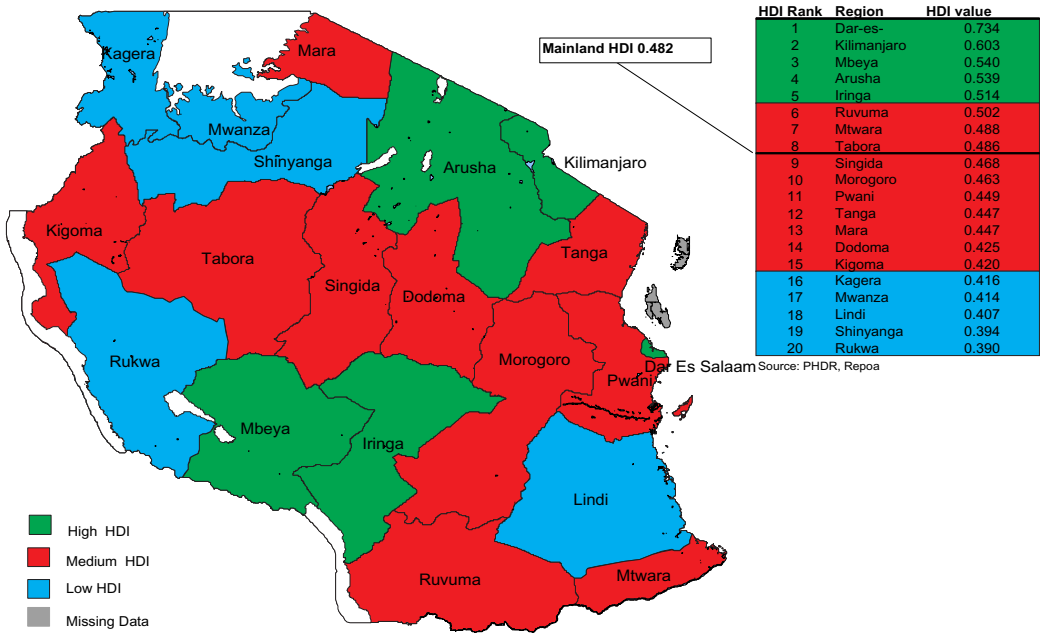
The value of the mainland HDI, using the same methodology is 0.482. This value is above the median HDI value, reflecting the effect of the strong performance of the highest ranking regions (Dar es Salaam and Kilimanjaro), pulling the overall national HDI upward.

At the bottom end of the spectrum the largest gap is 22 index points separating Mara and Dodoma. The five regions with the lowest HDI are Kagera, Mwanza, Lindi, Shinyanga and Rukwa, Rukwa's good performance in the Education Index being outweighed by very poor life expectancy and expenditure indices. The low ranking for Shinyanga is mainly caused by a very low education and life expectancy index.

Map 2 reflects the HDI ranking by region. It highlights the bottom and top 5 performers. This cut-off point is fairly arbitrary as differences particularly within the top 5 are large, Dar es Salaam and Kilimanjaro region performing much better than the remainder of the regions of Tanzania.

Map 2: HDI by Region

Human Development Index by Region



HDI Rank	Region	HDI value
1	Dar-es-	0.734
2	Kilimanjaro	0.603
3	Mbeya	0.540
4	Arusha	0.539
5	Iringa	0.514
6	Ruvuma	0.502
7	Mtwara	0.488
8	Tabora	0.486
9	Singida	0.468
10	Morogoro	0.463
11	Pwani	0.449
12	Tanga	0.447
13	Mara	0.447
14	Dodoma	0.425
15	Kigoma	0.420
16	Kagera	0.416
17	Mwanza	0.414
18	Lindi	0.407
19	Shinyanga	0.394
20	Rukwa	0.390

Source: PHDR, Repoa

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations

Note: This map is generated with the Tanzania Socio-economic Database (TSED), National Bureau of Statistics, 2002

It is worth noting that there is consistency in the ranking of the regions between the single indicator and the HDI approach. Dar es Salaam, Kilimanjaro and Mbeya rank consistently good. Rukwa, Lindi, Kagera and Shinyanga are consistently worst off. Pwani is an exception. Using the single indicator approach this region ranks lowest of the country. Using the HDI, Pwani ranks 11 out of 20 regions. This is caused by the good performance of Pwani when it comes to mean consumption expenditure per capita and the expenditure index, which is based on it. The expenditure index constitutes one-third of the HDI and it pushes Pwani up the ranks.

Table 15 reflects the existing regional backlog of deprivation in the same three dimensions of the HDI: A long and healthy life, knowledge and a decent standard of living.

Table 16 indicates an overall fairly even distribution of the HPI value across regions with two major exceptions. There is a marked gap between Kilimanjaro, ranked two and Mbeya ranked three. This is mainly related to access to water. In Dar es Salaam and Kilimanjaro there is a comparatively low proportion of the population without access to safe water (6.4 percent in Dar es Salaam and 22.7 percent in Kilimanjaro). The comparatively low adult illiteracy rates for Dar es Salaam and Kilimanjaro also contribute to the large gap between rank 2 and the remainder of the regions.

Table 14: Human Poverty Index[35]

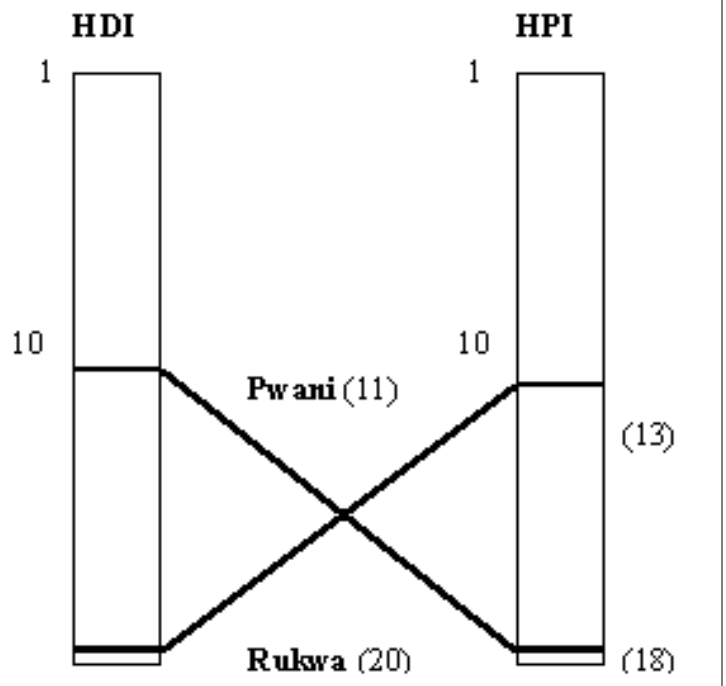
HPI rank	Region	Probability at birth not surviving to age 40 1988	Adult illiteracy rate (% age 15 and above) 2000	Population without access to safe water 2000	Underweight children under age 5 (%) 1996	HPI value
1	Dar-es-Salaam	0.41	9.0	6.4	22.2	21.4
2	Kilimanjaro	0.31	15.0	22.7	21.0	22.6
3	Mbeya	0.42	21.0	25.1	20.8	28.7
4	Arusha	0.29	22.0	41.0	35.1	29.7
5	Singida	0.27	30.0	39.1	28.4	30.3
6	Ruvuma	0.37	16.0	46.9	29.4	30.4
7	Morogoro	0.46	29.0	29.6	25.5	34.2
8	Kigoma	0.47	29.0	24.2	43.1	36.6
9	Mtwara	0.36	33.0	47.0	35.6	36.8
10	Iringa	0.46	19.0	46.2	48.2	37.4
11	Tabora	0.33	35.0	75.4	14.2	37.6
12	Dodoma	0.46	34.0	34.5	34.2	38.1
13	Rukwa	0.48	32.0	45.5	30.5	39.3
14	Mwanza	0.46	35.0	46.9	27.0	39.3
15	Mara	0.58	24.0	59.4	18.9	40.4
16	Tanga	0.44	33.0	54.0	36.2	40.7
17	Shinyanga	0.38	45.0	60.1	27.8	42.3
18	Pwani	0.46	39.0	65.2	34.3	44.9
19	Lindi	0.39	42.0	80.0	41.4	47.2
20	Kagera	0.65	36.0	67.2	36.0	50.9
	Tanzania Mainland	0.43	29.0	44.3	29.4	36.3

The value of the mainland HPI, using the same methodology is 36.3. This value is above the median HPI value, reflecting the effect of the strong performance of the highest ranking regions (Dar es Salaam and Kilimanjaro), pulling the overall national HPI upward.

It is worth noting that a trend can be observed of regions consistently ranking high and low, regardless of the methodology used for analysis (Single indicators, HDI, HPI). Dar es Salaam, Kilimanjaro, Mbeya and Ruvuma can consistently be found at the top end of the ranking - an indication of overall good performance. Lindi and Shinyanga are always found at the bottom end of the spectrum - an indication of overall poor performance. The single indicator ranking has showed, however, that even for overall good performers like Mbeya and Ruvuma much leaves to be desired in some areas.

Two regions stand out in inconsistencies when comparing the HDI and HPI. Rukwa ranks lowest (20) for the HDI but ranks 13 for the HPI. Pwani on the other hand ranks among the highest (11) for the HDI but ranks among the lowest (18) for the HPI. (See Box 2).

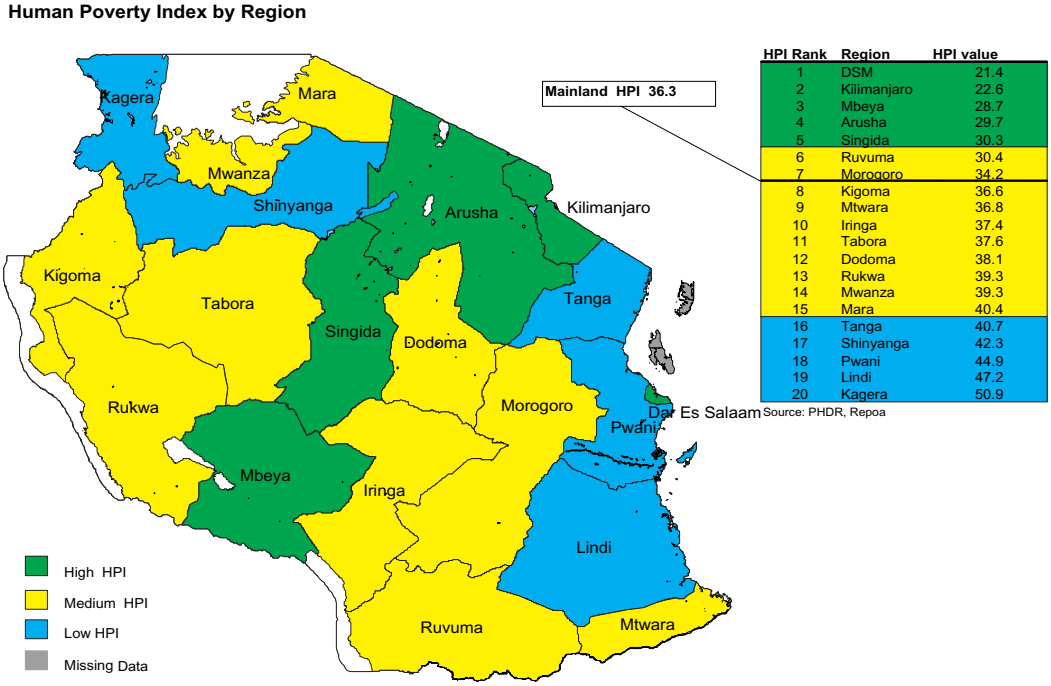
Box 2: Differences in HDI and HPI ranking for Rukwa and Tabora



The cause for the different ranking of these regions can be found in the choice of indicators reflecting the three dimensions of human development. Particularly the absence of an expenditure component in the HPI has a positive effect on the ranking of Rukwa region. It had the lowest mean monthly consumption expenditure of mainland Tanzania. Leaving this out of the equation and, on top of that, introducing the proportion of children underweight, for which Rukwa is a medium performer, boosts its ranking in the HPI.

The same analysis applies to the case of Pwani region. The expenditure component for which it performs well in the HDI pushes it up the ranks. Leaving consumption expenditure out of the equation and introducing access to safe water, for which Pwani is not performing well (18th rank), causes this region to rank among the worst off 5 regions (18) of Tanzania mainland for the HPI.

Map 3: HPI by Region



Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations

Note: This map is generated with the Tanzania Socio-economic Database (TSED), National Bureau of Statistics, 2002

2.3.5 Conclusion

A national perspective in analysing poverty alone obscures many details important for informed decision making on poverty reduction. The methodologies used in analysing regional differences in poverty reveal both similarities in regional performance as well as major differences in regional performance between methodologies. This illustrates the need to be open minded in the analysis of regional differences in poverty and look at it from a variety of perspectives, since no single methodology will provide all the answers.

It is also clear that a more in-depth analysis on the regional differences in poverty focusing on why some regions are performing better than others is needed.

Future steps, which are being considered under the poverty monitoring system, are an analysis of poverty at the sub-regional level, including a poverty mapping exercise. This will be facilitated by the release of the census data and improvements in the routine data systems, especially for health, education and water.

ENDNOTES:

[1] URT; *Poverty Reduction Strategy Paper - Progress Report 2000/01*. Dar es Salaam, 2001.
[2] Lerisse & Kyessi, 2002
[3] Economic Survey 2001
[4] In the standard definition, unemployment covers all persons who are not engaged in any economic activity but are available for such activities (whether seeking for employment or not). In the national definition, unemployment includes all persons who are not engaged in any economic activity but are available for such activities (whether seeking for employment or not) plus those with marginal attachment to employment.
[5] Due to differences in the format in which information was recorded between the 1991/92 and the 2000/01 surveys, only the first seven categories are reasonably comparable.
[6] For example, some surveys look at literacy only in one language (mostly Swahili), while others look at literacy in any language. Some surveys simply ask respondents if they can read and write and others test respondents by asking them to read or write a simple sentence. There are also significant differences in the way the literacy question is asked in different surveys. As part of the multi-year survey programme, it is important that the National Bureau of Statistics standardises the way in which literacy is approached in surveys.
[7] For this analysis, the Ministry of Education's routine data system is used as data source. Recent population-based estimates of enrolment rates, provided by the 2000/01 Household Budget Survey, are reasonably close to the Ministry of Education's facility-based figures.
[8] See UNICEF, 2002, p.50
[10] MEASURE, 2000
[11] The chart uses the mortality rates for infants and under-fives using five-year recall periods and plots the figures at the mid-point of these periods. Therefore, the 1999 TRCHS result is plotted in 1997, the mid-point of the 1995-1999 recall period. The use of different recall periods and the practice to quote rates as if they apply to the year in which a survey was conducted can lead to considerable confusion. It would be helpful if the Surveys and Census TWG could give out guidelines about how mortality rates should be reported and compared over the years and across surveys.
[12] Gwatkin et al, 2000
[13] UNICEF, 2002
[14] The main problem with the target as expressed in the PRS is that the surveillance system in place to monitor the rate of infection among pregnant women attending antenatal clinics has some flaws. Because of the considerable operational difficulties encountered by the system, data from this sentinel surveillance system are not yet considered reliable for trend analysis. Data is also routinely collected on blood donors and this provides a more complete time series. Both methods of monitoring the HIV sero-prevalence rate suffer from bias, but if time series is considered, it can be assumed that this bias is relatively constant over the years. For the remainder of this section, data on the HIV status of blood donors will be used. Pregnant women attending antenatal clinics have all had unprotected sex, thus exposing themselves to the risk of HIV infection. For this reason, it is likely that the infection rate among pregnant women will be higher than the rate among the total population of reproductive age. On the other hand, it is known that HIV positive women have a lower fertility rate, which causes bias in the other direction. The data on blood donors show that almost all (99.8 percent in 2000) of blood donors in Tanzania are relatives of patients. As the prevalence among hospital patients will be much higher than in the general population, there is a good chance that this rate will also be higher among their relatives, especially if they are spouses. Also, the large majority of blood donors are male (83.8 percent in 2000), making sound comparisons between male and female rates statistically challenging.
[15] See Public Health Sector Performance Profile, 2001
[16] A special section on the developmental challenges posed by HIV/AIDS features in chapter 4.
[17] The Ministry of Water and Livestock Development, WaterAid-Tanzania and the Eastern Africa Statistical Training Centre investigated data sets generated by the Population Census (1978 and 1988), Demographic and Health Survey (1991/92, 1994, 1996, 1999) and Household Budget Survey (1991/92 and 2000/01). A report on this analysis is forthcoming.
[18] Note that these are correlations only, no causal relations are implied.
[19] Save the Children (UK) 2001, " Situation analysis for the poor urban children at risk programme".
[20] ibid.
[21] Jambiya, G. et al (1997)

[22] ibid
[23] Save the Children (UK) 1997, " A Participatory Research Report on Poor Urban Children at risk in Dar es Salaam
[24] Lerrise and Kyessi (2002)
[25] Overcrowding is defined as an occupancy rate of more than two persons per room.
[26] Lerisse and Kyessi (2002)
[27] The poorest households are those found to be below the food poverty line, and poor households are those below the basic needs poverty line.
[28] Lerisse and Kyessi (2002)
[29] PPA 2002/03 project: Kinondoni and Ilala municipal councils
[30] Ibid
[31] Dr. C. Chami, " Geographic Diversity of Poverty", June 2002
[32] HDI and HPI are composite indices developed by UNDP and annually updated and published in the Human Development Report (HDR). The global HDR is prepared by an independent team, commissioned by UNDP. Each global HDR focuses on a topical theme, aiming to spark dialogue and provide tools for advocacy.
[33] For a full list of indicators, see the Poverty Monitoring Master Plan, page 8
[34] For life expectancy the latest data available is from the 1988 census. It is believed that regional differences in life expectancy have changed since, particularly because of the uneven spread of HIV/AIDS. See the text box for more details.
[35] Technical Note: To enable use of most recent data "population without access to safe water" was used instead of the recommended "population not using improved water sources". It is believed that this does not affect the principles underlying the calculation of the HPI.

CHAPTER 3

THE LINKAGE BETWEEN MACRO POLICIES AND POVERTY

3.0 Introduction

This chapter seeks to address the issues of macro-micro linkages from two perspectives. First it addresses the question of pro-poor economic growth by examining the linkages and nature of growth in agriculture, tourism, and mining. Then, secondly, it assesses the macro-micro linkages in health and education. There are, however, the constraints of limited data and information availability.

As a background to this analysis it is important to consider the series of structural reforms that have taken place in Tanzania since the mid 1980s. Macroeconomic stability has received special attention, and markets for resources and products have been gradually liberalized. Moreover, institutional capacity constraints for managing the required changes have also been addressed. These reforms were intended to enhance the development of private enterprise and speed up economic growth, which was anticipated to reduce poverty levels.

These reforms have produced macroeconomic gains. The aggregate economy has grown and macroeconomic stability has been achieved. However, recent results from the 2000/01 Household Budget Survey have shown that income poverty has hardly changed for the great majority of the Tanzanian households in the ten years since the previous household budget survey. While the proportion of households living in poverty has fallen appreciably in Dar es Salaam since 1991/92, it has fallen to a much lesser extent in other urban areas, and in rural households, the level of poverty has declined only marginally.

As we continue to monitor the performance of the Poverty Reduction Strategy, this apparent mismatch between macro and micro performance needs to be addressed. At the same time, stronger economic performance and greater prioritisation in the government budget on social services is expected to be reflected in increased access by the poor to priority services. This macro-micro linkage is also an important element of the PRS monitoring process.

3.1. A Conceptual Framework

Economic growth is pro-poor when it is broad-based, when it provides opportunities for a large proportion of the population to participate in productive enterprise and in sharing the benefits. The PRSP identified agriculture, small and medium-sized enterprises (SME) to be primary means through which poverty could be reduced. This

assessment focuses on the performance of agriculture, since this remains the mainstay of the livelihoods of most households in Tanzania, and, as seen, rural households are the most affected by poverty.

Sectors of the economy that have high backward and forward linkages may be pro-poor. Backward linkages offer stimuli to suppliers to respond to increased demand by users. Forward linkages provide stimulus to users to respond to increased output from suppliers. If these linkages generate additional income for households who, without them, would otherwise have been poor, then the linkages can be said to be pro-poor. It has been in tourism and mining where the fastest rates of economic growth have occurred in recent years in Tanzania. We, therefore, attempt to determine the extent to which growth in these sectors has contributed to poverty reduction, and the extent to which they are pro-poor, by assessing their linkages with other sectors and the extent to which these linkages may be of benefit to poor households.

The linkage between macro and micro can be enhanced through the mediation of government. The PRSP also identified priority social sectors to receive increased budgetary allocations in an effort to reduce poverty. This chapter analyses the health and education sectors, and particularly the provision of primary health care and primary schooling. These aspects are intended to be universally accessible - that is they should be truly broad-based. Moreover, their role in poverty reduction is critical in enhancing human capabilities and enabling increased productivity. Therefore, as we continue to monitor the PRS it is important that we determine performance in the delivery of quality services in these priority sectors.

3.2. Macroeconomic Performance and Poverty Status in Tanzania

3.2.1. Macroeconomic Performance

The country's overall economic growth and macroeconomic performance have responded positively to the ongoing economic reforms. Table 18 shows that between 1995 and 2000 the economy grew at an average rate of over 4 percent. The average rates for agriculture, mining and quarrying and manufacturing were 3.5 percent, 15 percent and 5 percent, respectively. These rates are much higher than those experienced in earlier years. The current account deficit, measured as the percentage of GDP, declined by more than 50 percent from an average rate of 19 percent in 1990-94 to slightly over 9 percent between 1995 and 2000. And inflation, a good indicator of macroeconomic stability, fell from an average of 29 percent in 1990-94 to 4.5 percent in June 2002. In addition, domestic savings, as a percentage of GDP, increased from an average of -1.6 percent in the 1990-94 period to 5.9 percent in 1995-2000. Investment rates as a percentage of GDP have been high during the entire decade. After a decline between 1995 and 2000, they rose to 18 and 19 percent on 1999 and 2000.

Table 15: Some Macroeconomic Performance Indicators for Tanzania, 1992-2000

Indicator	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average (1995 2000)*
Real growth of GDP (%)	1.8	0.4	1.4	3.6	4.2	3.3	4.0	4.7	4.9	4.1
Real growth of agriculture (%)	1.2	3.1	2.1	5.8	3.9	2.4	1.9	4.1	3.4	3.5
Real growth of manufacturing (%)	-4.0	0.6	-0.2	1.6	4.8	5.0	8.0	3.6	4.8	4.6
Real growth rate of mining and quarrying (%)	7.7	8.2	15.0	11.7	9.6	17.1	27.4.	9.1	13.2	14.6
Investment (% of GDP)	27.2	25.1	24.6	19.8	16.6	14.9	15.0	18.3	18.7	17.2
Domestic savings (% of GDP)	-2.4	-3.1	-1.2	0.8	5.4	6.2	6.0	5.4	12.0	5.9
Current account deficit (% of GDP)	17.4	25.8	17.1	13.3	7.7	8.4	6.5	13.1	7.7	9.4
Inflation (%)	21.8	24.0	33.5	27.4	21.0	16.1	12.9	6.7	5.5	14.9
External debt service (% of exports)	62.2	88.2	61.9	44.8	44.6	36.9	36.4	27.2	28.6	36.4

Extracted from Tanzania at the Turn of the Century: From Reforms to Sustained Growth and Poverty Reduction. A World Bank Country Study, Government of Tanzania and the World Bank, Washington, D.C., Table 2.1; Bank of Tanzania, Economic and Operations Report for the Year ended June 30, 2001

* Own computation

These achievements are significant, even by international standards. According to the Africa Competitiveness Report (2000) Tanzania is the most improved country in sub-Saharan Africa; a view also shared by the World Bank, the Intelligence Unit of the Economist (1999) and other international press, according to which Tanzania has one of the 20 fastest growing economies in the developing world. This performance has led to increased foreign investment, with inflows which averaged US$20 million in the early 1990s rising to over US$165 million currently (World Bank, ibid).

3.2.2 The Status of Poverty in Tanzania

The recent data on household poverty do not mirror the success in the macro economic data. From information from the household budget survey of 2000/01 and based on the results of this survey, the following conclusions can be drawn. Firstly, overall, the level of income poverty has declined slightly between 1991/92 and 2000/01. There are significant variations in the levels of income poverty between rural and urban areas, and within rural and urban areas. Thus, whereas income poverty declined significantly in Dar es Salaam, it declined only slightly in the other urban areas and there was hardly any change in rural areas. The poverty burden continues to weigh heavily on those living in the rural areas. The proportion of rural households who are poor is 36 percent compared to 18 percent in Dar es Salaam and 26 percent in other urban areas.

Secondly, the overall level of income inequality has risen slightly during the past ten years. Moreover, there are differences between rural and urban areas, and within rural and urban areas. Dar es Salaam experienced a significant increase in income

inequality, while the changes were only slight in other urban areas, and no change occurred in the rural areas. It is noted that the increase in income inequality is associated with a declining rate of poverty.

These results suggest two things: the benefits of economic growth have not been equally shared; and that a continued focus on rural poverty in the PRS is still necessary.

Table 16: Poverty and Inequality Measures in Tanzania

	Dar es Salaam		Other urban areas		Rural areas		Mainland Tanzania	
	91/92	2000	91/92	2000	91/92	2000	91/92	2000
Percentage of households living in poverty								
Below the food poverty line	14	8	15	13	23	20	22	19
Below the basic needs poverty line	28	18	29	26	41	39	39	36
Percentage of the poor								
Food Poverty	3.4	2.3	8.7	9.7	87.8	87.7	100.00	100.00
Basic Needs	3.9	2.9	9.4	10.0	86.7	87.2	100.00	100.00
Inequality Measures								
Gini Coefficient	0.30	0.36	0.35	0.36	0.33	0.33	0.34	0.35
Expenditure of the poorest quintile (%)	7.8	6.7	7.1	6.7	7.2	7.1	7.0	6.9
Expenditure of the richest quintile (%)	43.3	48.4	45.3	44.5	41.6	42.2	43	44.2

Source: Household Budget Surveys (1991/92-2000/01)

3.3. Pro-Poor Economic Growth in the Reform Period

The conceptual framework above outlines the approach for an assessment of whether economic growth may have been pro-poor. Currently such an assessment is severely constrained by the lack of reliable information in Tanzania. Reliable estimates of the prevalence of household poverty are available in disaggregated form at regional level only for 2000/01 from the recent household budget survey. This was the first time such a large-scale survey had been attempted in Tanzania, and earlier estimates of household income at regional level are very uncertain. Therefore, it is not possible reliably to estimate changes in poverty levels by region, much less to associate any such changes with developments in the macro-economy. Similarly, analyses of linkages in the economy typically depend on input-output and social accounting matrices. Such work on the Tanzanian economy has not yet been able to benefit from the very recent release of the 2000/01 survey data. The conclusions of earlier analyses, based on the data from the 1991/92 survey, must be considered carefully in light of the developments which have taken place since then.

3.3.1 Agriculture

The Tanzanian economy still depends on agriculture as its mainstay. During the

period between 1995 and 2000, the contribution of agriculture to total GDP has been around 50 percent. The ratio of non-monetary agriculture has been relatively high (44 percent on average), underscoring the importance of production for own consumption. This non-monetary contribution is large because most farmers operate small-scale farms, producing part of their output for household use or local unrecorded trade. Agriculture contributed 70-80 percent to total employment and 55 percent of the country's foreign exchange in 1998 (ESRF, 2000).

There are different conclusions from various analyses of agriculture's linkages with other sectors of the economy. A World Bank analysis in 2001 indicated that agriculture has large spin-off effects on the non-farm sector, mainly through forward linkages to agro-processing and consumption. On the basis of human resources development survey (HRDS) data, one shilling of new household income from export crop sales is estimated to be able to lead to 2 shillings worth of additional local employment in the production of non-tradable goods and services. In another study that estimated multipliers using the social accounting matrix (SAM) for Tanzania with household budget survey data for 1991/92, Wobst (1999) found that a shilling worth of income from export agriculture generates 1.80 shillings increase in overall GDP, in contrast to 1.20 shillings in response to a similar size stimulus from light manufacturing. Contrary to Wobst but in line with HRDS, Kweka's 2001 study found that agriculture, while having low output multiplier and backward and forward linkages, has the largest employment multiplier and employment linkages in a 4-sector model that comprised agriculture, manufacturing, tourism and other services. The employment multiplier - interpreted as the full-time equivalent number of employees per one million Tanzanian shillings increase in final demand - is, however, almost all confined within agriculture itself, with minimal spill over to other sectors. This implies that employment in the sector can be mostly enhanced by direct investment in that sector itself rather than by expecting a spill over effect obtained by investing in other sectors. Limbu and Mashindano's (2002) work also supports the view that agriculture has poor linkages to other domestic sectors.

Whatever difference in multipliers and linkages, agriculture is still the main source of livelihood for the majority of the population, and its performance significantly determines the overall improvement in people's living standards. In addition, sustained agricultural growth rates above the population growth rate have been associated with the early stages of economic successes in a number of Asian economies (ESRF, 2000 ibid).

Implication of Macroeconomic Reforms for the Agriculture Sector

The impact of the economic structural reforms on agriculture has been profound. The removal of subsidies has had a large impact on input prices and borrowing interest rates, which increased to market determined levels. The liberalisation of agricultural marketing led to an increase in product prices in the short run, but these later stabilised

when they reached market-determined levels. As a consequence of trade liberalisation and subsidy removal, co-operatives ceased to be the sole buyers of crops and suppliers of inputs - private traders and farmer organizations may also provide marketing services to farmers. Crop marketing subsidies, except those relating to the grain operations of the Food Security Department in MAFS, have been eliminated. Input distribution has also been liberalised as has agricultural export and import trade. Several loss-making agricultural parastatals, including NMC and NAFCO, are in the process of being privatised or liquidated.

Despite some initial and short run negative effects of the reforms on agricultural development, the policy environment for private investment is now more favourable, and is expected to generate sustainable agricultural growth in the long term.

The Performance of the Agricultural Sector

The agricultural sector has maintained a steady, if unspectacular growth rate of over 3 percent per annum over the last decade (Box 3.1). This is greater than the rate of total population growth, which means that there has been a small but steady growth in per capita agricultural output. It is also a faster rate of growth than that of the agricultural labour force, indicating a continuous slight increase in agricultural labour productivity over this period. Indeed, real agricultural growth has maintained the same average growth rate as the rest of the economy, with the result that its contribution to total GDP, at around 50 percent, has not fallen during the past decade. This is very different to the typical pattern in development where industrial and service sector growth rates normally outpace the agricultural sector growth rate leading to a steadily declining share of agriculture in total GDP.

The same pattern emerges in terms of agricultural exports where the real growth has averaged around 7 percent per annum, a similar rate to overall export growth so that the share of agricultural exports in total exports has remained virtually unchanged at 56 percent (Box 3.1).

Box 3.1: Selected Indicators of Agricultural Sector Performance

Total Real GDP Growth (percent p.a.)	2.8	3.3
Real Agricultural Growth (percent p.a.)	3.3	3.2
Real Growth in Agricultural Exports (percent p.a.)	7.5	6.8
Share of Agriculture in GDP (percent)	48.4	50.0
Share of Agricultural Exports in Total Exports (percent)	56.0	56.2

Source: URT/WB. Tanzania Agriculture: Performance and Strategies for Sustainable Growth, February 2000 (draft)

However, the level of real agricultural growth during the last decade has not been much to bring about a significant reduction in rural poverty. As seen earlier the proportion of rural households who are poor has not changed much in the last ten years. Given the importance of agriculture as the mainstay of rural livelihoods, agriculture must grow much faster if it is to generate real reductions in rural poverty in Tanzania.

Constraints to Growth in Agriculture

There are several reasons why the macro economic changes that have taken place may not have resulted in stronger growth in agriculture and reductions in rural poverty. One major factor is the continued reliance by small-scale farmers on hand-hoe cultivation in rain fed agricultural systems. Under these conditions, and in the absence of major technological breakthroughs or diversification into new crops, the rate of growth of the agricultural labour force tends to be a major determinant of the agricultural sector's growth. In addition, the incentive structure in agriculture has not encouraged growth or investment. Agriculture's barter terms of trade - the relative change in agricultural producer prices compared to prices of industrial goods - have not changed significantly over the past decade (Box 3.2). Breaking down this aggregate indicator suggests that the real price of food crops has fallen over the decade whilst the real price of export crops has risen. However, these figures need to be treated with caution as there have been dramatic year-to-year changes in all crop prices due to weather and/or world market conditions. In particular, extremely high coffee prices in 1995-96 largely account for the rise in export crop prices in the 1994-99 period.

The farmers' share of retail or export prices is another indicator of agriculture's incentive structure. As a result of market liberalization of the major food crops, margins between producer prices and consumer prices have narrowed significantly, indicating a higher degree of market integration. For the major export crops, the farmer's share of export prices has remained modest. At the same time, despite considerable rationalisation and streamlining of taxes in recent years, there are still significant direct and indirect taxes on many marketed agricultural products.

Box 3.2: Selected Indicators of Agriculture's Incentive Structure

Terms of Trade for Agriculture	1990-1993	1994-1999
ToT index (agric/industry) 1992 = 100	95	98
Real Producer Prices (food) Tsh/kg*	36.8	32.6a
Real Producer Price (export) Tsh/kg**	137.3	165.7
Farmers' share of consumer price (percent)		
Maize	66.8	87.9
Rice	35.0	38.4
Sorghum	50.0	99.4
Farmers' Share in Export Prices (percent)		
Cashews	52.4	64.7
Coffee Arabica	59.0	58.5
Coffee Robusta	51.0	45.7
Tea	51.2	34.5
Fire Cured Tobacco	51.8	74.9
Flue Cured Tobacco	29.4	56.5
Lint Cotton	35.0	51.2
Pyrethrum	25.5	21.8

a. 1994-1998
* Weighted average of maize, rice and wheat.
** Weighted average of coffee, tobacco, cotton and cashew nuts.

Source: URT/WB. Tanzania Agriculture: Performance and Strategies for Sustainable Growth, February 2000

Agriculture continues to be adversely affected by lack of competitive markets, high transport and transaction costs leading to low producer prices, post harvest losses of cereals, and a lack of expert advice and technologies suited to the particular environmental situation of different parts of the country. There is also a shortage of credit available to farmers. These factors result in low productivity and incomes.

Credit for agricultural marketing has experienced a spectacular collapse in the past five years. As a share of slowly increasing commercial bank lending, loans for agricultural marketing have fallen from 19.7 percent of the total in 1995 to a mere 0.8 percent in 1999. The availability of formal agricultural credit for production is limited. Just 5 percent of Tanzanian farmers obtain credit from non-family sources in a given year.

Constrained access to inputs and timely advice to a large extent holds back progress in the intensification of agriculture. Globally, it has been demonstrated in dozens of rate-of-return studies that agricultural research and extension can generate high returns on investment. Furthermore, based on a study of India, Government spending on Research and Development ranked as the most effective for raising productivity growth

in agriculture. Problems in Tanzania relate to poor transfer of knowledge from research to application, erratic access to extension agents and more recent transitional factors related to decentralizing the management of extension services to the local governments. These problems are particularly acute for crops such as cotton, food crops and coffee, which are typically grown by small-scale farmers, in contrast to tea and sisal where big farmers and/or marketing/processing companies finance research and/or provide the bulk of extension services.

The use of fertilizer has fallen by about half as a result of removing subsidy and lower crop prices but the impact on production of fertilizer-using crops has been negligible, suggesting either inadequate application or wastage in use. This is not to underrate the potential impact of intensification but to call attention to complementary measures for effectiveness. In the case of export crops such as tobacco and coffee, fertilizer remains profitable in many cases, but use may be constrained by lack of credit.

Farmers' responsiveness to price incentives in Tanzania has been confirmed by econometric analysis using annual-regional panel data for both food and export crop production. The main constraints relate to the availability of price information, wide marketing margins on account of poor infrastructure and weak competition in the markets. In 1992 the marketing margins were on average 48 percent of prices for exported crops and 25 percent for domestic sales, the difference being explained by the longer distances covered to the export points. Furthermore, there are costs associated with restrictions to crop movements, excessive taxes and their inconsistent application across local governments.

In a recent study on the relative effectiveness of different categories of Government spending aimed at reducing rural poverty and promoting productivity growth in India, public spending on roads, was found to be most effective through raising rural incomes and it was second only to research and development in raising productivity growth. A similar impact assessment via simulation for Tanzania by Wobst (1999) concluded that low income, rural non-export oriented farm households benefit most from better infrastructure. Spending on education likewise, had a small but significant impact on both poverty and productivity growth in agriculture. This analysis indicates priorities for government spending which is likely to have the largest potential impact on productivity growth and rural poverty reduction.

There are other factors, institutional in nature, which might influence macro changes and changes in rural incomes. One is the unpredictable imposition of controls for internal and external movement of agricultural produce, which hampers marketing efficiency, and the profitability of agriculture. Another is the large number of taxes and charges levied on agriculture, lack of reasonable uniformity in treatment across localities, and multiple taxation at different levels of Government. Lastly, but by no

means least, is a lack of a unified and organized voice for small-scale producers to articulate their concerns and priorities.

3.3.2 Tourism

In Tanzania tourism activities are largely concentrated in the Northern Wildlife Area (NWA), the city of Dar es Salaam and in Zanzibar. Government control of the industry was high until the early 1990s, when major institutional changes allowed for significant participation by private enterprises.

Europe and North America are the major sources of tourists to Tanzania (Wade et al, 2001 provide an historic and market analysis). Information on recent trends in tourism is provided in Tables 20 and 21. Nominal earnings from foreign tourism increased from US$120m in 1992 to nearly US$740m in 2000, compared to tourist arrivals, which rose from 202,000 in 1992 to 502, 000 in 2000. Expenditure per tourist is high in Tanzania, increasing from US$330 in 1986-90 to nearly US$1,500 in 2000, compared with an average of between US$338 and US$400 for Africa (WTO, various years).

Tourism earnings as a share of GDP increased significantly, from about one percent in the 1986-92 period to over six percent in the 1993-98 period. Comparable data for the East Africa region and African countries on average show that tourism earnings as a share of GDP increased marginally from 1.5 percent to about two percent over the same period (WTO, ibid). When the direct and indirect benefits of tourism are combined, the sector's contribution was recorded at 12.4 percent for 1999 (Bank of Tanzania, 2001). Earnings from tourism also are accounting for larger shares of exports as their rate of increase exceeds that of exports as a whole.

The economic impact of tourism was examined based on an input-output (IO) analysis by Kweka (2001). He found that the output multiplier for tourism in Tanzania is 1.8, implying that an investment of one million shillings leads to an increase of 1.8 million shillings to the economy. This was the highest output multiplier in a four-sector model that included agriculture, manufacturing, tourism and other services. The analysis also revealed that tourism led the other three sectors in terms of backward and forward linkages, and was second to agriculture in terms of inter-sector effects among 23 sectors. Tourism requires 44 percent of its inputs from other sectors, far above an average of 26 percent for all sectors. Tourism had a high backward linkage of 1.25, the third largest for 23 sectors used in the model, and the most evenly distributed. These findings support those of an earlier study by Curry (1986) that the expansion of tourism has great potential benefits to other sectors.

Table 17: Growth of International Tourism in Tanzania (1992-2000)

Year(s)	Arrivals	Nominal Earnings (US$)	Expenditure per Tourist (US$)*	Index (1991=100)	
				Arrivals	Earnings
1992	201,744	120.0	595	108	127
1993	230,166	146.8	638	123	155
1994	261,595	192.1	734	140	203
1995	295,312	259.4	878	158	274
1996	326,188	322.4	988	175	340
1997	359,096	392.4	1093	192	414
1998	482,331	570.0	1182	258	602
1999	627,325	733.3	1169	336	774
2000	501,669	739.1	1473	269	780

Source: Adopted from Kweka Josaphat (2001). "The Economic Potential of Tourism in Tanzania." Paper presented at the DSA 2001 Annual Conference, 10-12 September, IDPM, University of Manchester, UK and Economic Survey 2001
* Own computation

Table 18. Indicators of Macroeconomic Impact of Tourism in Tanzania (1991=100)

Year	Real	Real GDP	Earnings GDP	Earnings exports	Tourism Employment	Beds available
1992	163	103	158	127	111	111
1993	227	104	219	120	147	110
1994	241	104	232	110	191	115
1995	283	105	269	109	213	123
1996	292	110	266	129	222	125
1997	305	108	283	161	244	134
1998	429	115	372	180	293	136
1999	552	134	412	252	326	156
2000	556	150	371	207	346	176

Source: All values given as index values (1991 = 100). Calculated using data from National Bureau of Statistics/ Tourism Department and Economic Surveys (various years)

However, these findings must be interpreted cautiously. Firstly, they reflect the potential of tourism, and not what tourism is actually doing to the Tanzanian economy. Secondly, the data used were for the pre-reform period, and many developments have taken place since then. Thirdly, the data used were for the aggregate of the 'hotels and restaurants' sector, as a proxy for tourism, and not all the activities in this sector are for tourism and not all tourists' activities are included in this sector. Nevertheless Carey (1989) justified the use of these data as closely corresponding to tourism.

In spite of these weaknesses, tourism has the potential of developing into a pro-poor sector. An enabling environment and enhancement of local capacity (including human capacity) continue to be important basic pre-requisites for enhancing linkages with local economies and, in particular, the goods and services which might be provided by otherwise poor households.

3.3.3 Mining and Quarrying

The mining sector has grown fast during the reform period, mainly in response to deliberate government policy that aimed to promote its development. The Mineral Policy of 1997 specifies the role of the government as that of developing an enabling environment and facilitating institutional, legal and fiscal support. Government's efforts to encourage private sector participation have included the liberalisation of the sector, the granting of tax holidays, permission to remit profits outside the country, establishment of a clearer and simpler legal and regulatory framework and procedures for the granting, sale and transfer of mining rights.

Recoveries of precious minerals during the past few years have increased dramatically (Table 19). Recovery of diamonds increased from 25,500 carats in 1994 to 354,400 carats in 2000, nearly a 15-fold increase. Similarly, gold had a dramatic increase of over 400 percent, from 2,860 kg in 1994 to 15,060 kg in 2000; and the quantity of gemstones increased from 48,500 kg in 1994 to 150,800 kg in 2000, a more than 200 percent increase. These changes were matched with an increase in the number of mineral prospecting and mining licenses, which increased by 65 percent between 1996 and 1998, from 235 to 389 respectively.

Table 19: Mineral Recoveries in Tanzania (1994-2000)

Item	Unit	1994	1995	1996	1997	1998	1999	2000
Diamond	000'Carats	25.5	49.5	126.7	123.1	97.8	235	354.4
Gold	Kgs	2,816.4	320	318	232	427	4,767	15,060
Gemstone	Kgs	48,507	111,404	142,160	509,489	48,518	95,200	150,800
Salt	000' Tons	84.3	105	86.7	72.5	75	35	70
Gypsum	000' Tons	53	42	55.4	46.3	59.1	40	60
Limestone	000' Tons	1,740	1,062.1	1,200	-	1,181.2	1,241.2	15,000

Source: Quoted from Bank of Tanzania Economic Bulletin for the Quarter Ended December 31, 2001. Vol. XXXII No. 4 (Table 1.17)

Despite this growth, the share of mining in GDP is still small at 2 percent [1]. However, its contribution to total exports is high, at 39 percent in 2001. Mining contributed 55 percent of non-traditional exports in 2001. The most promising developments are in gold whose production is expanding rapidly due to the opening of new minefields. Thus, despite the small contribution of the sector to GDP, the speed of growth suggests

greater future influence on the structure of Tanzania's exports and the economy in general.

Currently the mining industry consists of two distinct sub-sectors, namely the larger scale mines, involving mainly foreign investment, and small-scale artisan mining. The latter is more labour intensive, involving an estimated over 100,000 workers (ESRF, 2000).

The artisan mining faces a number of problems. The use of the labour of children and youth is prevalent because they can crawl quickly into the mines and they are prepared to accept low wages. Artisanal mining output is uncertain and much of it is sold though informal channels, denying government tax revenue. In addition, artisan miners use crude and sometimes dangerous means of production, resulting in frequent serious accidents. Safeguards and sanctions are urgently needed in some key locations.

Economic linkages between mining and the rest of the economy, including through the government budget have been limited during the period of this assessment. The tax/royalty incentives, which have been provided, have so far resulted in limited tax revenues, though clearly, increased export earnings have been generated.[2]. Some observers believe that the new large-scale mining concessions leave little value added in the country (ESRF 2000, ibid). Secondly, direct employment effects have been constrained by the inadequacies of local skill capacity. The further development of local skills is needed, perhaps promoting stronger linkages between the large and small-scale mining enterprises.

Perhaps the most promising linkage from the development of mining to the reduction of poverty in Tanzania might be through the provision of economic and social services in areas around the mines. Unfortunately, there is not enough data now to undertake an analysis of the extent to which this is contributing to the reduction of poverty, though it is recognised that some of the mining companies are contributing to education and health services for their employees and the nearby communities.

3.4 Priority Social Sectors

It is in the services of priority social sectors where the macro-micro linkages are most apparent through the mediation of the government. The Government of the United Republic of Tanzania has put priority on achieving universal access to quality basic education and primary health care in the PRS, and earlier chapters of this report have assessed the current situation against specific target outcomes in the PRSP. These outcomes are generally recognised to be in the public interest, and therefore achieving the targets in these priority sectors depends critically on public services.

3.4.1 Health

In reviewing the prioritisation of the funds allocated to health, when compared to the neighbouring countries since independence, Tanzania has been doing better, measured

in terms of per capita health expenditure. However, data from various sources, as well as the data on health status reported in the earlier part of this report, indicate that there has been very little progress towards improved health outcomes - indeed there has been regression in some indicators - and very little improvement in health service provision in Tanzania.[3]

Why should this be the case? Various reasons could be given. However, we postulate on four of them here. First, it could be the case that the threshold level - the amount of spending which is necessary to achieve improvements in health outcomes - is so high that increases in public spending in Tanzania are inadequate to improve the health status. Second, it could be possible that overall allocations are sufficient but are used in wrong priorities. Third, it could be the case that the allocations are adequate, planned priorities are right, but there are leakages that minimise the impact of allocations on the lives of average Tanzanians. Finally, it could be the case that these factors are combined.

Allocation of Funds to Health Sector

For almost a decade now, health has received priority in the share of government expenditure, following the drawing of the Health Sector Reforms in 1993. The share of health expenditure in 1993/94 increased to 11.4%. By 2000/01, the first year of the implementation of PRSP, the share of government expenditure to health sector was 14 percent (PRSP, 2001).

Table 20 summarises an analysis using purchasing power parity (PPP) adjustments which shows that Tanzania's per capita health expenditure for the financial year 1993/94 was the second highest (after Uganda) among five countries. The country was also the second best in community health and the best in preventive health care. Whilst it occupied the third position in curative health care, its absolute per capita expenditure was about twice that of Eritrea and thrice that of Ethiopia.

Table 20: Purchasing power parity adjusted per Capita health care expenditures, by type of intervention in 1993/94 (Figures are in USD)

Country	Community	Preventive	Curative	Total
Eritrea	0.17	0.85	7.27	8.28
Ethiopia	0.33	1.01	4.97	6.31
Kenya	1.41	4.44	15.13	20.98
Tanzania	2.63	7.92	14.02	24.58
Uganda	5.70	5.89	21.72	33.31

Source: Ravics et al., 1996

Paradoxically, this relatively high position in expenditure is not reflected in health indicators. Tanzania's health indicators are at best similar to those of other African

countries (World Resources, various years); some indicators are poor even by African standards. For example, Table 21 compares Tanzania and Kenya in some of these indicators. In most of these, Tanzania is shown to have a lower performance than Kenya.

Table 21: A Comparison between Tanzania and Kenya in Some Health Indicators

Indicator	Country	
	Tanzania	Kenya
Crude Death Rate per 1,000 (1995-00)	13.5	11.3
Infant Mortality Rate/1,000 live births (1995-00)	80	65
Under 5 Mortality Rate/1000 live births (1995-00)	160	90
Percentage of underweight children (1990-96)	29	23
Reported cases of tuberculosis per 100,000 (1995)	134	100
Reported cases of measles per 100,000 (1995)	11	12
Reported cases of malaria per 100,000 (1994)	27,343	23,068
Reported cases of cholera per 100,000 (1995)	5.66	5.68

Source: World Resources, various years

We hypothesize here that given the multitude of health problems Tanzania faces (including malaria, HIV/AIDS and other communicable diseases), the absolute per capita amounts of allocations for health services are below the threshold that is sufficient to cause a meaningful impact on health indicators. The current per capita health expenditure in Tanzania is reported to be US$6; yet, US$12.00 has been agreed as the international threshold and US$9.00 has been agreed as a minimum threshold for Tanzania. These thresholds, moreover, inadequately incorporate provision for care and services for HIV/AIDS.[4]

Recognition that the substantial increases in the allocation to health have failed to make a desired impact on health indicators means that it is critical to streamline priorities so that resources are used in the most efficient manner to enhance their impact.

Prioritisation Within the Health Sector: Pro-Poor Criteria

Priorities for public health spending are determined in accordance with the Government's budget guidelines and through the health sector development programme. Allocations must be made for services at tertiary/secondary hospitals and primary health centres; curative and preventive health care; for personal emoluments and other charges (which include medical supplies and services).

Allocations may be judged to be pro-poor if they put priority on addressing the burden of diseases, which disproportionately affect poor people. Allocations, therefore, would be expected to move towards district-based health services that are easily

accessible to the majority of the poor in the rural areas and towards preventive health care. The provision of effective services also requires access to essential medical supplies and provision of drugs - items charged against "other charges" (OC).

Distribution of Expenditures within the Health Sector

Table 22, which is adapted from Tanzania: Social Sector Review (World Bank, 1999), presents a distribution of recurrent and development expenditure among health sector programmes for the year 1994/95.

Table 22: Distribution of health expenditures in Tanzania 1994/95

Category	Recurrent Government Share (%)	Development Government Share (%)	Donor Share (%)	Total Govt & Donor Share
Total	100	100	100	100
Total Curative	90	70	30	82
Referral Hospitals	27	9	0	23
Regional and District.Hospitals	32	40	5	28
Health Centres and Dispensaries	31	21	25	30
Preventive Services	7	23	70	15
Ministry Administration	1	1	0	1
Training	2	5	0	3
Other	1	1	0	0

Source: Extracted From Tanzania: Social Sector Review (World Bank, 1999), Table 5.13 p. 125

The table shows that 90 percent of recurrent, 70 percent of non-donor development, and 30 percent of donor expenditures were allocated at that time to curative services, including the various levels in the referral hospital system (consultant, regional and district) and the peripheral health units (health centres and dispensaries). The consultant hospitals consumed 23 percent of the combined government and donor monies, the district hospitals used 28 percent, and 30 percent of funds were allocated to health centres and dispensaries. Preventive services were budgeted to receive about 15 percent of non-household health expenditures. The bulk of this (58 percent), however, came from donors funding. The classification of allocations and expenditures according to curative or preventive services is difficult because health staff, especially at local level, perform both functions. However, it is clear from these data that there was an even distribution of recurrent expenditure among referral hospitals, regional/district hospitals and dispensaries and health centres. Given the size of the country, the small number of referral hospitals (4), and the fact that dispensaries and health centres provide curative care to 55 percent of the poorest population quintile (and only 26 percent of the richest quintile) and 40 percent to all Tanzanians (HRDS, 1993/94), this distribution was not in favour of the poor.

Expenditure for Personal Emoluments and Other Charges

Table 23 presents the breakdown of recurrent expenditures between personal emoluments (PE) and other charges (OC) from 1997/98 to 2001/02. A move towards OC is considered pro-poor because it is within this category that medicines and other supplies belong. Conversely, an increasing ratio of PE implies a higher percentage use of expenditures to pay health personnel. From the table, there is a general trend towards a rising share of OC: the changes from 1997/98 to 2001/02 are from 35 percent to 62 percent in the Ministry of Health (MoH) administration; from 31 percent to 50 percent in hospitals; from 36 percent to 54 percent in preventive health services (now classified to include services provided by dispensaries and health centres); and from 33 percent to 53 percent in total government recurrent expenditure.

Table 23: Sub-sector Breakdown of Recurrent Expenditures, PE:OC%

	1997/98		1998/1999		1999/2000		2000/01		2001/02 (estimate)	
	PE	OC	PE	OC	PE	OC	PE	OC	PE	OC
MoH Admin/Central	65	35	52	48	67	33	44	56	38	62
Hospitals	69	31	56	44	69	31	57	43	50	50
Preventive Health Services	64	36	60	40	61	39	47	53	46	54
Total GoT Recurrent	67	33	57	43	66	34	52	48	47	53

Source: Extracted From PER Health Sector 2002, Table 6, p. 23

Table 24 shows the distribution of subventions made to local councils.

Table 24: Health sector subvention estimates to local councils

Year	Personal Emoluments		Other Charges	
	Amount (mill.TShs)	% of total	Amount (mill.TShs)	% of total
1998/99	14,026.0	94.2	855.6	5.8
1999/00	14,503.6	84.7	2,628.0	15.3
2000/01	21,153.5	72.6	7,958.9	27.4
2001/02	23,728.5	66.9	11,739.8	33.1

The table shows that the OC share increased from 5.8 percent in 1998/99 to 33.1 percent in 2001/02. The absolute amounts also increased consistently, showing an improved picture. These data indicate that allocations are improving for services closer to the people.

Expenditures and District-Based Health Services

Table 25 also shows an overall trend increase in the proportion of the public health budget, which goes to district-based health services (from 52 percent in 1997/98 to 58 pertcent in 2001/02.

Table 25: Trends in % Recurrent allocations towards district based services

	1997/98	1998/1999	1999/2000	2000/01	2001/02 (estimate)
MoH Admin/Central	6	6	7	9	9
Secondary and Tertiary Hospitals	42	48	43	30	33
District Based Health Services	52	46	50	61	58

Source: Extracted From PER Health Sector 2002, Table 5, p. 23

It should also be noted that the data in the table do not show all the funds allocated to local authorities. Some of the expenditures allocated to the central ministry of health go to hospitals and local authorities in the form of in-kind transfers, notably for medicine kits for primary health care.

The Issue of Leakages

A "Pro-Poor Expenditure Tracking Study" by REPOA (2001) indicates that there are widespread leakages of OC funds allocated to district councils. The main causes of these leakages are:

- council leaders' allocating funds to operations other than those delivering community-level services; the highest share going to administration, followed by vehicle operations leaving medical equipment, hospital diet, utilities and training with the lowest share;
- lack of transparency with regards to receipt of funds and their allocation from the treasury since often heads of dispensaries/health centres are not informed by their District Executive Directors (DEDs) on disbursements and the allocation to departments.

The net effect of these problems is to reduce the amount of funding actually used in delivery of health services.

Table 26 shows allocation of funds and expenditure levels for some district councils. Difference between per capita health sector income and actual expenditure could occur because of changed priorities; councils needing less funding than requested; or problems of data inaccuracy on expenditures at council level (REPOA, 2002). However, the diversion of funds has been frequently reported to be a serious problem.

Table 26: Health sector income and expenditure at council level, 2000 (Figures in T.Shs.)

Council	Per capita income	Per capita expenditure	Per capita difference
Korogwe	1,348	1,088	260
Pangani	4,388	3,311	1,077
Muheza	1,452	2,298	-847
Handeni	1,007	348	659
Arumeru	415	216	199
Arusha	1,027	1,055	-28
Mwanga	1,311	2,290	-979
Same	980	1,164	-184
Moshi	1,430	1,380	50
Mufindi	734	1,118	-383
Kilombero	2,307	879	1,428
Morogoro	1,000	993	8
Kondoa	1,294	694	600
Temeke	1,057	651	407
Ilala	1,351	564	787
Median	1,294	1,055	239

Source: PER health sector, 2002

Note: It is likely that not all funds to the sector were identified, partly due to lack of knowledge of some respondents on the monetary value of resources received in the form of goods in kind from the Ministry of Health (drugs and medical supplies, kerosene etc.) and from donor projects like rehabilitation, supply of equipment, training etc. (PER, Health sector, 2002).

3.4.2 Education

In accordance with the priorities and targets of the PRS, the government of Tanzania has recently increased its allocation to education, and in particular for primary education. Donor funding for education is also on the increase, though difficult to quantify since a significant portion of it still takes place outside the main budget.

Macro-micro linkages in support of the PRS and its targets are strong when public expenditures achieve the planned outcomes. Higher allocations and proper prioritisation are necessary but not sufficient conditions for positive outcomes. In the case of education, inadequate provision of other charges - for teaching and learning materials and other expenses - has jeopardized quality, especially for poor families who cannot afford to provide their children with the supplies they need for learning. Pro-poor education expenditures, therefore, would imply increasing allocations in favour of other charges (OC). Reducing leakages is also, clearly, important.

Budgetary Allocations and Expenditure Prioritisation

Table 27 provides data about the public budget for education as a proportion of the total government recurrent budget, and allocations within the education sector for all levels from 1998/99 to 2001/02. The share of the government's recurrent budget

allocated to education has been increasing, though it declined in 2001/02 relative to the 2000/01 share (but still higher than the shares of 1998/99 and 1999/2000).

Table 27: The Education Budget in Tanzania 1998/99 - 2001/02

	1998/99	1999/00	2000/01	2001/02*
Total education budget as a percentage of total government budget (%)	13.5	18.0	26.8	21.0
Allocation of Recurrent Budget				
Primary	64.5	65.8	58.4	70.6
Secondary	7.4	6.5	6.3	6.2
Teacher Education	2.5	2.2	1.6	-
Higher and Technical	21.4	22.5	20.6	19.1
Administration and Others	4.2	3.0	13.1	4.1

**Estimates*
Source: URT, Education Sector Public Expenditure review, May 2002

Moreover, education receives the largest share in recurrent priority spending among the other priority sectors (URT, 2002). This pattern is a good indicator that the government is targeting education - a key pro-poor sector - in its expenditure allocation. The ratio of primary education spending to total education spending has also increased from 64.5 percent in 1998/99 to 70.6 percent in 2001/02, while the government budget for secondary education has been less than 10 percent and declining. Higher and technical education allocations from budgetary sources declined from 21.4 percent in 1998/99 to 19.1 percent in 2001/02. Primary education benefits the majority of the people, including the poor, so putting priority here indicates that allocations within the education sector are becoming more pro-poor, signifying a strong macro-micro linkage as for the PRSP.

However, the data reported here are government allocations and do not include private expenditures. Since non-governmental agents (religious institutions and private individuals, for example) invest more in secondary education than in primary education, it is likely that the share of total expenditures in secondary education is higher than the figures shown in Table 27.

Budgetary Allocation between Personal Emoluments and Other Charges

Table 28 shows trends in the relative allocations for personal emoluments (PE) and other charges (OC) in primary education. The proportion of PE has declined from 94.4 percent in 1998/99 to 85.7 percent in 20001/02. The budget for OC has increased from 5.6 percent in 1998/99 to 14.3 percent in 2001/02. This trend is due to deliberate policy to increase and protect OC in the priority sectors, and can be inferred as a pro-poor move.

Table 28: Percentage Spending on PE and OC for Primary Education

1998/99	1999/00	2000/01	2001/02*
PE 94.4	89.4	87.8	85.7
OC 5.6	10.6	12.2	14.3
100	100	100	100

*Estimates
Source: excerpt from URT: Education Sector Public Expenditure Review, May 2002, p. 29

Expenditure Leakages in Education

In 1996 the government undertook to develop the Education Sector Development Programme (ESDP) to address existing problems and face the challenges resulting from on-going reforms and the increasing demand for human resource development (PER, 2002). Under the ESDP a series of policies and reforms have been initiated with the objective of ensuring that all children have equitable access to good quality primary education. The Primary Education Development Plan (PEDP) came out of the ESDP, whose main components are largely in line with the objectives outlined in the PRSP.

One landmark under PEDP was introduction of a capitation grant to help finance non-salary expenditure (OC) in primary education to the tune of US $10 per student per annum. This compares with previous allocations amounting to only US$1. In the national budget the increasing allocations to OC, pro-rated per pupil, are shown in Table 29. They show an increasing trend, from around US$2 to about US$8 per pupil. However, information collected at the grassroots level indicate that students still received a small proportion of these increased allocations - only about US$1 (Education Public Expenditure Review, 2002).

Table 29: Computation of per student OC from 1998/99 to 2001/02

PRIMARY	1998/99	1999/00	2000/01	2001/02
PE	100,825	106,039	208,281	203,988
OC	5,981	12,573	28,941	34,038
Total recurrent	106,806	118,612	237,222	238,026
Enrollment	4,035,209	4,182,677	4,370,500	4,839,361
Per Student OC (TShs)	1,482.24	3,005.94	6,621.92	7,033.51
Exchange Rate	681	797.3	803.3	916.3
Per Student OC (US $)	2.18	3.77	8.24	7.68

Source: Public Expenditure Review Education, 2002

Various sources, including the reports of the Controller and Auditor General, NGOs and media reports show that the public authorities do not always account for the use of funds (PER, 2002). In some districts, for example, education funds are diverted or 'borrowed' for other 'pressing' needs, and are never returned. As a result, the

government has directed that education (and other sectors) allocations at local level be published in local papers to increase transparency and accountability. It would also be useful if all individuals who misappropriate funds were brought to justice, as this would further minimise such thefts.

The Pro-poor Expenditure Tracking Study (REPOA, 2001) which aimed at tracking down government expenditures on priority sectors (education, health, rural water and rural roads), found that just as in the health sector, education also faces leakages because of a number of reasons:

- unpredictable flows of funds to district councils, both in level and timing which creates room for delays and misappropriations;
- serious delays in disbursements, especially those related to other charges (OC)[5] , a problem more prevalent in rural as opposed to urban localities;
- disbursement delays even within localities[6] and significant re-allocations of funds at that level;
- lack of an effective central government monitoring system for actual disbursements to councils and use of funds thereafter, and varied reporting formats from many education service units.

Education Quality

The overall purpose of providing education is to enable learners successfully to manage their environment for their own betterment and that of the whole society. Quality education is thus vital.

The resources used to provide primary education influence the level of education quality. Among the most important of these resources is the size and quality of the teaching force. The number of teaching staff in primary schools, who were 109,936 in 1997, declined by 3.7 percent to 105,921 in 2001. This decline went hand in hand with an increase in the number of students, so that the teacher-pupil ratio went from 1:37 in 1997 to 1:46 in 2001 (MOEC, 2002)[7]. Although this ratio is close to the targeted level of 1:45, vast variations in efficiency levels (teachers per class, class sizes, student per teacher) exist across regions, districts and within individual schools. For example, Galabawa (2000) shows that while Kilimanjaro and Lindi had a teacher-student ratio of 1:30, Shinyanga had 1:53; and average class sizes varied from 31 to 55. These variations are significant because they also lead to variations in success rates, as districts with lower teacher-student ratios or bigger average class sizes tend to have poorer performance in Primary School Leaving Examinations scores (Galabawa, ibid.). An indication of quality of primary school teaching is provided by the qualifications of teachers. The percentage of Grade IIIA teachers is 43.8 percent as opposed to 0.5 percent who hold diplomas and 55.7 percent who are grade B/C teachers. Mbelle and Katabaro (2002 p.23) summarise this composition as engendering "poor quality" education.

Another indicator of the quality of education is performance in the Primary School Leaving Examination (PSLE). As has been shown in an earlier section of this report, a large proportion of pupils in standard 7 do not achieve passing grades in this examination, and a significantly lower proportion of girls achieve passing grades, compared to boys.

A challenge to the government is to transform primary schools into providers of life skills.

ENDNOTES:

[1] It is possible that these data are underestimated due to unrecorded transactions in the underground market.

[2] Foreign mining companies in Tanzania are given up to 5-year tax holiday at the beginning of production, pay to the Tanzanian government a royalty fee of only 3 percent of the value of their mineral output, and thereafter are free to take out of the country 100 percent of their profits. Most of their mining equipment is also not taxed.

[3] World Bank 2000, DHS 1991/92 and 1995/96; HRDS 1993/94; and HBS 2000/01

[4] It should be noted that these dollar values are unadjusted by purchasing power parity; this accounts for their being substantially lower than the values that appear in Table 23.

[5] The study indicates that processing of OC disbursements to education takes up to 37 days from the Ministry of Finance to Kisarawe district, 31 days to Dodoma district, 30 days to Babati district, 37 to Mtwara district and up to 54 days to Kigoma district. Overall, PE disbursements take shorter periods to be received at their destination.

[5] The study further shows that there are significant delays in transferring OC funds to sectoral accounts in all councils. These delays take up to 48 days in some council.

[7] The ratio is likely to decline further given the rising enrolment ratios.

CHAPTER 4

VULNERABILITY

4.0 Introduction

When tackling the problem of poverty, emphasis often begins with descriptions of how poverty manifests itself through hunger, illness, powerlessness, the inability to see a doctor, to go to school or to read and write. Limited attention is given to the forces that drive people into poverty. Few studies, for example, focus on individuals, households, or communities who may not necessarily be poor today but have a high probability of falling below some benchmark indicator of well being in the future. These people are exposed to the risk of impoverishment. They do not have the ability to cope over long periods before falling into poverty.

The Poverty Reduction Strategy (PRS) in Tanzania recognizes vulnerability to unpredictable events as a concern. It acknowledges risks associated with adverse weather, HIV/AIDS pandemic, orphanage, disability, old age, and refugees. It also notes the breakdown of the traditional systems and underscores the importance of safety nets in risk management. However, the PRS does not go into detail because not enough is known about vulnerability in Tanzania to formulate precise programmes of support with the necessary financial resources that would be required.

This chapter takes the first step towards filling this gap by conceptualising the problem of vulnerability in Tanzania. It also sketches the forms of vulnerability, factors contributing to it, and a typology of vulnerable groups. Except for a few events such as HIV/AIDS for which some detailed information is available, little can be said at present about many of the risks that generate adverse outcomes and leave households more vulnerable to manage future risks. This chapter, therefore, focuses on conceptual issues. Further information from the current participatory poverty assessment (PPA) should contribute significantly to a deeper understanding of vulnerability in Tanzania.

4.1 Conceptual Description of Vulnerability

Vulnerability and poverty have often been viewed to be synonymous. Despite being strongly linked, they are different. Vulnerability is a process in which individuals, households or communities are impoverished and eventually become poor or poorer. It describes a continuous forward looking state of expected outcomes; the probability of falling below a socially defined minimum level of well being in the future. In this sense, both poor and non-poor households face risks that if realized can generate adverse outcomes that may leave them more vulnerable to manage future risks. Poverty on the other hand describes a situation in which households are placed below a socially defined minimum level of well being, usually manifested in hunger, sickness, powerlessness, illiteracy, etc.

The process of vulnerability involves three main situations. The first is exposure to risk. Households may be exposed to or susceptible to natural, socio-economic, political and environmental risks that if realized generate negative impacts that damage their welfare. Although risk is often associated with unpredictable events, some events are certain. The latter may include death from HIV/AIDS. The second is risk management or responses, i.e. response actions to risks, shocks and adverse outcomes generated. They may be ex ante actions taken before the risk is realized or ex post actions taken after the risk is realized. The third is outcome. Realized risk together with household responses lead to an outcome, in this context measured in welfare change. Therefore, poverty is an outcome of the process of vulnerability.

4.2 Sources and Typology of Vulnerability in Tanzania

All households are not equally susceptible to risks. Two factors determine household vulnerability to risks, namely resource endowment and entitlement. Endowment refers to ownership of physical assets and labour power as well as access to information, cultural and behavioural practices. These determine household's capability to cope with risks. Entitlement refers to the command that people can exert over goods and services, either by using their own resources in direct production or by using them to sell and buy on the market. It refers to the rules of the game that determine the rewarding system. For example, entitlement failure may arise when individuals and households become too dependent on a volatile labour and goods markets;[1] wage employees may be vulnerable to loss of jobs and falling real wages and; farmers and livestock keepers may be vulnerable to price declines. Citizens may also lose their entitlement if they have to buy their legal rights in a weakly governed state.

Both the allocation of resource endowment and the rules of the game for determining the rewarding system operate within an institutional framework linking individuals, households, communities and nation. Therefore, analyses of vulnerability must be placed in the context of institutional relations of the state, community and households. This is because individuals and households always exercise their capabilities to secure livelihoods within a particular institutional context or framework.

Therefore, sources of vulnerability may be categorized into systemic and non-systemic related. Systemic sources are linked to institutionalised economic, social, political and cultural setting of the households, communities and nations. This shapes the resource allocations and the reward system. To address this kind of vulnerability requires both macro and meso level approaches. Non-systemic sources are linked to individual or household attributes. They may be location and/or household specific.

4.2.1 Systemic Sources of Vulnerability

Socio-cultural factors

Socio-cultural factors strongly influence decisions on resource endowment and

entitlement and, through them, the reward system. They influence decisions on resource endowment for the youth, the elderly and women. They also influence decisions on entitlement for women, children and people with disability.

Resource Endowment

Socio-cultural factors influence resource endowment by gender and age.

(a) The Youth

Most youth do not own productive assets such as land, implements and capital in Tanzania. Many also lack the necessary skills and/or experience to be employed in the highly constrained labour market. This has led to an increase in rural-urban migration. The majority of migrant youths expect to join the formal sector but end up in the informal sector with its uncertainties and low earnings. Some female youths end up joining domestic work, and some engage in transactional sex that exposes them to risks of STDs (sexually transmitted diseases) including HIV/AIDS.

(b) The Elderly

In rural areas the vulnerability of the elderly has recently increased because of two factors. As mentioned above, the youth migrates to urban areas in an attempt to seek new opportunities, often leaving the elderly to meet their own livelihood needs. In addition the HIV/AIDS pandemic has mainly hit the youth and middle aged, leaving the elderly to care for the very young. In many cases the elderly are responsible for the livelihoods of young orphans left behind by their parents who have passed away from HIV/AIDS. This difficulty has been exacerbated by a further factor: the break-up of the traditional social security system. Traditional systems have not been able to cope with new developments in the social, economic and cultural aspects of Tanzanian life, and the pressures imposed by the effects of the HIV/AIDS pandemic.

(c) Women

Women are also vulnerable to many cultural practices that discriminate against their ownership of productive assets. Many traditions and customs prevent women from owning land, cattle, houses and similar assets. In events of separation or death of spouse, women face discriminatory cultural practices that negate their rights to own assets left behind. These are most often left to their sons.

Through their access to education and good health, women's capacity to manage the environment surrounding them can be greatly enhanced. However, as seen in Chapter Two, women are far behind in higher and tertiary education and bear the largest brunt from the weak health system - high maternal and children mortality, high HIV/AIDS incidence, and high morbidity.

Entitlement

Socio-cultural factors influence entitlement by gender, age and disability.

(a) Gender Bias

Female children are vulnerable to gender discrimination in some parts of Tanzanian society where there are negative perceptions of their contribution to the household livelihood. This perception considers female children to belong to their future husbands' families after marriage; hence most of the returns to investment on female children are considered to accrue to their forthcoming family by marriage. Therefore, only the minimum investment to prepare the girl for marriage is considered adequate. This can lead to fewer years of education and less time for studies as well as more domestic chores. As a result, in some parts of Tanzania, female children have to work harder to perform well in education but are also subjected to early marriages. Early marriage for many young women occurs at the expense of their education and health. This discriminatory socio-cultural system produces an unequal entitlement system that leads to a highly unequal reward system.

(b) Bias Against Children and the Youth

Some health care and feeding practices make children vulnerable to malnutrition and diseases. They exacerbate the negative effects of inadequate basic health facilities that reduce attendance to maternal and child health (MCH) services during pregnancy and deny parents the necessary counselling services on appropriate feeding and childcare practices, immunization, and HIV transmission from mother to child. For example, a survey undertaken in 1998 indicated that more than 80 percent of children deaths occurred at home, and 60 percent of them without any contact with formal health services.[2]

Malnutrition continues to be a major cause of high infant mortality and under-five mortality in Tanzania. Inappropriate feeding practices are the main factor in poor nutritional status of young children. Delays in the initiation of breastfeeding, low rates of exclusive breastfeeding and low frequency of feeding are cited as main causes of poor children nutrition in the country.[3] Results from a survey carried out in 1999 show that nearly 30 percent of the under-fives have a weight-for-age problem, i.e. they are underweight as earlier confirmed that children from the poorest 20 percent of households are four times more likely to be underweight than children from the richest 20 percent of households.

What can be done? In Tanzania, children need more adult time for better care and attention, including for feeding. We especially need to encourage both mothers and fathers to provide more nutritional snack foods for children such as bananas and groundnuts. More time caring will increase children's food intake.

Child labour is an integral part of the socio-cultural and economic systems of many African households and communities. It is part of the training and capacity building of a person. However, some new social, cultural and economic developments have encouraged households to use child labour as a source of income. This has led to some

of the worst forms of child labour as children become integrated into the labour market, outside of their homes. Children become vulnerable to psychological and physical abuse that lead to numerous mental, physical, social and moral problems. They are often denied their rights to education, good health and care.

(c) People with Disability

People with disability are vulnerable because they lack necessary social and economic support necessary to develop their potentials and opportunities for better livelihoods. For example, children with disabilities often lack access to education facilities that accommodate their needs. They are often not socially integrated. Attitudes and beliefs, and discriminatory behaviours often prevent disabled persons' reaching their full potential.

4.2.2 Non-Systemic Causes of Vulnerability

Vulnerability may also be facilitated or even caused by individual attributes that may not directly be linked to an established system. Laziness, alcoholism, lack of personal integrity, risky behaviour, etc. may facilitate risk realization. For example, alcoholism and risky behaviour may encourage unsafe sex that may lead to HIV/AIDS. On the other hand, other things being equal, hard work and personal integrity increase resource endowment and raise individual capability to cope with risks.

4.3 Risk Management

Risk management comprises response actions to risks, shocks and adverse outcomes generated. They fall into two categories, namely ex ante and ex post risk management actions. The former refers to actions taken before the risk is realised and the latter refers to actions taken after the risk has been realised. Ex ante risk management contains three groups of strategic actions. The first strategy is to prevent or reduce the risk. For example, abstinence from sex or having sex with one uninfected partner would be the strategy to prevent or reduce the spread of HIV/AIDS. The second strategy is to lower exposure to risk. For those that are unable/unwilling to abstain from sex or stick to one uninfected partner, the strategy would be to reduce their exposure to the virus by using condoms. The third strategy is risk mitigation. This may involve taking a health insurance cover to provide compensation for the expected welfare loss associated with HIV/AIDS infection.

Since ex post risk management occurs after the risk has been realized the strategy is how to cope with the welfare loss generated. It may include how to care for the sick, the orphans, etc. Provision of public safety nets, use of child labour, etc. may form part of the coping strategy.

Three policy questions arise from the risk management discussion. The first is whether to focus on ex ante or ex post risk management. The second is to determine the

combination of instruments to be used, that is, once a decision has been made on whether ex ante or ex post. The third is to determine the role of the various stakeholders in risk management.

Generally, there is an agreement that ex ante risk management is superior to ex post risk management. Clearly in the case of certain risks such as HIV/AIDS infection this superiority is absolute. But even in many other areas, prevention has always been more superior to cure. Perhaps the more difficult issue is the choice of instruments to be used. This difficulty arises because some instruments may produce external costs that reduce future capability to cope with risk. In other words they may increase the future vulnerability of individuals or households. For example, a household may decide to cope with income loss by engaging in child labour that eventually increases future vulnerability of the child. Another example is the famous food aid programmes that have been criticised for reducing returns to local food production and increase future vulnerability to food shortage in the country.

It can be noted that a large part of the ex ante risk management may require socio-economic, political and cultural institutional changes. They also require broad based campaigns, high levels of institutional operations and actions that cut across various levels. Therefore, the legal, political, resource and organizational requirements are too huge to be handled by individuals and households. Governments are best placed to address these areas - through changes in the laws and regulations, legal enforcements and information and education campaigns.

4.4 Challenges and Recommended Areas for further Research

This chapter has attempted to establish a framework for understanding vulnerability in Tanzania. The forthcoming PPA (currently in progress) will provide new information on vulnerability. In addition there is need to undertake further studies to complement PPA results and to prepare comprehensive documentation on vulnerability in terms of typology, location, characteristics, and factors associated with vulnerability, and to place these within the broader context of institutional relations of the state, community and households.

Future research should focus on identifying and distinguishing factors that are systemic in nature and those that are non-systemic, clearly indicating how each influences resource endowment and entitlements. These should be placed within the context of risk management. This should be used to inform policies that adequately respond to the nature of vulnerability.

ENDNOTES:

[1] Sen, A.K (1981)
[2] URT and UNICEF (2001), " Situation Analysis of Children in Tanzania"
[3] ibid

CHAPTER 5

LESSONS, CHALLENGES AND PROSPECTS

5.0 Diversity

Perhaps the most important theme recurring throughout this report is that of the diversity of poverty. While poverty is widespread in Tanzania and affects the large majority of the population in one way or another, it manifests itself differently and varies in intensity. This diversity can be seen in differences between people living in urban and in rural areas, between the regions of the country, between men and women, and between households with different levels of income. An important lesson to be drawn from this finding is that national averages tend to deceive. There is a danger involved in focusing too narrowly on national targets and national estimates for the indicators that correspond to those targets. Perhaps the most revealing example of how averages can deceive was given in the section on education in Chapter 2. The 2000/01 HBS shows that, compared to 1991/92, there is an overall modest improvement in the proportion of children who attend primary school. But in fact, this overall gain hides the fact that a lower proportion of children of the poorest households went to school in 2000/01 than in 1991/92. The overall gain hides a loss for the children of the poorest households. Recent initiatives in the education sector have dramatically boosted enrollment rates and may go a long way in improving access to education for children in the poorest households. It is important that data are available which allow us to look beyond the averages, to assess if recorded improvements are equitable.

This leads us to a second lesson, which is that there are several ways to reach national poverty reduction targets - some more pro-poor than others. The targets are set at the national level, and therefore reflect an average. The national target can be reached by improving the situation for the entire population, or by a relatively larger improvement for part of the population. The infant mortality rate is a case in point. As this rate is relatively high in all income poverty quintiles, the national target could be met by a large reduction in the rate for the least poor quintiles, a large reduction for the poorest quintiles, or an equal reduction across all quintiles. Equality will increase or decrease according to the strategy followed. If, for example, efforts to reduce infant mortality have an urban bias and rely on services, which are more accessible to the non-poor, it is quite likely that the poorest households will gain less from the Poverty Reduction Strategy.

All of the above should lead to reflection on whether a 'one-size-fits-all' approach is right for the PRS. At the moment, the strategy in the PRSP is fairly uniform. It applies to the entire country and to all population groups. On the basis of the evidence presented in this report, one could argue that the strategy itself ought to be diversified, to reflect the diversity of poverty. This can be pursued in two ways. First, central government

policy makers could be encouraged to consider more specific targeting in PRS implementation. This may mean setting explicit targets for specific population groups or parts of the country. If strategies are diversified according to the specific needs and circumstances of parts of the country or population groups, this will need to be reflected in how resources are allocated. For example, perhaps the time has come to let budget allocations to local authorities be determined more directly by development needs and levels of poverty. Second, the national strategy needs to be translated into action at the local authority level. This may require the adaptation of planning guidelines for local authorities to facilitate operationalisation of the PRS at that level.

Finally, the poverty monitoring system will need to be sharpened to ensure that it tracks poverty status in a disaggregated manner, to enable it to provide evidence on the distributional aspects of the PRS. The poverty monitoring system needs to provide evidence which helps to understand who benefits most from the PRS: women or men? the poor or the rich? rural or urban dwellers? Sharpening the poverty monitoring system to address these needs will in the medium term require strengthening information emerging from administrative data sources as well as in-depth analysis of key forthcoming data sets such as the census.

5.1 Urban Poverty

One aspect of the diversity of poverty is the difference in poverty status between urban and rural areas. A special task for the Research and Analysis Working Group, set out in the 2001 PRS Progress Report, was to initiate research on urban poverty. This was meant to deepen the understanding of poverty in urban areas and to prepare the ground for specific policy measures under the PRS to reduce urban poverty. The conclusion in this report is that the analysis given in the PRSP, that poverty in Tanzania is predominantly a rural phenomenon, still stands. In the status chapter, it is clear throughout that urban areas, and Dar es Salaam in particular, score better on almost all of the PRS indicators. The research work carried out under the Research and Analysis Working Group has revealed, however, that there are specific problems in urban areas and specific social groups, which are at greater risk of sliding deep into poverty. Any policy measures under the PRS should address specifically the needs of these specific social groups, which are discussed further below.

Section 2 in Chapter 2 sets out the poverty issues which are at stake in urban areas. The following ought to be taken into account in the PRS:

- Youth unemployment: there are large numbers of young people in urban areas for whom no viable economic opportunities are available. The Integrated Labour Force Survey reveals increases in unemployment levels in Dar es Salaam and other urban areas and an analysis shows that this increase is particularly marked for people under 35 years of age. In Dar es Salaam, almost half the population between 15 and 25 years of age is unemployed. It is of paramount importance that economic

opportunities are created for young people throughout the country, both because of the potential of young people to contribute to economic growth and because of the risks involved in large numbers of young people who feel disenfranchised. The efforts to promote economic opportunities for young people should not just be focused on urban areas, as this will encourage rural-urban migration.

- A large informal sector: Closely linked to the problem of unemployment is the existence of a large informal sector in urban areas. Urban areas have seen the most dramatic shifts in employment patterns over the 1990s, with formal employment declining in importance and informal activities growing rapidly. The informal sector has its own problems of hidden unemployment, precarious and hazardous employment, and the lack of an enabling environment. Creating an enabling environment for the urban informal sector, which minimises existing disincentives, should be an important aim of urban poverty reduction.
- Vulnerable groups: There are specific vulnerable groups in urban areas, which are at great risk of sliding into poverty or failing to climb out of poverty. These include people living in unplanned settlements (e.g. in valleys where they are at risk of floods), people living on the streets and people involved in hazardous or precarious economic activities such as commercial sex work, quarrying and domestic work.
- Urban infrastructure and environmental issues: Due to high levels of rural-urban migration, with which urban development has not kept pace, the urban infrastructure is over-stretched in many urban settlements. Affordable housing is problematic, as can be seen in the increase in the number of people per room in urban areas. Water provision has not kept pace with the rapidly expanding population, causing hygiene and health risks. The proportion of people using safe water in Dar es Salaam has declined over the last decade. There are also problems with waste management and air pollution.

5.2 The 1990's - A Lost Decade for Poverty Reducation?

In Chapter 2, the trends in indicators over the 1990s were assessed, wherever data were available. For most of the indicators, the conclusion of this trend analysis is quite sobering. For some indicators, such as infant and under-five mortality, the 1990s were characterised by stagnation. The declining trend that was observed for those indicators in earlier decades levelled off and even seems to have reversed. Other indicators, such as access to reproductive health care, as measured through the proportion of births attended by skilled personnel, show significant deterioration over the 1990s. Others, such as the poverty headcount ratios or primary school enrollment rates, show marginal improvements over the 1990s. It is tempting to draw the conclusion that the 1990s were a lost decade for poverty reduction in Tanzania. Yet, for several reasons, this conclusion is too harsh.

Important progress was made, particularly in the second half of the 1990s, with the

establishment of an enabling environment for poverty reduction. After years of reforms, inflation was brought under control and the government's budget deficit was much reduced. Greater macro-economic stability and a favourable investment climate attracted greater foreign direct investment. A sound policy framework for poverty reduction was drawn up, giving a clear focus to the poverty reduction effort and external assistance provided in its support. Substantial debt relief was granted in response to this policy framework. A local government reform programme was initiated, setting the scene for much greater involvement of local stakeholders in their development.

The challenge for the first decade of the 21st century is to translate this enabling environment for poverty reduction into real gains for the poor. Because of the lack of progress during the 1990s, the challenge of reaching most of the PRS targets is now truly daunting. Many of the targets can still be met by 2010 or 2015, but it is more important than ever to:

- allocate sufficient resources to the PRS;
- minimise leakages and wastage of public resources;
- monitor PRS implementation closely for early signs of what works and what doesn't;
- strengthen participatory processes which allow the poor to take part in setting priorities for the PRS and monitoring progress;
- use evidence provided through the poverty monitoring system and popular feedback to sharpen the focus of the PRS and improve its implementation process.

5.3 Making Growth Pro-Poor

The PRS rightly puts emphasis on the importance of achieving sound economic growth as a necessary condition for poverty reduction. However, the nature of growth is of great importance (see Chapter 3). There are two main strategies to make growth have a greater impact on poverty reduction. One is to ensure that the sectors which are growing rapidly deliver more substantial benefits to the poor. The other is to encourage higher growth in those sectors that have a more direct impact on large numbers of poor people.

In the Tanzanian economy, some sectors have shown rapid growth in recent years, particularly tourism and mining. But Chapter 3 illustrates that these 'engines of growth' cannot, at present, be seen as fulfilling their potential for poverty reduction. The tourism sector, for example, is disappointing in terms of employment creation, accounting for only one percent of the labour force. This compares unfavourably with the sector's share of 14 percent in GDP in the year 2000. Forward and backward linkages in this sector are still weak and local communities benefit little from the increased investment in tourism. In addition, there are negative externalities affecting the environment, among other things. In the mining sector, a similar situation is manifested. The large scale mining sector is heavily dominated by foreign investors, who benefit from generous

tax allowances. While the macro-economic contributions of the large scale mining sector cannot be denied, the micro-economic effects are limited to the charitable works of the mining companies in the immediate vicinity of the mining sites. The small-scale, artisanal mining sector has a more substantial employment creation potential, but it is characterised by precarious and hazardous employment and does not receive the same kind of preferential treatment as the large-scale mining sector. In order to make these sectors realise their potential for poverty reduction, policy measures are required that encourage forward and backward linkages, employment generation and more direct benefits to local communities, while at the same time minimising negative externalities.

While it is worthwhile to investigate how the rapidly growing sectors can be made more pro-poor, it is even more important to ensure that sectors involving large numbers of poor people grow faster. This brings us to agriculture. With the large majority of the population and an even larger majority of the poor dependent on the agriculture sector, it is crystal clear that one of the keys to poverty reduction lies in the promotion of agricultural growth. Chapter 3 reviews the performance of the agriculture sector in recent years and points at the obstacles that prevent this sector from performing better and deliver more substantial gains for the poor. It is early days to judge whether the Agriculture Sector Development Strategy and the Rural Development Strategy will deliver the much-needed boost to agricultural growth. Access to affordable inputs and access to a fair market remain top priority for farmers, as well as the establishment of a conducive policy environment for agriculture, the creation of off-farm economic opportunities and free access to markets in industrialised countries. Improvements in roads and communication infrastructure are crucial to agricultural development and should continue to receive high priority in a holistic approach to rural development.

5.4 Translating Policy Measures into Real Benefits for the Poor

Chapter 3 also investigates obstacles that exist for policy measures to lead to real benefits for the poor. The education and health sectors are analysed in detail. It is in this chapter that the necessity of strong linkages between PRS implementation, poverty monitoring and the Public Expenditure Review becomes apparent. The chapter highlights the level of public expenditure as a potential problem, as well as the prioritisation of public expenditure within the sectors. The issue of leakages of public resources is also highlighted. The way in which policies are translated into budget allocations and budget execution is of crucial importance if we want to ensure that the PRS is implemented in an effective and efficient manner. The main lesson learned therefore, is that the poverty monitoring process and the PER process need to be much more intimately linked to each other. There is scope for more interaction between the Technical Working Groups for poverty monitoring and the PER Working Group and Secretariat. Priorities for analytical work to be carried out could be set jointly and the results of analytical work could be reviewed together. Bringing the two processes together should be a high priority for the 2002/03 Financial Year.

5.5 Vulnerability

Another theme in this report is vulnerability. The reason to pay attention to the phenomenon of vulnerability is that it is considered to be a major concern of the poor in the PRSP, but it is also recognised that the knowledge base on vulnerability is relatively weak. Work has been carried out by the Research and Analysis Working Group to provide a conceptual framework for vulnerability, which clearly outlines the differences between vulnerability and poverty. Details of the conceptual framework are given in Chapter 4. It stresses that vulnerability should be seen as the susceptibility of people to become poor or slide deeper into poverty. Vulnerability therefore helps us to understand the dynamics of poverty. The conceptual framework provided by the Research and Analysis Working Group has helped to inform the research agenda of the Participatory Poverty Assessment, which is focusing on vulnerability.

An important contribution of the conceptual framework proposed is that it distinguishes between vulnerability as a result of 'shocks' and vulnerability as a result of systemic factors. Only 'shocks' are considered as cause of vulnerability in the PRSP. This is an important addition, as it allows analysis to move beyond natural disasters and adverse weather conditions, to include other factors such as socio-cultural dimensions, access to productive assets and governance issues. The conceptual framework also emphasises that there are different ways of coping with vulnerability, including avoidance or prevention, preparedness and mitigation. Responses are organised at individual, group, community, regional or national level. An important conclusion is that the establishment of safety-net mechanisms by central or local governments, albeit an important way of dealing with the effects of vulnerability, may not be the only appropriate option. Safety nets will not address the systemic causes of vulnerability. Their focus is on mitigation, rather than prevention or preparedness. The conceptual framework has thus set the scene for much further analysis, which can form the basis of more specific policy advice in the next Poverty and Human Development Report.

5.6 Issues for Further Research

This report has only been able to report on a selection of issues relevant to poverty and human development in Tanzania. The analysis gives rise to a number of issues for further research. In addition, there are research questions that arise from the PRSP which remain to be addressed. The main research issues to be addressed in future editions of the Poverty and Human Development Report are highlighted here:

- The wider impact of HIV/AIDS: In many places in this report, attention has been paid to the wider impact of HIV/AIDS and the obstacles the pandemic might pose for the achievement of many of the PRS targets. More detailed analysis is needed to assess how HIV/AIDS will affect the implementation of the PRS and how individual sectors can expect to be affected. This calls for a series of in-depth studies

on specific sectors, which will be invaluable in informing the drafting of mitigation plans within those sectors and may lead to adjustments in the PRS.

- Vulnerability: Further research and analysis is needed on the different manifestations of vulnerability and on which policy measures might be most appropriate to contain or reduce vulnerability. The findings of the PPA will be available by the end of 2002 and will be a major source for a deeper understanding of vulnerability in the next Poverty and Human Development Report. In addition, more research is needed to provide an inventory of the different policies, programmes and projects that are currently in place to address vulnerability. Together with a deeper understanding of the reality of vulnerability, this will help to inform appropriate policy measures.
- Diversity: It is at the level of the local authorities that poverty reduction programmes are implemented and therefore, evidence on poverty status needs to be disaggregated beyond the regional level. The 2002 Population and Housing Census provide an ideal opportunity to carry out poverty mapping. Several predictor variables have been included in the Census questionnaire. These variables will be used to estimate the level of poverty at the district level. Future Poverty and Human Development Reports will report on the results of this exercise.
- Governance: In the zonal workshops, which were held to inform the drafting of the PRSP, grassroots stakeholders emphasised the importance of governance issues as an obstacle to poverty reduction. Yet, governance is not yet adequately addressed in the PRS. The poverty monitoring system does not yet cover governance either. A comprehensive review is required to determine which aspects of governance are key to reducing poverty and containing vulnerability, and to agree on key indicators that should be selected in the context of the poverty monitoring system.
- Poverty and the environment: The PRSP stresses environmental concerns yet they are inadequately covered to date. A deeper understanding is needed of how poverty and the environment are related, with a view to mainstreaming environment into the PRS. With the appointment of 'environment champions' to the four Technical Working Groups of the poverty monitoring system, several of the groups should start producing evidence on this important subject, which can be treated in more detail in a future Poverty and Human Development Report.
- The relation between the PRS targets and the MDGs: Internationally, there is growing consensus about a core set of development targets, embedded in the Millennium Declaration and the Millennium Development Goals. To a great extent, the MDGs are compatible with the PRS targets. However, it would be worthwhile to carry out a systematic comparison between the MDGs and the Tanzanian poverty reduction policy framework to highlight any discrepancies. The poverty monitoring system should also be compared against the MDGs and the corresponding indicators, to ensure that MDG monitoring can become a function of the poverty monitoring system.

5.7 Summary of PRSP Targets and Assessment of their Feasibility

In the report, available data and their quality are analysed for each category of PRSP-relevant poverty indicators. The table below summarises PRSP targets and the assessment of their feasibility.

Categories and quantified targets	Assessment
Income poverty	
Reduce the proportion of the population below the basic needs poverty line by half by 2010	Target likely to be reached in Dar es Salaam. However, it is extremely challenging to reach the targets in other Urban or Rural categories and thereby the National Level.
Reduce the proportion of the population below the food poverty line by half by 2010	Target likely to be reached in Dar es Salaam. Reaching the target in other Urban or Rural categories and thereby the National Level is extremely challenging.
Reduce the proportion of the rural poor by half by 2010	Very challenging to reach that target.
Achieve an overall GDP growth of 6 Percent by 2003	Likely to be reached.
Achieve an agriculture growth rate of at least 5 Percent by 2003	Reached in 2001.
Investment and employment	
No explicit quantitative targets in PRSP	no assessment
Education	
Reduce illiteracy by 100 percent by 2010 = universal literacy	Target is unlikely to be reached
Increase gross enrollment rate in primary schools to 85 percent by 2003	Definitely within reach
Increase the net enrollment rate in primary schools to 70 percent by 2003	Target unlikely to be reached
Reduce the drop-out rate in primary school to 3 percent by 2003	No clear assessment but indicated that the target will be difficult to reach. The overall drop out from standard I to VII should be assessed
Increase the proportion passing Standard VII examination to 50 percent by 2003	Unlikely to be reached
Increase transition rate from primary to secondary school to 21 percent by 2003	Reached in 2000
Increase the enrollment rate in secondary schools to 7 percent by 2003	No explicit conclusion, but indicated that target is likely to be reached
Achieve gender equity in enrollment rates in primary and secondary school	Achieved at primary school level. In Form I girl-boy ratio in 2001 was 0.96, in form VI it was 0.51
Health	
Reduce infant mortality rate from 99 to 85 per 1000 live births by 2003.	"Extremely challenging", implying unlikely to reach
Reduce infant mortality rate to 50 per 1000 live births by 2010 and to 20 by 2025	"Extremely challenging", implying unlikely to reach
Reduce under-five mortality rate from 1958 to 127 by 2003 and 79 by 2010	"Extremely challenging", implying unlikely to reach

Increase percentage of children under 2 years immunised against measles and DPT from 71 percent to 85 percent by 2003	Target within reach., actually registered already in 1996
Contain sero-positive prevalence rate in pregnant women from 5,5-23 percent (1996) to 6-27 percent in 2010	"Target very challenging indeed"
Reduced maternal mortality from 529 to 450 per 100,000 by 2003 and to 265 by 2010.	Not appropriate indicator to assess short-term changes occurring as a result of PRS
Increased coverage of births by trained personnel from 50 percent to 80 percent	Would imply a radical change in present trends
Restored life expectancy to 52 years by 2010	Unlikely to be achieved given HIV/AIDS trend
Malaria in-patient case fatality rate for under-five children decreased from 12,8 percent to 10 percent by 2003 and 8 percent by 2010	MoH Management Information System unable to calculate values for the relevant indicators
Child nutrition	
Reduced prevalence of stunting (height-for-age) reduced from 43 to 20 percent	Little progress so far, high disparities between urban rural and poorer richer households
Reduced prevalence of wasting (weight-for-height) from 7 to 2 percent	Little progress so far, high disparities between urban rural and poorer richer households
Water	
Provision of adequate, safe and clean water in rural areas to 55 percent by 2003	Actual trend lagging slightly behind the required, indicating some possibility to reach the target.
Provision of adequate, safe and clean water in rural areas to 85 percent by 2010	Target extremely challenging
Roads	
Rehabilitate 4,500 km of feeder, district and regional roads in the 8 poorest regions	Most rural roads in poor condition Upgrade from poor to fair quality 7,000 km of such roads, in
12 poorest regions	Most rural roads in poor condition
Spot and emergency repairs over an estimated 50,000 km of roads in all districts	Most rural roads in poor condition

According to the matrix, 8 targets are met or likely to be met on time (the 2 economic growth targets, 4 targets in the field of education, 1 in health and 1 -possibly- in water). The 2 income poverty targets are unlikely to be met, with the exception of Dar es Salaam. Another education target is partly met. 10 targets are unlikely to be met. The remaining 9 targets have no target year indicated or are for other reasons not possible to assess quantitatively at the present stage.

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Appendix 1: Technical Note

Calculating the Human Development Index

Background Information

The HDI is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development.

- **A long and healthy life,** measured by life expectancy at birth
- **Knowledge**, measured by adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrollment (with one-third weight)
- **A decent standard of living,** as measured by GDP per capita (PPP US$)

In this report monthly consumption expenditure per capita (HBS00/01) was used to measure the standard of living dimension of the HDI. Data on consumption expenditure from the HBS are considered to be more reliable than the available regional GDP estimates. More importantly, consumption expenditure data is a direct measure of the standard of living and therefore, reflects the situation at the household level better than the GDP.

Before the HDI itself is calculated, an index needs to be created for each of the above dimensions. To calculate these dimension indices (life expectancy, education, consumption expenditure per capita) minimum and maximum values are chosen for each underlying indicator. For the purpose of this report these values are the same as used for the HDI in the Global Human Development Report, except for the indicator on consumption expenditure per capita. The minimum and maximum values used for each indicator are reflected below.

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	85	25
Adult literacy rate (%)	100	0
Combined gross enrollment ratio (%)	100	0
Consumption expenditure per capita (TShs)	25,000	4,500

Performance in each dimension is expressed as a value between 0 and 1 by applying the following general formula:

$$\text{Dimension index} = \frac{\text{Actual value} - \text{minimum value}}{\text{Maximum value} - \text{minimum value}}$$

The HDI is then calculated as a simple average of the dimension indices. Below, the calculation of the HDI is illustrated for a sample region, Kagera.

Illustration of the calculation of the HDI, using data for Kagera region

Calculating the Life Expectancy Index

The life expectancy index measures the relative achievement of a region in life expectancy at birth. For Kagera with a life expectancy of 45 years in 1988, the life expectancy index is 0.333

$$\text{Life expectancy Index} = \frac{45.0 - 25}{85 - 25} = 0.333$$

Calculating the Education Index

The Education index measures a region's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrollment. First an index for adult literacy and one for combined gross enrollment are calculated. Then these two indices are combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrollment. For Kagera, with an adult literacy rate of 64 percent in 2000 and a combined gross enrollment ratio of 80.5 percent in 2000, the education index is 0.694

$$\text{Adult literacy index} = \frac{64 - 0}{100 - 0} = 0.640$$

$$\text{Gross enrollment index} = \frac{80.5 - 0}{100 - 0} = 0.805$$

Education index = 2/3 (0.640) = 1/3 (0.805) = 0.694

Calculating the consumption expenditure index

The consumption expenditure index in the HDI serves as measure of a 'decent standard of living'. The reason for using consumption expenditure instead of GDP per capita PPP has been elaborated above. When using GDP as a component of the HDI, income is normally adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used. In this report this adjustment is not applied, because of the limited difference between the maximum and minimum regional consumption expenditure by region, and because a ranking would not be affected by not applying logarithms in the calculation.

For Kagera with a mean monthly consumption expenditure of Tsh 9,000 in 2000 the consumption expenditure index is **0.220**

$$\text{Consumption expenditure index} = \frac{9{,}000 - 4{,}500}{25{,}000 - 4{,}500} = 0.220$$

Calculating the HDI

Once the dimension indices have been calculated, determining the HDI is straightforward. It is a simple average of the three dimension indices.

HDI = 1/3 (0.333) + 1/3 (0.694 + 1/3 (0.220) = 0.416

Calculating the Human Poverty Index

Background Information

While the HDI measures average achievement, the HPI measures deprivations in the three basic dimensions of human development captured in the HDI:

- Lack of a long and healthy life: vulnerability to death at a relatively early age, as measured by probability at birth of not surviving to age 40.
- Lack of knowledge: exclusion from the world or learning and written communication, as measured by the adult illiteracy rate.
- Lack of a decent standard of living: lack of access to overall economic provisioning, as measured by the percentage of the population not using improved water sources and the percentage of children under five who are underweight (combined in an un-weighted average)

To enable use of most recent data (HBS 2000/01) "population without access to safe water" was used instead of the recommended "population not using improved water sources". It is believed that this does not affect the principles underlying the calculation of the HPI.

Calculating the HPI is more straightforward than calculating the HDI. The indicators used to measure the deprivations area already normalized between 0 and 100 (because they are expressed as percentages, so there is no need to create dimension indices as for the HDI

Illustration of the calculation of the HPI, using data for Kagera region

Measuring deprivation on the "decent standard of living" dimension (P3)

An un-weighted average of two indicators is used to measure deprivation on the 'decent standard of living' dimension. For Kagera, where in 1996 the proportion of children under 5 with underweight was 36.0 percent and where in 2000, 67.2 percent of the population did not have access to safe water, the un-weighted average is 51.6 percent

Unweighted average = ½ (67.2) + ½ (36.0) = 51.6%

Calculation of the HPI

The formula for calculating the HPI is as follows:

$$\mathbf{HPI = (1/3\ (P1+P2+P3))}$$

Where:

P1= Probability at birth not surviving to age 40 (times 100)
P2= Adult literacy rate
P3= Unweighted average of population not using improved water sources and underweight children under age five.
For Kagera region the corresponding values were:
P1= 65%
P2= 36%
P3= 51.6%

The resulting HPI is

$$\mathbf{HPI = (1/3\ (65 + 36 + 51.6)) = 50.8}$$

No weighting has been applied to the three components of the HPI.