Rwanda Public Observatory Report Number 3

Against The Odds: Achieving the MDGs in Rwanda

Pamela Abbott and John Rwirahira

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Status at a Glance

Goal 1: Eradicate Extreme Poverty and Hunger	1990	2010	2015 Target	Status	EDPR 2012 /13[1]	Vision 2020 2010	Vision 2020 2020
Target 1. A: Halve between 1990 and 2015, the proportion of people in poverty	47.5	44.9	23.8		46	40	30
Target 1. B: Productive and Decent Work for All including Women and Children							
Target1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger							
Prevalence of underweight children under five year	29.0	11	14.5				
Proportion of population below minimum level of dietary intake	34	24	17		24		
Goal 2: Achieve universal primary education							
Target 2 Ensure that by 2015 children everywhere, boys and girls alike will be able to complete a full course of primary schooling. Net enrolment ratio in primary school	62.5	91.7	100			100	100
Proportion of pupils starting grade one who reach last grade of primary school		78.6	100				
Literacy rates of women and men aged 15 -24 years.	72.7	83.7	100				
Goal 3:Promote Gender Equality and Empower Women							
Target 3 : Ensure that gender disparity in primary and secondary is eliminated, preferably by 2005 and in all levels for education no later than 2015							
Ratio of boys to girls in primary school	0.90	102					
Ratio of boys to girls in secondary school	0.96	127					
Share of women in waged employment in the non-agricultural sector		31.3	50.0				
Proportion of seats held by women in national parliament	17	56.3	50				
Goal 4:Reduce Child Mortality							
Target 4: Reduce by two-thirds between 1990 and 2015 the infant mortality rate. Infant mortality rate	85	50	28.0		70	80	50
Under-five mortality rate	141	76	47.0				
Proportion of one-year-old children immunised against measles	78.0	90.3	100.0				
Goal 5: Improve Maternal Health							
Target 5A : Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio Maternal mortality ratio	1,300	487	325		600	600	
Proportion of births attended by skilled health professionals	26.0	67	90[2]				
Target 5B: Achieve by 2015 universal access to reproductive health Contraception prevalence rate (condom utilisation 15 – 24 years) Male Female		66.2 42					
Married Women 15-49 years using modern contraceptives		45			75		
Adolescent fertility rate	60	41					
Antenatal care coverage		98.2	100.0				
Goal 6: Combat HIV/AIDS, Malaria and Other Diseases							
Target 6A. Have halved by 2015 and began to reverse the spread of HIV/AIDS HIV prevalence rate amongst population aged 15 -24		1.0			0.5		
Condom use at last high-risk sex 15 - 49 Men		27.6					
Women		28.9					
Proportion of population aged 15-24 years with comprehensive correct knowledge		76.3					
		71.2					
female		0.91					
male							

[1] The Government of Rwanda is committed to achieving the MDGs. For some MDG Goals *EDPRS* and /or Vision 2020 has a target. These are included here for comparison.

[2] This is not an MDG Target but was agreed by the International Conference on Population and Development as a target for 2015 (UN 1999). It was adopted as a proxy measure for monitoring progress towards achieving MDG 5 (Department of Reproductive Health 2008).

Ratio of school attendance of orphans to non-orphans aged 10 – 14 years							
Target 6B: Achieved by 2015 universal access to treatment for HIV/AIDS for all those who need it. Proportion of population with advanced HIV infection using antiretroviral drugs[3] Adults Children		 77 49	 100.0 100.0				
Target 6C: By 2015 have halted and began to reverse the incidence of malaria and other major diseases. Incidence and death rates associated with malaria Mortality rate adults and children over 5 years (per 100,00 population) Morbidity rate children 0 -5 years (prevalence) Proportion of children under five sleeping under an insecticide-treated bed nets		 1.4 69.6	 				
Mortality rate per 1000, 000 population from TB		3.3					
Goal 7 Environmental Sustainability							
Target 7C: Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation Proportion of population using an improved drinking water source	NA	74.2	82.0		86	80	100
Proportion of population using an improved sanitation facility	NA	74.5					
Goal 8 Develop a Global Partnership for Development							
Access to essential drugs		69					
Telephones per 100 population (mobile phone)	NA	45.2					
Personal computers per 100 population	NA	1.7					

On-Track
Warning, May not be Achieved
Off Track

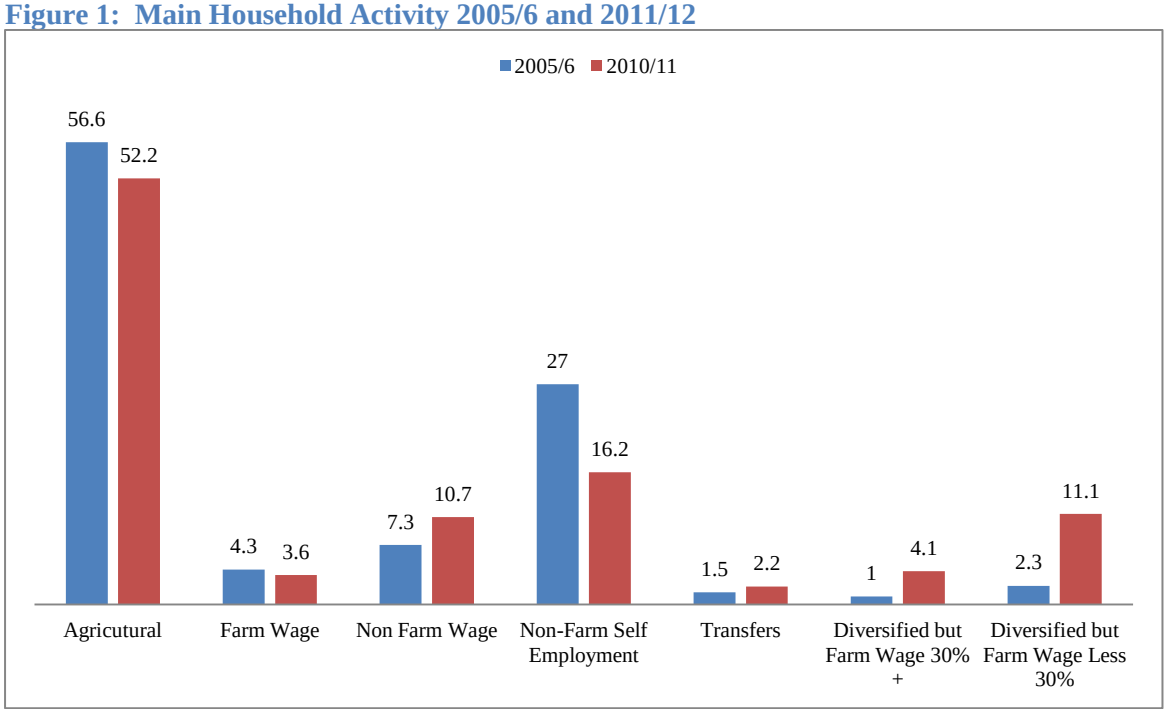
(Sources of Targets and Data: National Institute of Statistics 2006, 2007, 2011, 2012; Ministry of Finance and Economic Planning 2000, 2007; RDHS 1992, 2012)

[3] The issue is not access but take-up. All children and the majority of adults diagnosed as in need of anti-retroviral treatment are entitled to receive it free.

Introduction

In the last five years Rwanda has made dramatic development progress. There has been sustained economic growth and the signs of economic transformation noted in 2005 have been confirmed. There has been a continued growth in non-farm employment and a good performance in all economic sectors. There was an increase in non-farm employment and a consequence reduction in households' reliance on agriculture for their income. Nevertheless by 2010/11 still over half of all households (55.9) relied on agriculture for their survival (Figure 1). Interestingly there was also a decrease in households dependent on non-agricultural income from 34.3 per cent to 27 per cent, driven by a decline in households dependent on non-farm self-employment, down by 10.8 percentage points. However, the latter was more than compensated for by the increase in households with diversified incomes, up from 3.3 per cent to 15.2 per cent - suggesting that there has been an increase in opportunities for farm and non-farm waged employment and that the number of households that are able to benefit from having income from more than one source of income has increased[4].

Figure 1: Main Household Activity 2005/6 and 2011/12

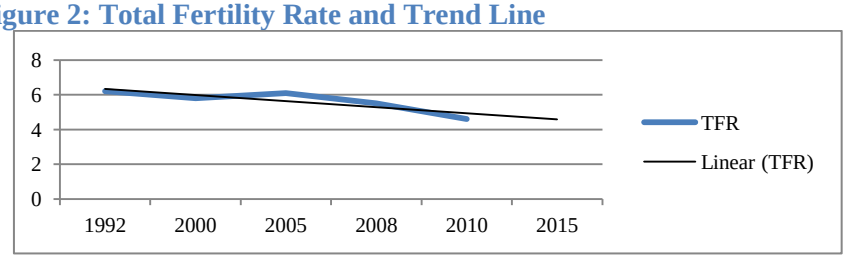


(Source: NISR 2012b)

GDP grew by an average of 8.8 per cent between 2006 and 2011, exceeding the *Vision 2020* of eight per cent. GDP grew by 5.5 per cent in agriculture, 10.1 per cent in manufacturing and 10.5 per cent in services. Between 2005/6 and 2010/11 poverty fell by 11.8 percentage points. This compares with a fall of 1.2 per cent between 2000 and 2005/6. Poverty has fallen faster in Rwanda than in most other successful countries in Sub-Saharan Africa including Ghana (11% between 1998/9 and 2005/6), Senegal (8.5% between 2001 and 2006) and nearly as fast as in Uganda (14.3% between 2002/3 and 2009/10) (NISR 2012b). At the same time there has been a sharp reduction in the total fertility rate (Figure 2), a noticeable move from agricultural work to paid employment and increased agricultural productivity and commercialisation (Figure 1:NISR 2012b). There has been an increase in school attendance and completion at primary secondary and tertiary levels, an improvement in health and increased access to health care and to clean drinking water and improve sanitation.

[4] Vinck *et al* (2009) found that in rural areas households that combine income from more than one source were better off, on average, then those that relied on subsistence farming.

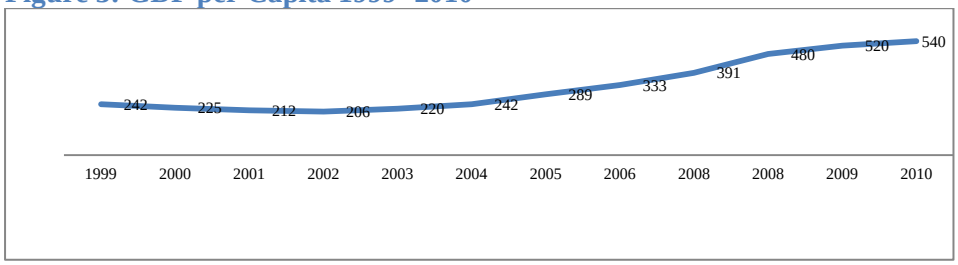
Figure 2: Total Fertility Rate and Trend Line



Sources: MINECOFIN, 2000; Ministry of Health *et al*, 2006, 2009, 2011

The strong economic growth (Figure 3) has transferred into benefitting all the population, with those in the lower wealth quintiles benefitting more than those in the higher ones. The Gini Coefficient fell from 52 per cent in 2005/6 to 49 per cent in 2010/11and the ratio of the 90th percentile of consumption to the 10th also fell. Poverty fell significantly in all the provinces, as did inequalities, except in the Northern Province where it remained unchanged. At the district level, however, poverty reduced in only 13 of the 30 districts (NISR 2012b).

Figure 3: GDP per Capita 1999- 2010



(Source: GDP National Account 20095; NISR 2011)

However, by 2010/11 only 65 per cent per cent of the 2012/13 Key Economic Development Strategy (*EDPRS*[6]) Results Indicators had been achieved or looked to be on track to be achieved (Ministry of Finance and Economic Planning 2012). Of the six *EDPRS* Results Indicators for MDG targets, the 2012/13 target has been achieved by 2010/11 for four out of six – poverty reduction, extreme poverty reduction, maternal mortality and infant mortality. They had not been achieved for uptake of modern contraception or access to clean drinking water. Nor had a reduction in HIV infection rate been achieved, a second generation *EDPRS* indicator.

This raises the question of what progress is Rwanda making to towards achieving the 2015 MDG Targets, which it is committed to achieving. The MDGs represent the world's shared development Goals and are designed to measure progress in improving wellbeing and empowering the poor to take control over their own lives.

This report looks in more detail at the extent to which Rwanda is on track for achieving the 2015 MDG Targets. It mainly looks at the national picture as a whole. A more detailed report with an inequalities analysis by gender, poverty status, age, urban/rural location and district will be published later in the year.

[6] The *Economic Development and Poverty Reduction Strategy 2007-12* (Ministry of Finance and Economic Planning 2007) is the mid-term implementation framework for Rwanda's long term development framework, *Vision 2020* (Ministry of Finance and Economic Planning 20070 .

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Target: Reduce Poverty by Half the 1990 Level by 2015

Indicators

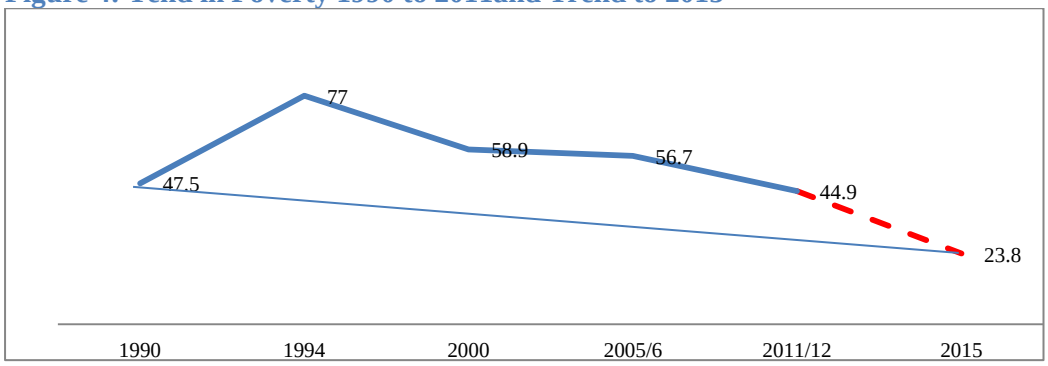
- Proportion of the population below the national poverty line[8].
- The poverty gap ratio.
- Share of poorest quintile in national consumption.

Status at a Glance

- Off track

Figure 3 shows the trend in poverty reduction from 1990 to 2011 and the linear trend to 2015. Despite the strong reduction in poverty between 2005/6 and 2010/11 the 2015 MDG Target is unlikely to be met. Although the *EDPRS* 2012 target had been met by 2010 the *Vision 2020* target of 40 per cent was not met although the 2020 target of 30 per cent will probably be met. In 1990 the poverty rate was 47.5 per cent making the MDG Target 23.8 per cent. Poverty rose sharply after the Genocide against the Tutsi in 1994 to 77 per cent but had fallen back to 58.9 per cent by 2000. The rate fell marginally between 2000/1 to 2005/6 by 2.2 percentage points to 56.7 per cent. Between 2005/6 and 2010/11 it fell dramatically by 11.9 percentage points to 44.9 per cent. However, even if the same rate of decline were to continue, the 2015 MDG Target will not be met. It would require an accelerated decline to achieve the Target. With an average decline of 2.4 per cent a year it will take until 2018/19 to reach the 2015 MDG Target.

Figure 4: Tend in Poverty 1990 to 2011and Trend to 2015



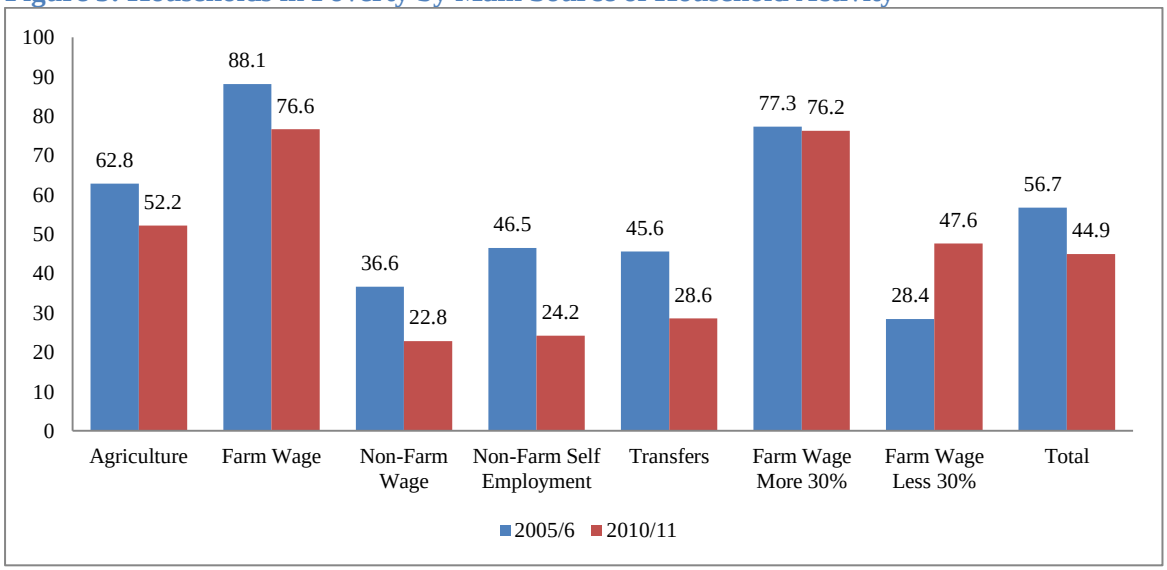
(Source: NISR 2012b, P134)

[7] The *Vision 2020* target for reduction in HIV prevalence had been greatly exceeded but it is now recognised that the 2000 baseline figure overestimated prevalence by at least 100 per cent because it was based on estimates from high risk populations.

[8] The report, as recommended by UNDP, uses the national poverty line. The poverty line is based on the cost of buying the minimum food consumption basket plus an allowance for essential non-food consumption. The extreme poverty line is the cost of buying the minimum food consumption basket.

Figure 5 shows that there has been a decline in poverty for household irrespective of the main source of income, apart from those with diversified incomes with less than 30 per cent coming from paid farm work. However, the largest declines have been for households mainly dependent on non-agricultural income, waged employment, non-farm own account work and transfers.

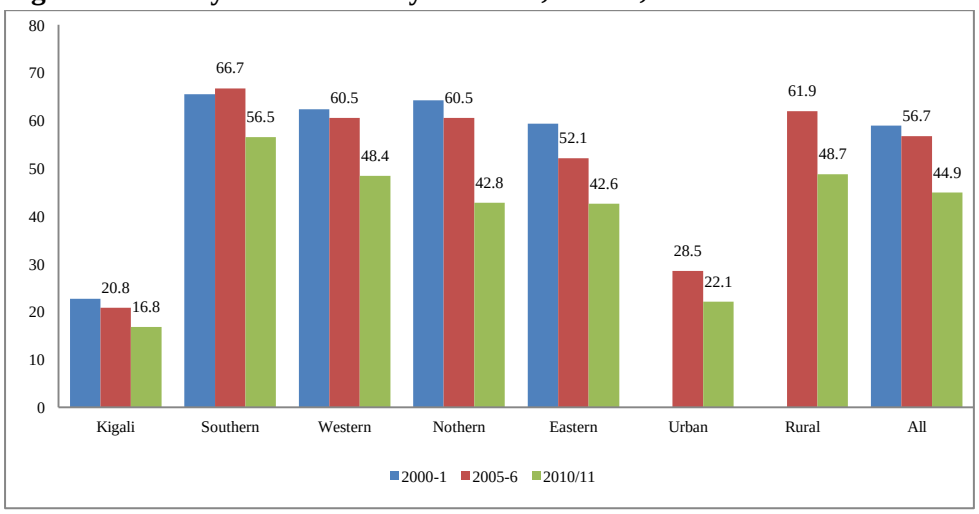
Figure 5: Households in Poverty by Main Source of Household Activity



(Source: National Institute of Statistics 2012b)

Figure 6 shows the reduction in poverty by Province from 2000 to 2010/11. Poverty has reduced in all the Provinces and Kigali City. Southern Province, which experienced a marginally increase in poverty between 2000 and 2005/6, has seen a significant decrease of 10.2 percentage points between 2005/6 and 2010/11. The largest reduction over the period has been witnessed in Northern Province, where poverty has reduced by 15.7 percentage points, and the poverty rate by 2010/11 was much the same as the Eastern Province, which had the lowest provincial poverty rate in 2000 and 2005/6. Kigali city has by far the lowest poverty rate, 16.8 per cent in 2010/11 but has witnessed a much smaller decline in poverty over the period of four percentage points. Between 2005/6 and 2010/11 the rate of decline in poverty was significantly greater in rural areas. The poverty rate fell by 6.4 percentage points in urban areas compared with 13.2 percentage points in rural areas, narrowing the urban rural divide from 33.5 percentage points to 26.6 percentage points.

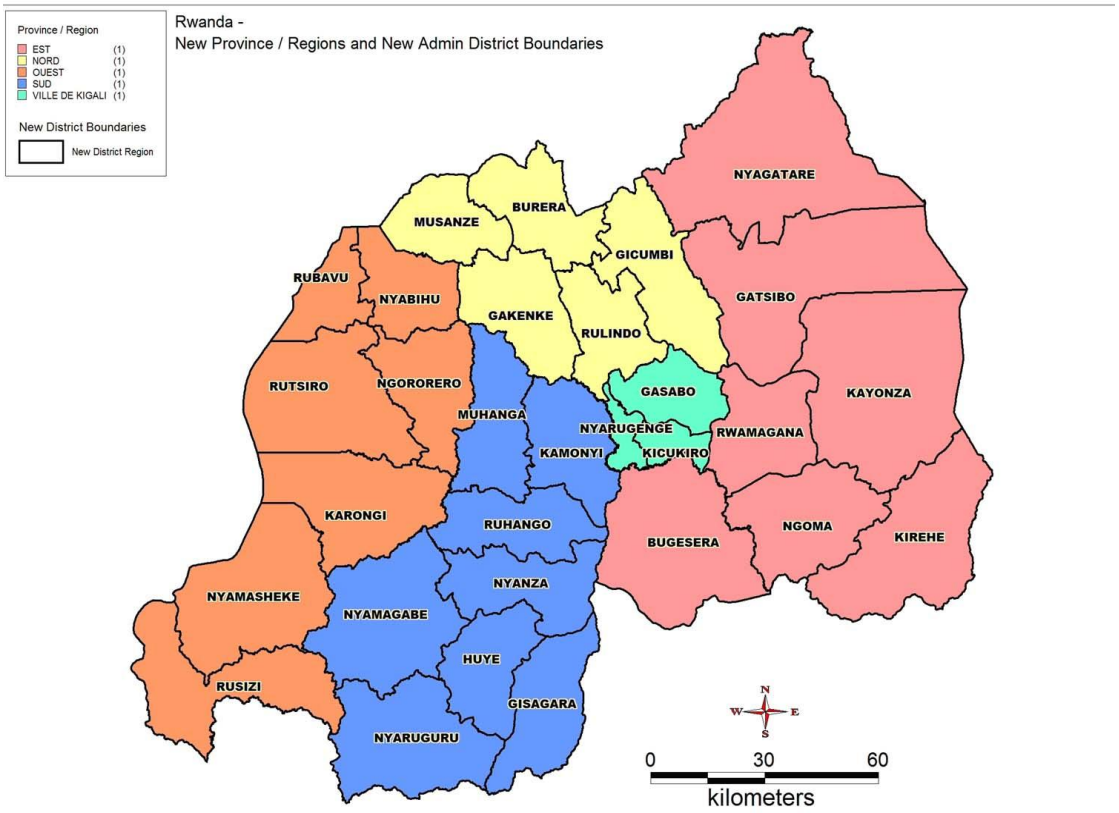
Figure 6: Poverty Head Count by Province, 2000-1, 2005-6 and 2010/11



(Source: NISR 2012b, P134)

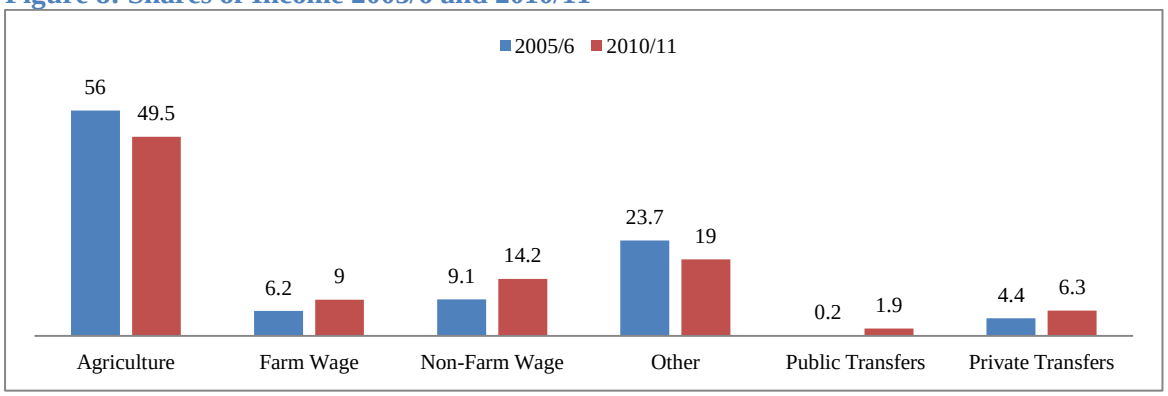
However, poverty only fell in 13 of the 30 Districts and there are very large variations by district (NISR2012a). In 2005/6 poverty ranged from 10 per cent in the least poor district to 85 per cent in the poorest. By 2010/11 it ranged from 8.3 per cent in the least poor district to 70 per cent in the poorest. The three least poor Districts are Musane in Northern Province and Kicukiko and Nyarugenge in Kigali City. The six poorest Districts are located in the Southern and Western Provinces - Gisagera, Nyarguru, Nyamake and Nyanza in Sothern Province and Karongi and Nyamasheke in Western Providence (Figure 6; NISR2012b, P138).

Figure 7: District Map of Rwanda



The main explanations for the significant fall in poverty between 2005/6 and 2010/11 are an increase in farm productivity and the sale of agricultural products and the increase in non-farm income. The share of income from mainly subsistence agriculture fell by 6.5 percentage points whilst that from non –farm wage income increased by 5.1 percentage points and that from 'other', which includes small non-farm enterprises, increased by 4.7 percentage points. Public and private transfers also increased (Figure 8).

Figure 8: Shares of Income 2005/6 and 2010/11

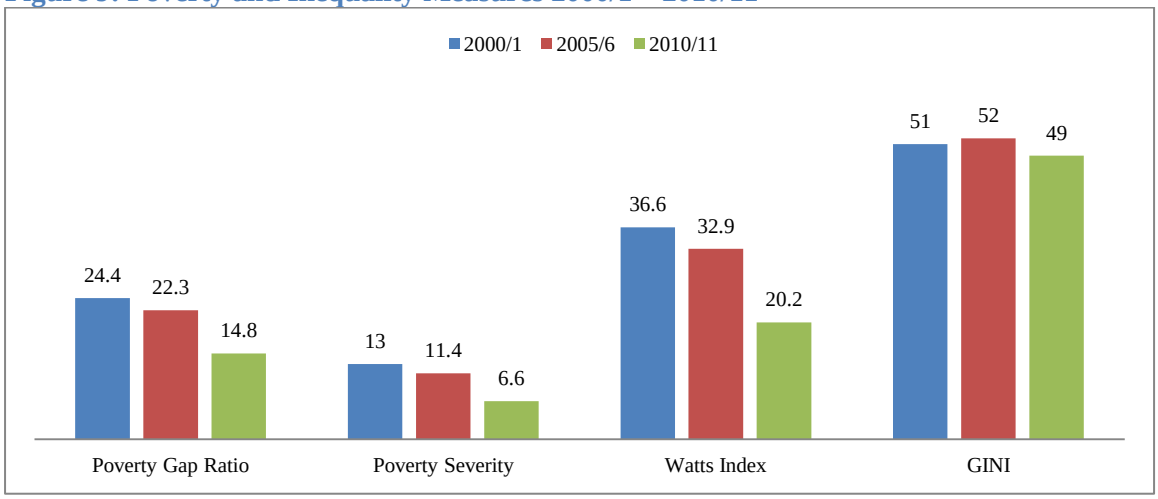


(Source: NISR 2012b)

Provided growth can be maintained and inequality does not increase then the prospects for future poverty reduction are good. Between 2005/6 and 2010/11 inequalities as measured by the Gini Coefficient fell as compared with the period between 2000 and 2005/6, when inequalities increased (Figure 9). However, the recent growth has been translated into significant poverty reduction. Between 2005 and 2010/11, growth was faster at the bottom of the income hierarchy than at the top, resulting in a reduction in inequalities. This contrasts with the 2000-2005/6 period, when income grew faster among the better off and inequalities increased. Inequalities have reduced in all Provinces and are now marginally lower than in 2000. We that should note, however, that the 2010/11 Gini of 49 per cent is still well above the *EDPRS* 2012/13 and *Vision 2020* 2010 target of 40 per cent. On present trends it is unlikely that the *Vision 2020* target of 35 per cent will be met.

Figure 9 also shows the trend in standard poverty measures, the poverty gap ratio, the poverty severity measure and the Watts index. All the indices fell over the period 2000 – 2010/11, with a much sharper decline between 2005/6 and 2010/11 than in the earlier period. The poverty severity measure, for example, fell by just under half over the period, with most of the fall in the second half. The Watts index measures depth of poverty and permits estimation of the average time it takes a household to escape poverty. If the incomes of the poorest 57 per cent in 2005/6 continue to grow at the average rate for 2005/6-2010/11 (5.6%), the average length of time it will take for a household to escape poverty will be 3.6 years. If the rate of growth is 4.4 per cent, the average for the period 2005/6-2010/11, then the average time to escape poverty will be 4.5years.

Figure 9: Poverty and Inequality Measures 2000/1 – 2010/11



(Source: NISR 2012a; 2012b)

Target: Productive and Decent Work for All, Including Women and Children

Indicators

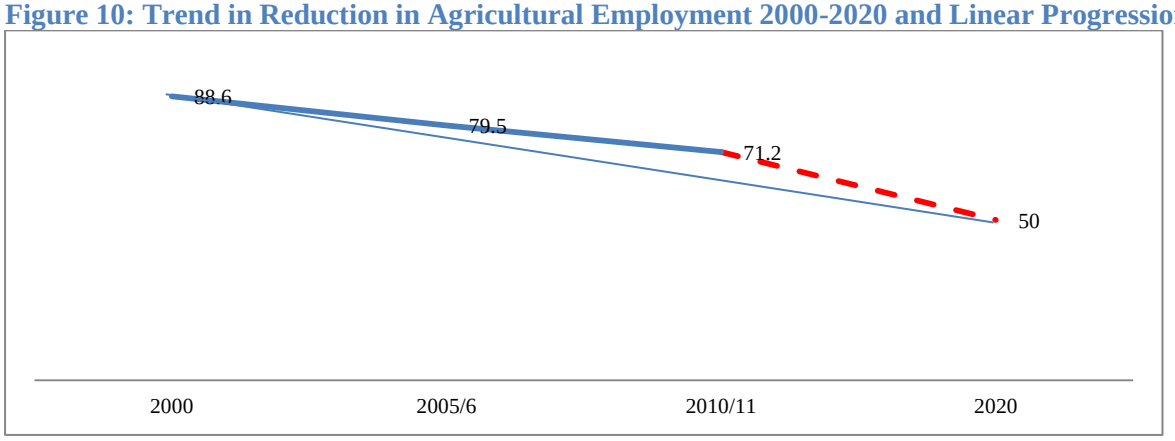
- Growth rate of GDP per person employed.
- Employment-to-population ratio.
- Proportion of people employed living below the national poverty line.
- Proportion of own account and contributing family workers in total population.

Status at a Glance

- Off Track

A new MDG Target introduced in 2007 relates to decent work and the importance of paid non-farm work for poverty reduction. This is in recognition of the fact that full and productive employment is the main route out of poverty. In Rwanda a majority of workers do not have decent jobs as defined by the International Labour Organisation and used as the MDG definition (Schmidt nd). There is, however, no specific target but *Vision 2020* set a 2010 target of 25 per cent non-agricultural employment by 2010 and 50 per cent by 2020. By 2010 28.8 per cent of workers were in non-agricultural employment. The target is 50 per cent by 2020 and at the current rate of movement out of agricultural employment looks unlikely to meet this target (Figure 10).

Figure 10: Trend in Reduction in Agricultural Employment 2000-2020 and Linear Progression



(Source: Ministry of Finance and Economic planning 2000; NISR2012)

The employment to population ratio is an indication of the ability of an economy to absorb adults seeking employment - that is, to provide full employment. However, a ratio of over 80 per cent is generally an indicator of an abundance of low-quality jobs and the need to work to survive. In Rwanda the economic activity rate is over 80 per cent. It has declined since 2000 from 86.7 per cent to 84.2 per cent in 2010/11. However, there was virtually no change between 2005/6 and 2010/11 (0.2%).

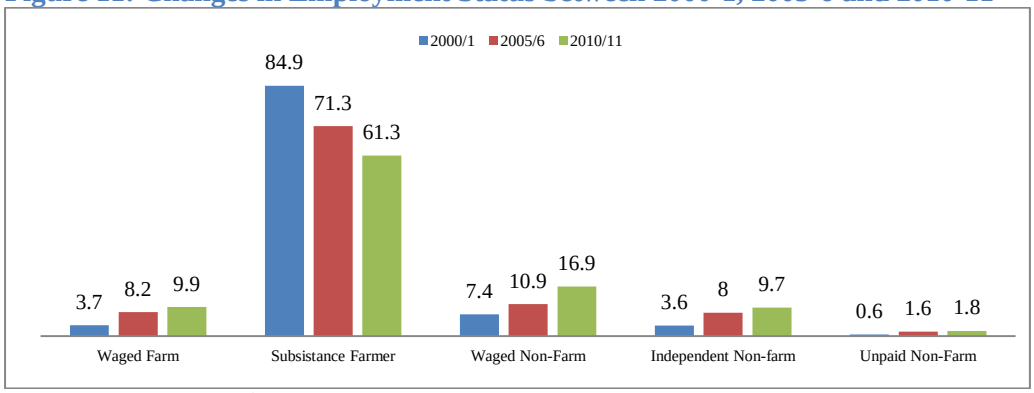
The proportion of employed people living below the national poverty line is a measure of the proportion of people who work for a poverty wage - in other words, are not able to earn sufficient to bring themselves out of poverty. This is different from the headline poverty figure which is a measure of households, as it is a measure of 'individuals in employment' poverty status. In 2005/6 55 per cent of workers earned a poverty wage. The figure for 2010/12 is not yet available but it will have declined significantly compared with 2005/6 and is almost certainly going to be below the headline poverty count of 44.9 per cent.

The proportion of own-account and contributing family workers is a measure of vulnerable employment. This is a measure not only of vulnerability to poverty but of vulnerability to poor work

conditions. Using this definition, there has been a significant decline in vulnerable employment, a decline of 16.3 percentage points over the 10 year period 2000-2010. In 2010/11, 72.8 per cent of workers were in vulnerable employment, compared to 80.9 per cent in 2005/6 and 89.1 per cent in 2000 (Figure 9). However, in Rwanda research has demonstrated that non-farm self-employment can reduce household poverty (Abbott 2010; Vinck *et al* 2009). On the other hand, paid farm employment is the poorest paid of all work and concentrated in the informal sector where workers are unlikely to enjoy the full protection of employment law. We do not have the figures yet for 2010/11, but in 2005/6, 91 per cent of waged farm workers were in the informal sector, compared to 58 per cent of non-farm waged employees (Strode *et al* 2007). In 2010/11, 16.9 per cent of workers were in non-farm waged/salaried employment, but they made up 22.2 per cent of the non-poor; 9.7 per cent were in independent non-farm employment, but they made up 12.5 per cent of the non-poor. Conversely, Farm employment accounted for 9.9 per cent of employment but only 6.4 per cent of the non-poor. Small-scale farmers made up 61.8 per cent of the employed but only 56.7 per cent of the non-poor.

Figure11 shows that between 2000 and 2010/11 there was a significant move out of subsistence farming and a corresponding increase in waged farm, waged non-farm and independent non-farm employment. By 2010/11, 16.7 per cent of workers were in waged employment and 9.7 per cent in non-farm self-employment, compared with 7.4 per cent and 3.6 per cent respectively in 2000, an increase of 9.5 and 6.1 percentage points respectively.

Figure 11: Changes in Employment Status between 2000-1, 2005-6 and 2010-11



(Source: National Institute of Statistics 2012b)

Thus whilst we cannot measure accurately the proportion in decent employment as defined by the International Labour Organisation, our analysis suggests that there has been an increase in decent employment in Rwanda but that the overwhelming majority of workers are still not in decent work.

Target: Halve the Proportion of People who Suffer from Extreme Hunger

Indicators

- Prevalence of underweight children under five years of age.
- Proportion of the population below minimum level of dietary energy.

Status at a Glance

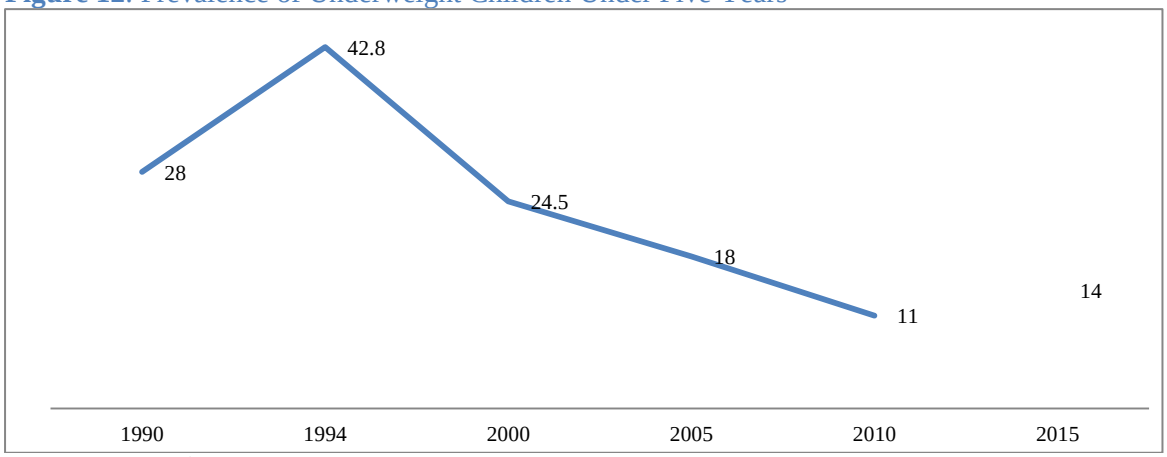
- On track for children under five years of age
- On track for population as a whole.

Nutritional status is an important measure of health as well as being related to poverty. The definition of extreme poverty in Rwanda is the inability to afford the basic basket of food which provides the minimum calories necessary for an active adult, 2,300 a day.

Nutrition continues to be a public health concern, although there is a strong commitment to tackling the problem. A number of initiatives and interventions have been put in place over the last 10 years including the *National Nutrition Policy* in 2007, the *National Protocol on Management of Malnutrition* in 2009 and the *National Multisectorial Strategy to Eliminate Malnutrition* in 2010.

Figure 12 shows that Rwanda has already achieved the 2015 MDG Target for the prevalence of underweight children. By 2010 the proportion of underweight children under five years had declined to 13.7 per cent, 11.4 per cent below -2 SDs and 2.3 per cent below -3SDs. There has also been a decline in stunting (height-for age) from 51 per cent in 2005 to 44 per cent in 2010 and wasting (weight-for height) from five per cent in 2005 to three per cent in 2010. Despite this progress the 2010 DHS comments on the slow progress being made in improving the nutritional status of women and children.

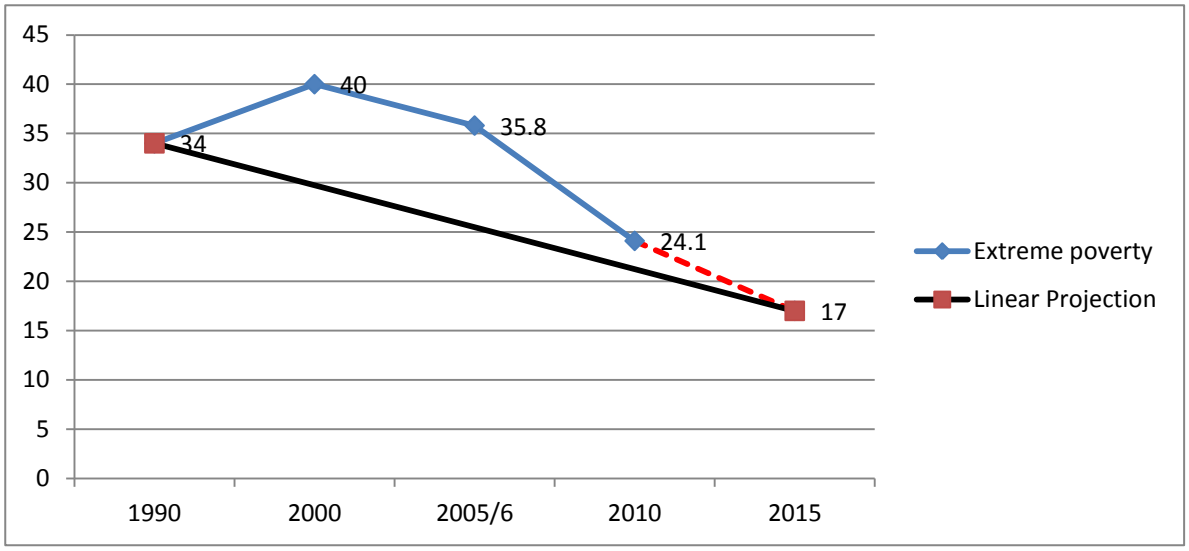
Figure 12: Prevalence of Underweight Children Under Five Years



(Sources: Republic of Rwanda and United Nations 2003, P14: NISR2009, P38; Vinck *et al* 2009, p71, NISR *et al* 2011))

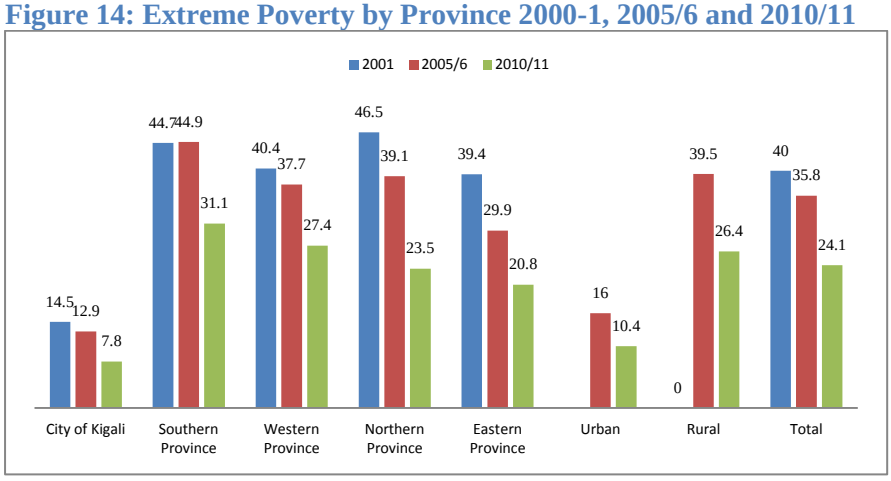
Figure 13 shows the trend from 1990 to 2010/11 in extreme poverty, which is a proxy measure of the proportion of the population below the minimum level of dietary intake. It shows that there has been a reduction in extreme poverty since 2000 and that the MDG Target of 17 per cent is almost certain to be met. The reduction between 2005/6 and 2010/11 was 11.7 percentage points, an average of 2.4 a year. This suggests that the Target for extreme poverty will be achieved by 2013/14 if extreme poverty continues to fall at the same average rate a year as it did between 2005/6 and 2010/11.

Figure 13: Trend in Extreme Poverty 2000-2010/11 and Linear Progression



There has been a narrowing of the gap in extreme poverty between rural and urban areas and a narrowing of the differences between the Provinces. Figure 13 shows that there has been a decline in extreme poverty in all Provinces and in rural as well as urban areas. In the last decade extreme poverty has fallen by around 50 per cent in Kigali City and the Northern and Eastern Provinces. Extreme poverty is highest in Southern Province (31.1%), where it is a third higher than Eastern Province (20.8), which has the lowest rate of the Provinces. Kigali City has the lowest rate of extreme poverty, 7.8 per cent, only just over a third of the rate in Eastern Province. Extreme poverty fell in rural areas by 13.1 percentage points compared with 5.6 percentage points in urban areas between 2005/6 and 2010/11. The urban/rural gap was 23.5 percentage points in 2005/6 and had fallen to 16 percentage points by 2010/11.

Figure 14: Extreme Poverty by Province 2000-1, 2005/6 and 2010/11



(Source: NISR 2012b, P135)

Target: Ensure that All Boys and Girls Complete a Full Course of Primary Education

Indicators

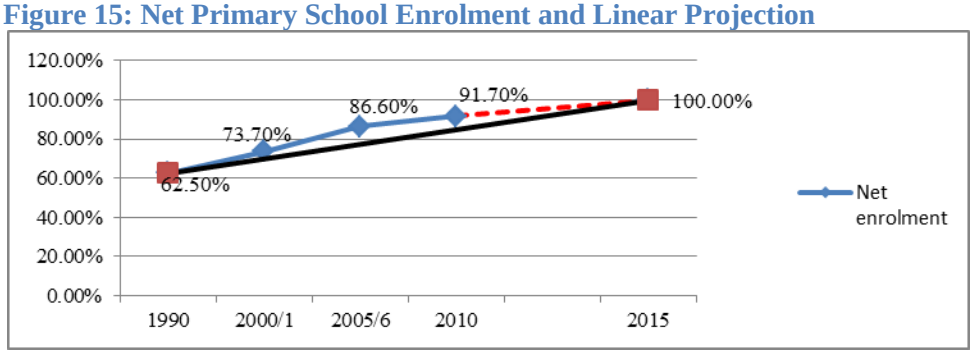
- Net enrolment ratio in primary education.
- Proportion of pupils starting grade 1 who finish grade 6.
- Literacy rate of 15-24 year olds.

Status at a glance

- Potential to Achieve with Accelerated Progress

Despite the significant progress that has been made in getting children into school and enabling them to complete primary education, Rwanda has moved off track for achieving the 2015 MDG Targets. The *Vision 2020* target of 100 per cent by 2010 was not achieved and there will need to be a concerted effort if the2015 Target is to be achieved. The rate of progress towards achieving 100 per cent net primary school enrolment has slowed as the net enrolment rate has increased. The rate increased by 24 percentage points between 2000 and 2005/6 but only by 5.1 percentage points between 2005/6 and 2010/11, an average of one percentage point a year (Figure 15(. At the current rate of progress it will take at least until 2018/19 to achieve the 2015 MDG Target. It becomes more difficult to get the remaining children into school so it may take longer. Additional effort will be required to achieve the Target by 2015.

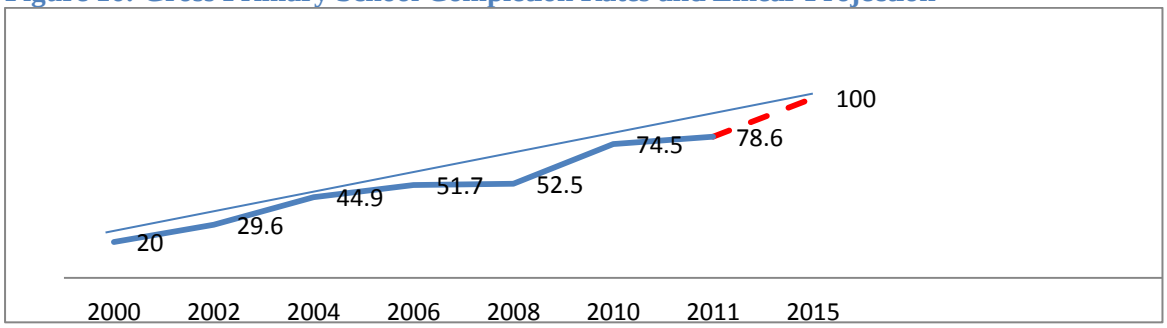
Figure 15: Net Primary School Enrolment and Linear Projection



(NISR 2012b)

Figure 16 shows gross completion rates for primary school. There has been an increase of 58.6 percentage points over the last decade but progress has been uneven, with a sharp rise between 2008 and 2010 of 22 percentage points (an average of 10 a year) and 4.1 between 2010 and 2011. If the rate of increase between 2010 and 2011 is maintained then the MDG Target could be achieved but it looks a tough challenge and will require additional effort to accelerate progress.

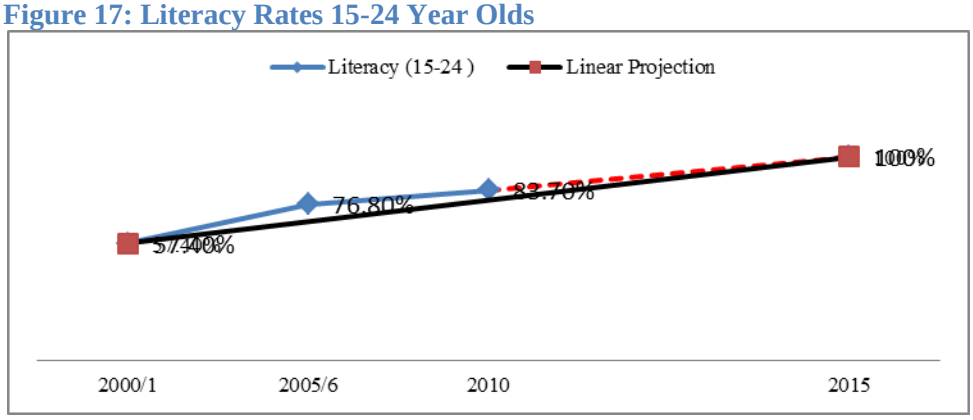
Figure 16: Gross Primary School Completion Rates and Linear Projection



(Source: NISR 2007 P12; NISR2009, P63,:Education Sector strategic plan 2010-2015; Rwanamiza 2011)

Figure 17 shows the literacy rates for 15-24 year olds, which is a proxy for the effectiveness of the education system. As would be expected, literacy rates have increased with the increase in school enrolment and completion rates. By 2010/11 literacy amongst 15-24 year olds stood at 83.7 per cent, an increase of 26.3 percentage points in the last decade. However, the 100 per cent literacy rate will be achieved only when 100 per cent of children go to school and stay in school long enough to gain basic literacy skills. Those who will be 24 in 2015 would have started school in 1998 and those who will be 15 started in 2007. Some of these will never have attended school and others will have withdrawn before they gained basic literacy skills.

Figure 17: Literacy Rates 15-24 Year Olds



(NISR 2012b)

Vision 2020 had a target of 80 per cent adult literacy by 2010. Although we do not have the figure, given that the adult literacy rate is lower than that for 15-24 year olds it is very unlikely to have been met. The 2020 target of 100 per cent adult literacy is clearly not going to be achieved. One hundred per cent adult literacy will not be achieved until all children attend school and remain in school until they have at least achieved basic literacy skills.

Target: Eliminate Gender Disparity in Primary and Secondary Education Preferably by 2005 and at all Levels by 2015

Indicators

- Ratio of girls to boys in primary schools.
- Ratio of literate women to men aged 15-24 years.
- Proportion of seats held in parliament by women.
- Share of women in waged employment in the non-agricultural sector.

Status at a glance

- Achieved for ratio of boys to girls in primary school and proportion of women in parliament.
- Off track for share of women in waged non-farm employment.

There are three key indicators that are used to measure the gender gap: education, employment and political representation. Rwanda has one of the narrowest gender gaps in the world. However, this should not be confused with the empowerment of women (Abbott *et al* 2012). The analysis of the trends since 2000 suggests that the gap in education at primary and secondary level has disappeared but the gap in tertiary education has not decreased. The gap in employment has widened, with men capturing more of the opportunities to move into non-farm work than women.

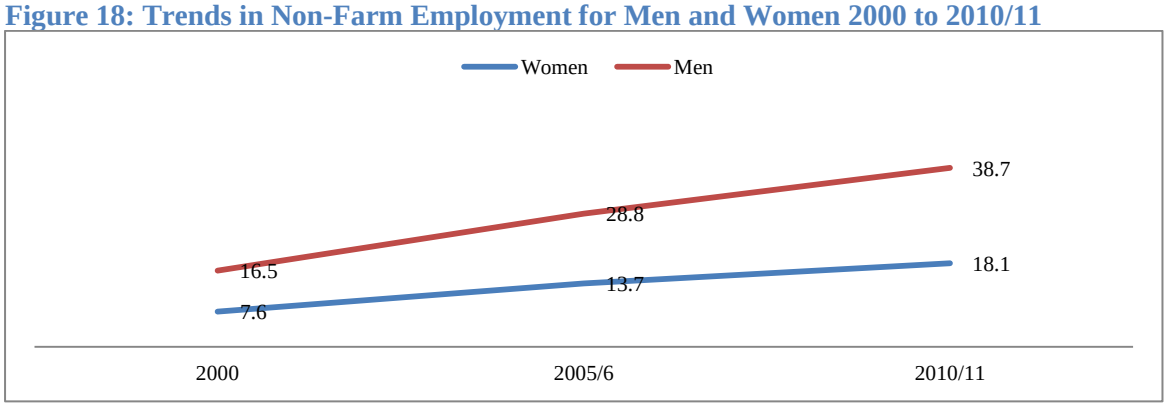
The target for the ratio of girls to boys in primary education has been achieved. It has also been achieved at secondary level. It is only in TVET and higher education that the proportion of boys exceeds that of girls (Rwanamiza 2011). There are nearly a third more men attending tertiary education than women, three per cent and 2.1 per cent respectively. The increase between 2005/6 and 2010/11 was 50 per cent for both men and women, indicating that there has been no narrowing of the gap.

The literacy rate for young women aged 15-24 years is now higher than that of young men, 84.7 per cent compared with 82.5 per cent. It was the same in 2005/6.

The Target for the proportion of women in Parliament has also been achieved, with Rwanda being the first country in the world to achieve this Target in 2008.

However, the Target of 50 per cent of non-agricultural employees being women has not been achieved, and indeed the gap between men and women widened between 2005/6 and 2010/11 as it had done between 2000 and 2005/6. In 2005/6, 13.7 per cent of women were employed in remunerated non-agricultural work (waged and independent), compared with 28.8 per cent of men, three quarters of the additional paid non-farm jobs created between 2001 and 2006 were taken by men, and men were responsible for 60 per cent of small business start-ups (Strode *et al*, P10). In 2011/12, 38.7 per cent of male workers were in non-farm jobs compared with 18.1 per cent of female workers, an increase of 9.9 percentage points for men compared with 4.4 percentage points for women (NISR 2012b) (Figure 18).

Figure 18: Trends in Non-Farm Employment for Men and Women 2000 to 2010/11



(Source: NISR 2006; NISR2012b)

Target: Reduce by Two Thirds the Mortality Rate among Children Under Five Years
Indicators

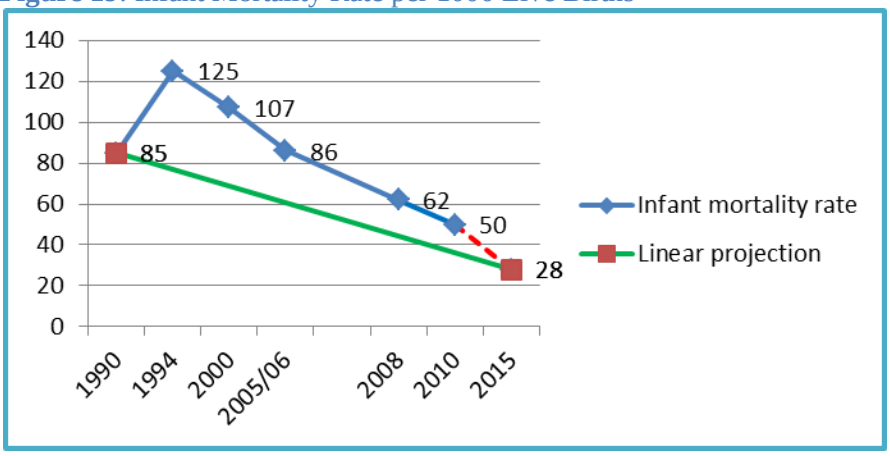
- Under-five mortality rate.
- Infant mortality rate.
- Proportion of 1-year-old children vaccinated against measles.

Status at a glance

- On Track

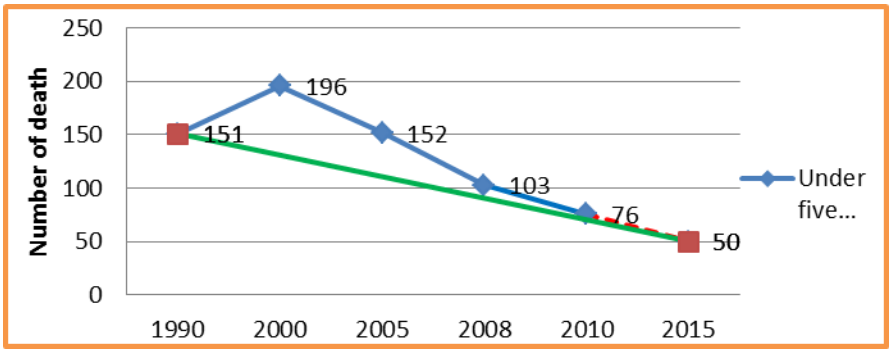
There have been dramatic improvements in children's health in the last decade and the MDG Targets for infant mortality and under-five mortality look set to be achieved (Figures 19 and20). The *Vision 2020* 2010 target and the *EDPRS* 2012 target have been achieved. If the same rate of progress is maintained as that between 2008 and 2010 then the infant mortality MDG Target should be achieved in 2014 and the under-five Target by the end of 2012, both well ahead of 2015.

Figure 19: Infant Mortality Rate per 1000 Live Births



(Source: NISR 2007a P24; NISR 2009, P7, Ministry of Health et al 2011)

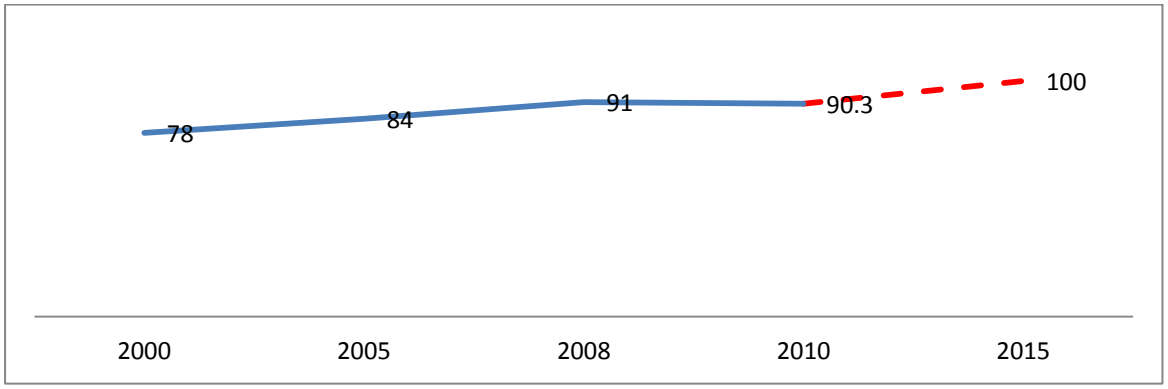
Figure 20: Under 5 Years Mortality Rate per 1000 Live Births



(Source: NISR 2007a, P23; NISR 2009, P8; Ministry of Health *et al* 2011)

However, the 100 per cent target for the proportion of one-year-old children immunised against measles is very unlikely to be met. A 100 per cent take up of immunisation is improbable given parents with religious and other objections to having their children immunised. However, the 90 per cent coverage which has already been achieved gives 'herd immunity'.

Figure 21: Proportion of One-Year-Old Children Immunised Against Measles



Target: Reduce by Two Thirds the Maternal Mortality Rate

Indicators:

- Maternal mortality rate.
- Proportion of birth attended by a skilled health professional.
- Contraception prevalence rate (condom utilisation 15-24 year olds).
- Adolescent birth rate.
- Antenatal care coverage.
- Unmet need for family planning.

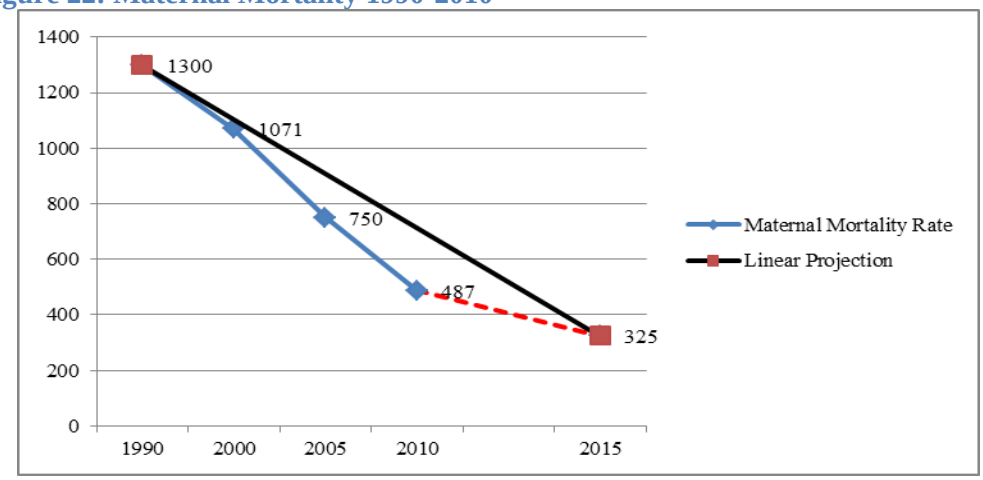
Status at a glance

- On track

There have been significant improvements in women's health over the last 10 years, with a dramatic decline in the maternal mortality rate, an increase in births attended by a skilled worker and increased uptake by married women of modern methods of contraception. Both the Vision 2020 2010 and *EDPRS* 2012 targets have been achieved for maternal mortality.

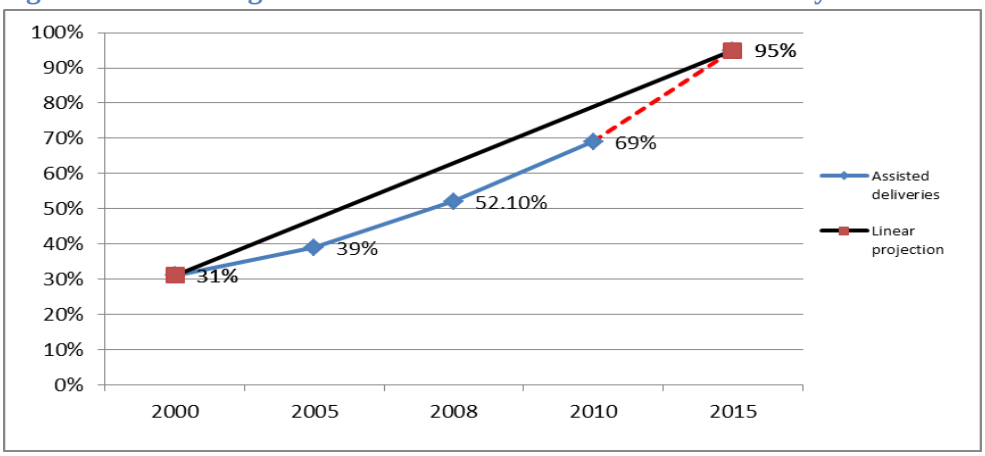
In Figure 22 we show the decline in the maternal mortality rate from 1990 to 2010 and the trend to 2015. We use as the 1990 figure the World Health Organisation revised estimate. Using this figure the 2015 Target should be met by 2013. The Government generally use a rate of 611 for 1990 and 268 for 2015 which on current trends would mean the Target would be met by 2015. However, if the 1990 rate is taken as 611 then the target should be 152 in which case the 2015 MDG Target would not be met until on current trends until 2017 (see Appendix). One should note, however, the maternal mortality rate in the 2010 DHS is a six-year average and therefore does not fully reflect the dramatic decline in maternal deaths in health facilities witnessed as a result of the introduction of maternal death audit (Ngabo *et all* 2011). The introduction of audits reduced maternal mortality by around 50 per cent, mainly because of a reduction in deaths from postpartum haemorrhage.

Figure 22: Maternal Mortality 1990-2010[9]



Given the unreliability of maternal mortality figures in developing countries, the UN have introduced as a proxy indicator the percentage of births attended by a skilled birth attendant (UN 1999). Figure 23 shows the trend for births attended by a skilled health care worker between 2000 and 2010 and the trend to 2015. If the average rate of progress between 2005 and 2010 (6% a year) is maintain then the MDG 2015 Target of 95 per cent of births attended by a skilled worker will be achieved. Rwanda has, in any case, put in place a system of emergency response so that community health workers can ensure that women get appropriate treatment in an emergency and Graham *et al* (2001) argue as a based on a meta-analysis of research that this is the most effective way to reduce maternal mortality in developing countries.

Figure 23: Percentage of Births with Skilled Attendant at Delivery 2000-2010



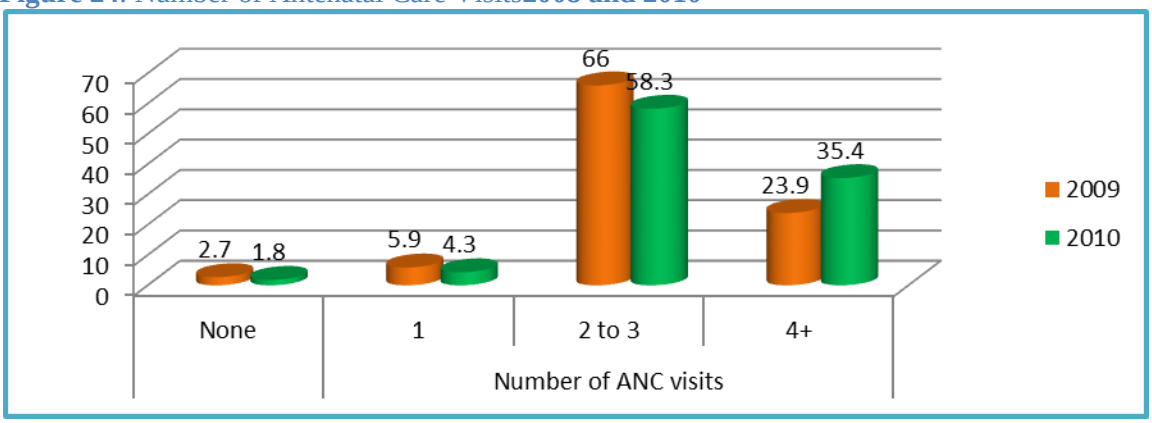
Source: Abbott and Rwirahira, 2011

Antenatal care is also seen as important and enables early diagnosis of potential problems, the prescribing of iron supplement and testing for HIV. Attendance for antenatal care is high (Figure24). In 2010 98.2 per cent of pregnant women attended at least one antenatal care visit. However, only

[9] The rate for 1990 is the revised estimate by WHO and UNICEF (WHO 1996) developed to enable progress towards achieving the MDG for maternal mortality to be measured. It is significantly higher than the rate of 611 which was reported in the *2007 Rwanda Country Report* (NISR 2007b) and is higher than the figure used in Hogan et *al*'s 2010 analysis – 813 (508 – 1223) published in the *Lancet*.. Measuring maternal mortality has been difficult because of poor-quality data (Hogan *et al* 2010). See the Appendix for graphs showing the trend based on the figures used in other reports in Rwanda.

35.4 per cent made the WHO recommended four visits. Also, only 1.8 per cent attended for a visit during the first trimester, as recommended by the world Health Organisation.

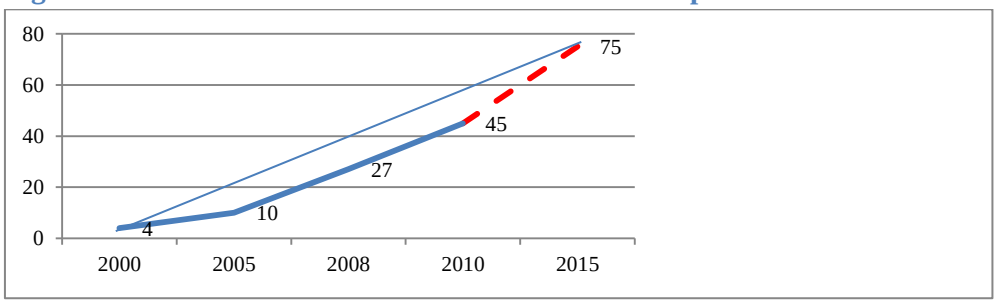
Figure 24: Number of Antenatal Care Visits**2008 and 2010**



(Source: NISR *et al* 2010, P112)

The use of modern contraception by married women has also increased dramatically, from four per cent in 2000 to 45 per cent in 2010. However, this is well short of the *EDPRS* 2012/13 target of 75 per cent. The 2010 DHS estimates that there is an unmet need for family planning by 19 per cent of married couples. This suggests that the government's target figure is higher than the existing demand and that to achieve the 75 per cent there will have to be further demand stimulation.

Figure 25: Married Women's Use of Modern Contraception 2000-2010 and Trend[10]



Source: DHS, 2000, 2005; IDHS, 2007; DHS, 2010

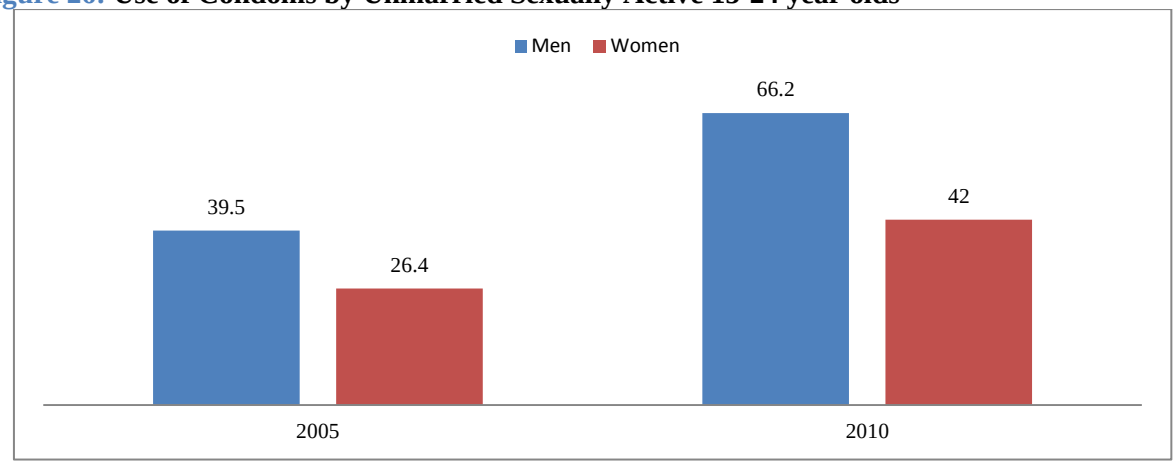
The availability of contraception for unmarried men and women is also important and an especially vulnerable group are young people aged 15-24 years. Early pregnancy, especially outside of marriage, has a negative impact on a young women's transition to adult life and her future prospects for economic empowerment. Abortion except when there is a threat to the life of the mother is illegal in Rwanda. However, the demand for family planning by young unmarried women is very low, two per cent for young women aged 15-19 and 6.3 per cent for those aged 20-24. Half of the of the demand for those aged 15-19 years is met and 70 per cent for those aged 20-24 years.

An alternative way of measuring unmet need for modern contraception by young people is the proportion that are sexually active and used a condom at their last sexual encounter. Figure 26 shows the use of condoms by sexually active unmarried young people. It shows that there has been an increase in the use of condoms between 2005 and 2010 for both young men and women with men being significantly more likely to say they used a condom. In 2010 two thirds of young men used a

[10] The target is the 2012 *EDPRS* target.

condom but only 42 per cent of young women. This suggests that there is a significant unmet need for modern contraception by young people.

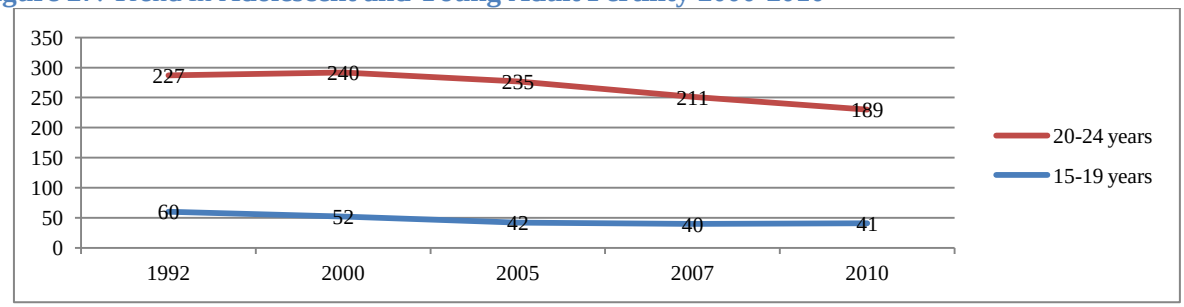
Figure 26: Use of Condoms by Unmarried Sexually Active 15-24 year olds



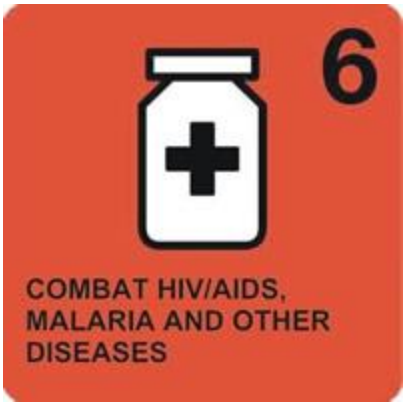
(NISR *et al* 2011)

Early pregnancy is also a problem for young women. It can have a negative impact on transition to adult roles, cause school dropout and poses a higher risk to the health of the mother than delaying childbirth until the twenties. Figure 27 shows the trend for adolescent and young adult fertility. Adolescent fertility has declined only slightly since 1992 and remains relatively high at 41 births per 1,000. Young adult fertility has declined since 2000 from 240 to 189 but still remains high.

Figure 27: Trend in Adolescent and Young Adult Fertility 2000-2010



Source: HDS, 2000, 2005: IDHS 2007/8; DHS, 2010



Target: Have halted by 2015 and begun to reverse the spread of HIV/AIDS and provide universal access to treatment for HIV/AIDS for all those who need it

Indicators

- HIV prevalence among population aged 15-24 years.
- Condom use at last high-risk sex.
- Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS.
- Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years.
- Proportion of population with advanced HIV infection with access to antiretroviral drugs.

Status at a glance

- Off track

HIV infection is a major public health concern in Rwanda, where it is the main cause of mortality and has a negative social and economic impact on everyone in the country. Despite significant investment by the Government of Rwanda, Development Partners and NGOs in sensitisation and education about HIV there has been no decline in the HIV infection rate since the 2005 DHS. Data from the 2010 DHS (NISR *et al*., 2011) found an HIV prevalence rate of 3 per cent in the general population aged 15-49 years. HIV prevalence in urban areas (7.1%) was much higher than in rural areas (2.3%); and HIV women (3.7%) than in men (2.2%). The rates for young people aged 15-24 are also virtually unchanged, being one per cent in 2010 (1.5% female, 0.4% male, 2.7 urban, 0.7 rural) compared with 1.2 per cent in 2005. The *EDPRS* target for 2012/13 will not be met.

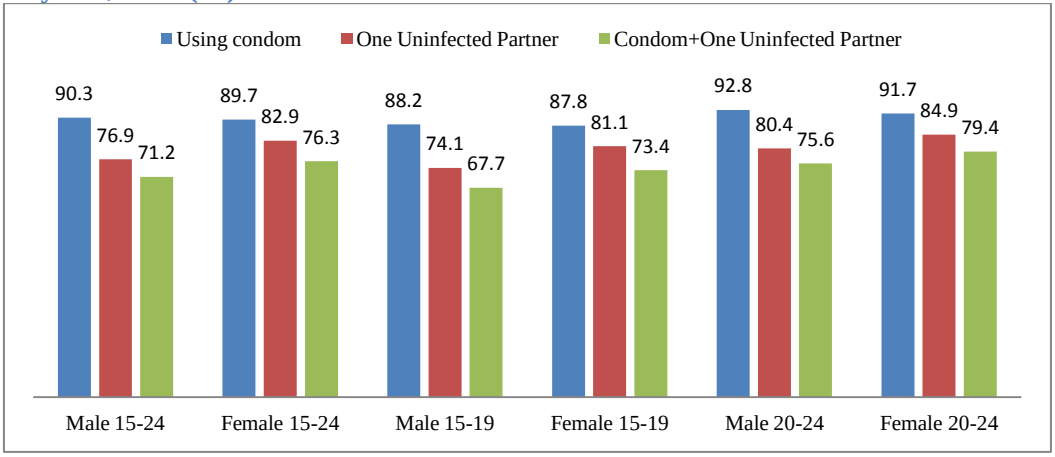
There seems to have been only a modest decline in prevalence rates since 2000[11]. The *HIV, AIDS and STIs 2008 Annual Report* reported global prevalence rates declining from 5.2 per cent in 2002 to 4.1 per cent in 2005, with an increase to 4.3 per cent in 2007. In 2008 the proportion of people who tested positive for HIV following voluntary testing was 3.7 per cent for women and 3.0 per cent for men. A Behavioural Biological Survey (BBS) conducted in 2010 found that HIV prevalence had increased among young people aged 16 to 19 years in two areas of Kigali (Biryogo and Gikondo) and was 16 per cent compared with a national HIV prevalence rate of 0.5 per cent for young people in the 2005 DHS (National Institute of Statistics *et al*., 2005).

In the 12 months prior to being interviewed for the 2010 DHS, 38.6 per cent of women aged 15-49 and 36.6 per cent of men aged 15-59 had been tested for HIV and had the results. Just over three quarters of the women (75.5%) and 68.6 per cent of the men had ever been tested and had the results. For women and men both for ever tested and tested within last year the percentage tested increases with age to 39 years and then declines.

[11] Reliable up-to-date data on HIV prevalence will not be available until the full findings of the 2010 DHS are published.

Knowledge of how to prevent HIV transmission amongst young people is high, with around 90 per cent of 15-24 year olds knowing that a condom provides protection. However, nearly a third of young men and a quarter of young women are not aware of the importance of using a condom and having one uninfected partner (Figure 28).

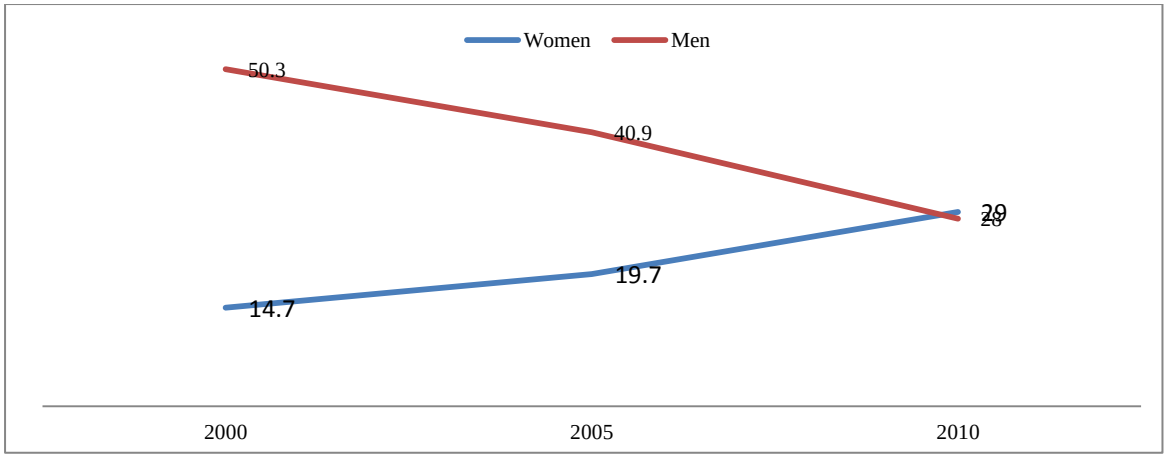
Figure 28: Knowledge of HIV Prevention Methods Amongst Male and Female Youth 15 to 24 years, 2010 (%)



Source: NISR *et al*, 2011

Although around 90 per cent of men and women aged 15-49 (with little variation by age) say that the risk of HIV transmission can be reduced by using a condom every time they have sex this does not necessarily translate into safe sex practice. As we saw in Figure 25 above 58 per cent of unmarried young women and 34 per cent of young men who are sexually active do not use condoms. While only 29 per cent of women and 28 per cent of men who had had more than one sexual partner in the previous 12 months (a high risk group) reported using a condom in their last sexual encounter in 2010 (NISR *et al* 2011). The proportion of women who did so had increased from 2000 - when it was 14.7 - and 2005 - when it was 19.7 per cent - but declined for men from 50.3 in 2000 and 40.9 per cent in 2005.

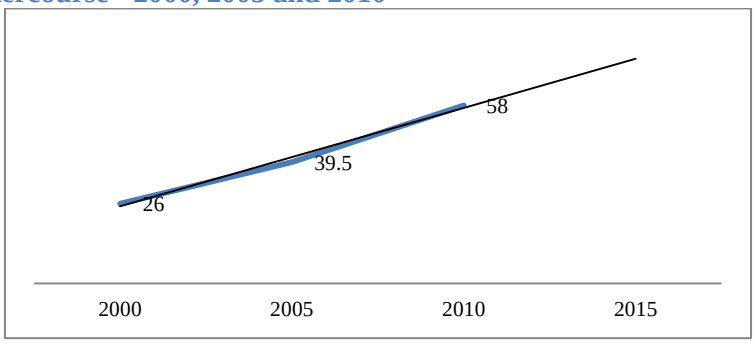
Figure 29: Proportion of Men and women that Engage in High Risk Sex that Used a Condom at their Last Sexual Encounter



(DHS 2000, 2005, 2010)

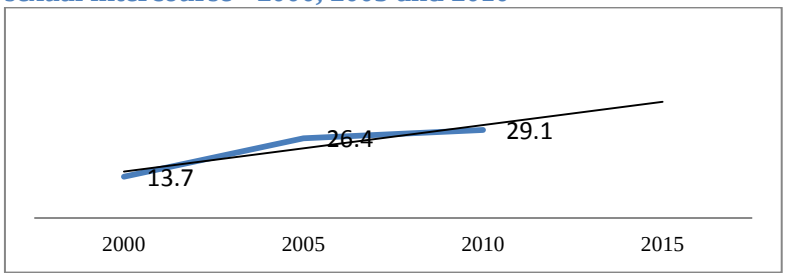
However, the proportions are higher for young people, with 58 per cent of young men and 29 per cent of young women who engage in high risk sex saying they had used a condom in their last sexual encounter. This shows an increase compared with 2000 and 2005 for both young women and young men (Figures 29 and 30).

Figure 30: Percentage young men who engage in unsafe sex and used a condom at last sexual intercourse - 2000, 2005 and 2010



Source: DHS, 2000, 2005, 2010

Figure 31: Percentage young women who engage in unsafe sex and used a condom at last sexual intercourse - 2000, 2005 and 2010



Source: DHS, 2000, 2005, 2010

Anti-retroviral treatment is available in Rwanda for all adults and children who are deemed to be in need of it. The WHO 2010 criterion of eligibility for treatment of CD4 below 350 Cells per Cubic Millimetre is used. In 2011 a policy was introduced of putting discordant couples on treatment as soon as HIV is diagnosed irrespective of CD4 level. This is a prevention strategy as being on antiretroviral treatment reduces the risk of transmission of the infection from the affected to the non-infected partner (AVERT www.avert.org).

In 2008 antiretroviral treatment coverage was estimated to be 77 per cent for eligible adults and 49 per cent for children (National AIDS Control Commission 2010, P11). There is insufficient information and clinical follow-up for those with HIV/AIDS and a number of those on ART are lost. HIV-positive children are diagnosed at a late stage, possibly increasing morbidity and mortality (Ministry of Health, 2009).

Target: Have halted by 2015 and begun to reverse the incidence of malaria and other major disease.

Indicators:

- Incidence and death rates associated with malaria.
- Mortality Rate Adults and Children over 5 years (per 100, 00 population);
- Mortality Rate Children 0-5 years (per 100, 00 population).
- Malaria cases per 100,000 populations.
- Proportion of children under 5 sleeping under insecticide-treated bed nets.
- Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs.
- Incidence, prevalence and death rates associated with tuberculosis.
- TB related mortality per 100,000 population.
- Proportion of tuberculosis cases detected and cured under directly observed treatment short course.

Status at a glance

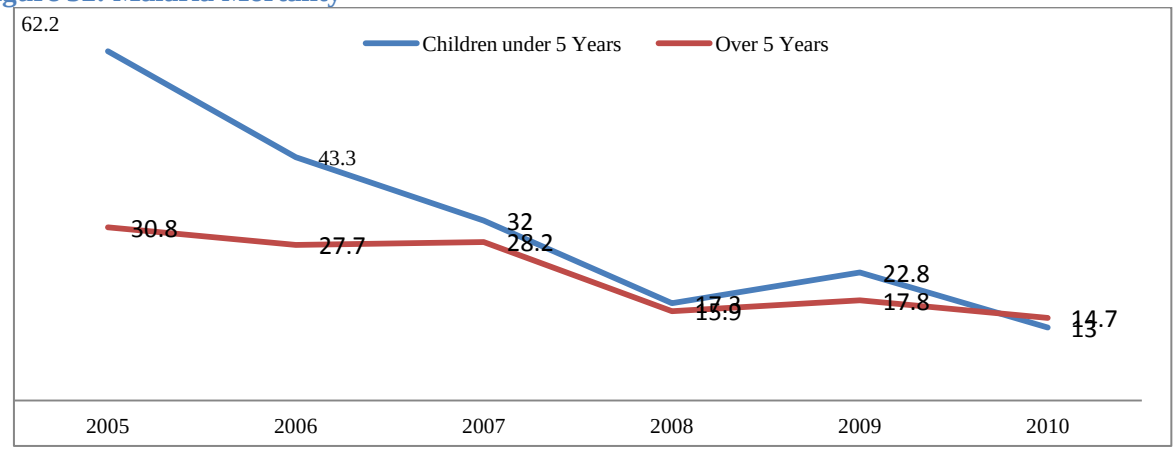
- On track

Malaria continues to be a significant cause of morbidity and mortality in Rwanda. The entire population is at risk, 19 of the Districts located in low-lying areas are mesoendemic, and 11, located in the high plateaus and hills, are epidemic-prone.

There has been a significant decline in the number of malaria cases from 1.5 million reported in 2005 to a low of 663,785 based on HIMS data in 2010. In 2009 the Ministry of Health directed that all presumed malaria cases be laboratory tested and by 2011 96 per cent of were being tested. Community health workers are being trained to play a central role in integrated community management of malaria cases.

As Figure 32 shows, there has been a dramatic decline in malaria mortality for both children under five years and children over five years and adults, with Rwanda more than meeting the 2000 Abuja Summit target of reducing the burden of malaria by half by 2010. The *Vision 2020* target of malaria mortality rate of 30 by 2010 has been achieved as has the 2020 malaria mortality rate of 25. The malaria incidence declined by 70 per cent between 2005 and 2010, with malarial cases reported in outpatients declining by 60 per cent and mortality due to malarial declining by 54 per cent. Between 2001 and 2010 the test positive rate declined 66 per cent (Ministry of Health 2010). As a result of this decline fever cases are no longer recommended for antimalarial treatment, which is only given once infection is confirmed.

Figure 32: Malaria Mortality



(Source NISR 2011)

Rwanda was one of the first countries to achieve universal coverage of LLINs in February 2011 (President's Malaria Initiative 2011). In 2010 81.5 per cent of households owned at least one net compared with 57 per cent in the IDHS of 2007/8 and 53.9 per cent more than one. Seventy per cent of children under five slept under a treated net compared with 58 per cent in 2007/8, as did 72.5 per cent of pregnant women compared with 62 per cent in 2007/8 (NISR *et al* 2011)[12].

There is evidence of a decline in mortality associated with TB, with the rate declining from six in 2006 to 4.8 in 2007 and 3.5 in 2010 (NISR 2011). TB cases in Rwanda are also declining; there is a programme to treat drug resistant cases and HIV + patients are routinely tested for TB.

Target 7C: Improve Sustainable Access to Safe Drinking Water and Basic Sanitation

Indicators

- Proportion of the population using an improved drinking-water source.
- Proportion of the population using an improved sanitation facility.

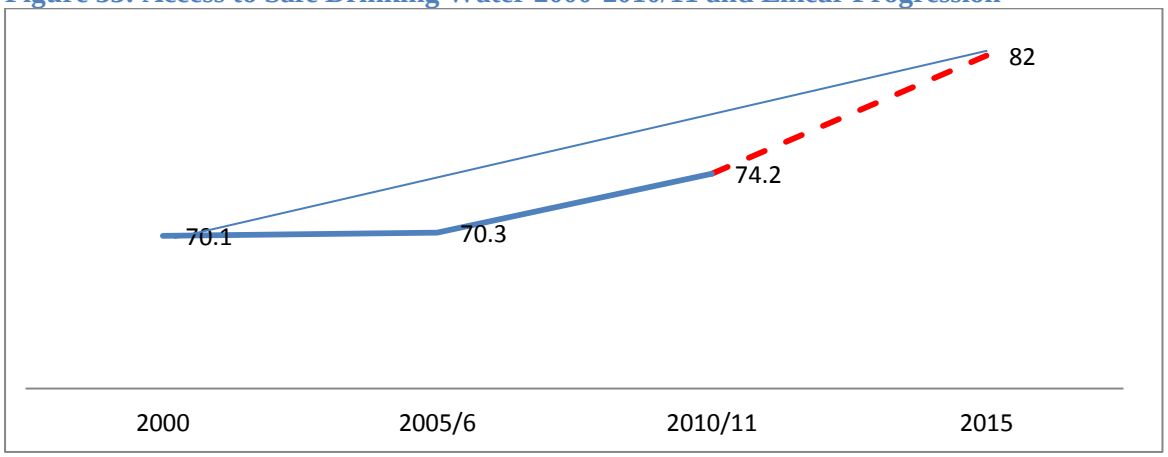
Status at a glance

- Potential to be achieved with support to accelerate progress.

Access to clean water and improved sanitation are an important public health issue and help reduce water-borne diseases. There has been an increase in households with access to clean water (Figure 32). However, the *Vision 2020* 2010 target of 80 per cent was not met and the *EDPRS* 2012/13 target of 86 per cent of households having such access will not be met. If the rate of progress that was made between 2005/6 and 2010/11 is maintained it will be 2020 before the MDG Target is met and 2021 before the 2013/13 *EDPRS* target is met.

[12] The 2010 DHS rates do not reflect the additional 2.5 million nets distributed after the survey was completed.

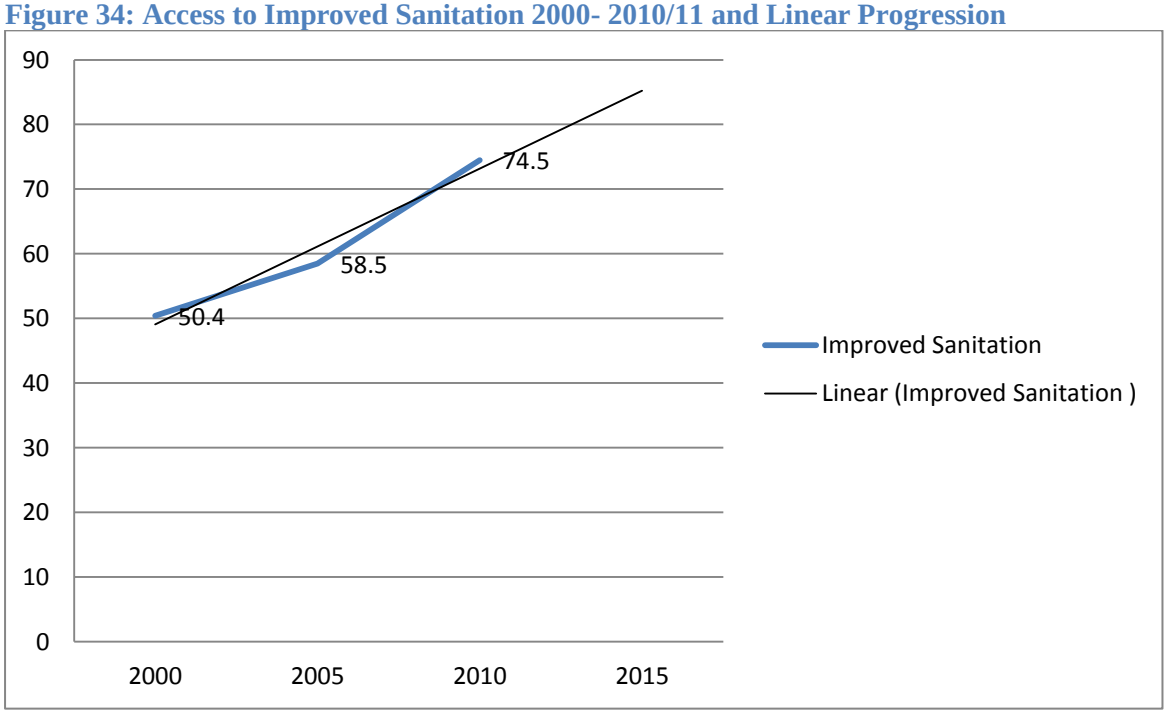
Figure 33: Access to Safe Drinking Water 2000-2010/11 and Linear Progression



(Source: NISR 2006; 2012)

There has also been an increase in improved sanitation, with 74.5 per cent of household having an improved facility by 2010/11, up from 50.4 per cent in 2000 Figure 34). Improved sanitation is as defined in the WHOUNICEF Joint Monitoring Programme (http://www.wssinfo.org/definitions-methods/watsan-categories). Improved sanitation included flush toilets and pit latrines with a floor slab. Only 1.7 per cent of toilets are flush; 82.8 per cent are pit latrines with a floor slab

Figure 34: Access to Improved Sanitation 2000- 2010/11 and Linear Progression



(Sources: NISR 2006 2012)

T*arget 8B: Provide access to essential drugs and make available the benefits of new technologies, especially information and communications*

Indicators

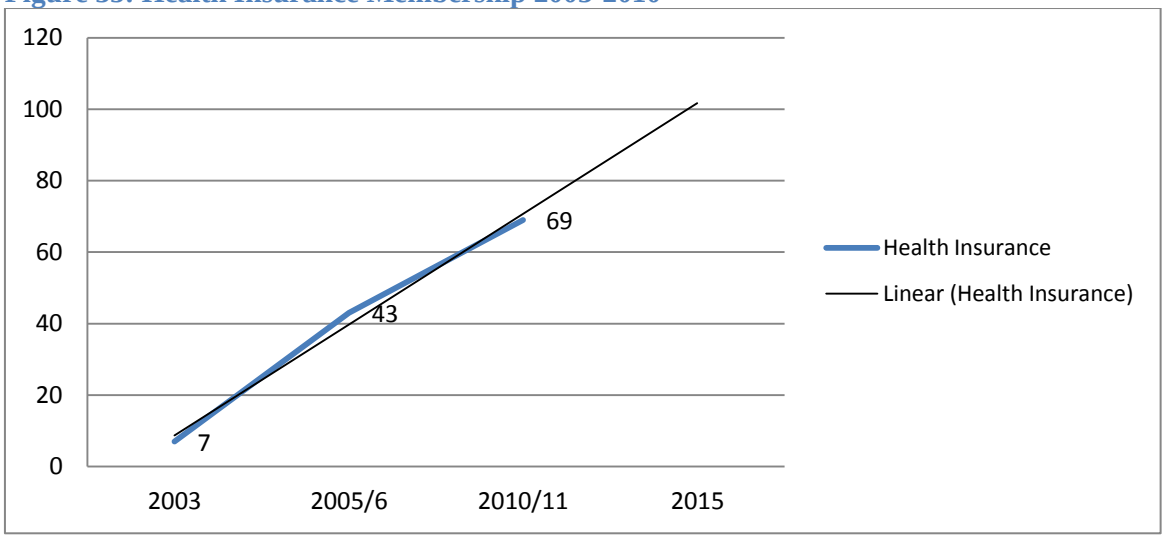
- Proportion of population with access to affordable essential drugs on a sustainable basis.
- Telephone lines per 100 population.
- Cellular subscribers per 100 population.
- Internet users per 100 population.

Status at a glance

- Around a 90 per cent of the population have affordable access to essential drugs
- Unlikely to achieve substantial increases in use of telephones and intern

At least 69 per cent of Rwandans had access to affordable drugs in 2010. Rwanda has a mutual health insurance which gives member access to to essential drugs. The premiums are graduated, with the poorest and most vulnerable being exempt, the normal premiums being 3,000 RFW and the better off paying 7,000 FRW a year. The NISR has reported membership of health insurance at over 80 per cent (NISR 2009) but according to EICV3 membership of a health insurance scheme was 69 per cent in 2010/11 up from seven per cent in 2003 and 43 per cent in 2005/6 (Figure 35).

Figure 35: Health Insurance Membership 2003-2010



Source: Abbott and Rwirahira, 2010; NISR 2012

There has been a dramatic increase in ownership of mobile 'phones, from 6.2 per cent in 2005/6 to 45.2 per cent in 2010/11. However, while computer ownership has trebled, it still stands at only 1.7 per cent of households having their own computer (Figure 36).

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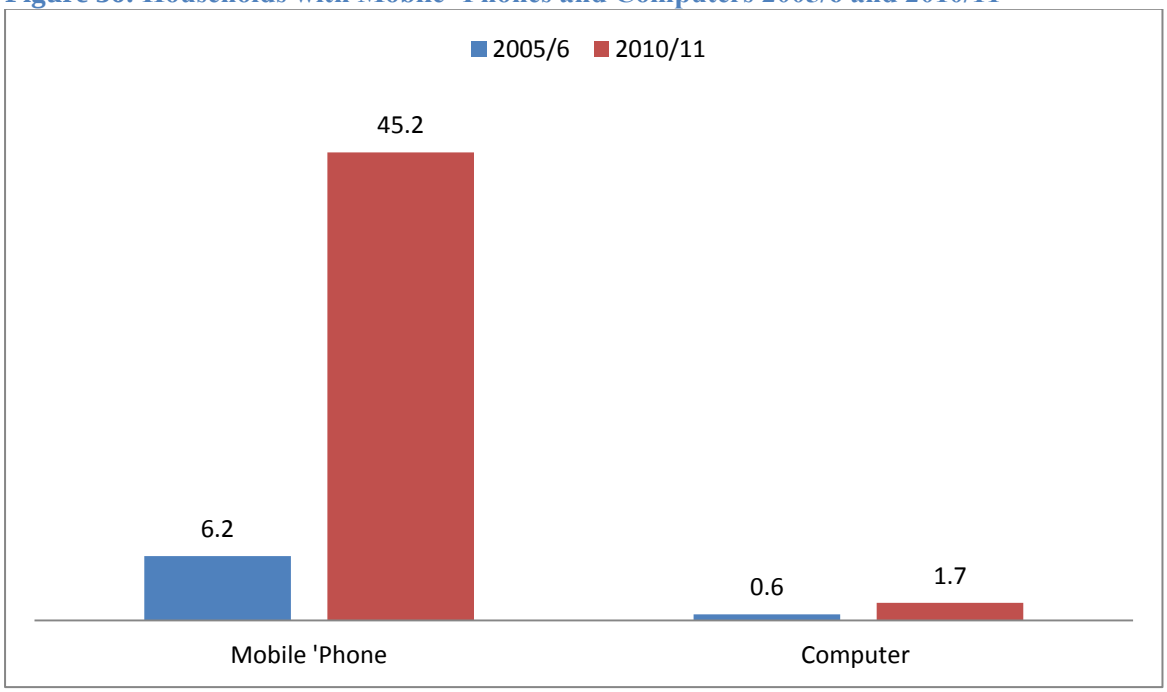
Figure 36: Households with Mobile 'Phones and Computers 2005/6 and 2010/11



(Sources: NISR 2006; 2012)

Conclusions

Rwanda has made significant progress towards achieving the 2015 MDG Targets. Not all the Targets will be achieved by 2015 but most of those that will not will be achieved shortly after that. Given the reversal in development as a result of the 1994 Genocide against the Tutsi, this is a fantastic achievement. However, there remains a decent job deficit and despite the progress towards gender equality in education and politics women's economic empowerment is not being progressed.

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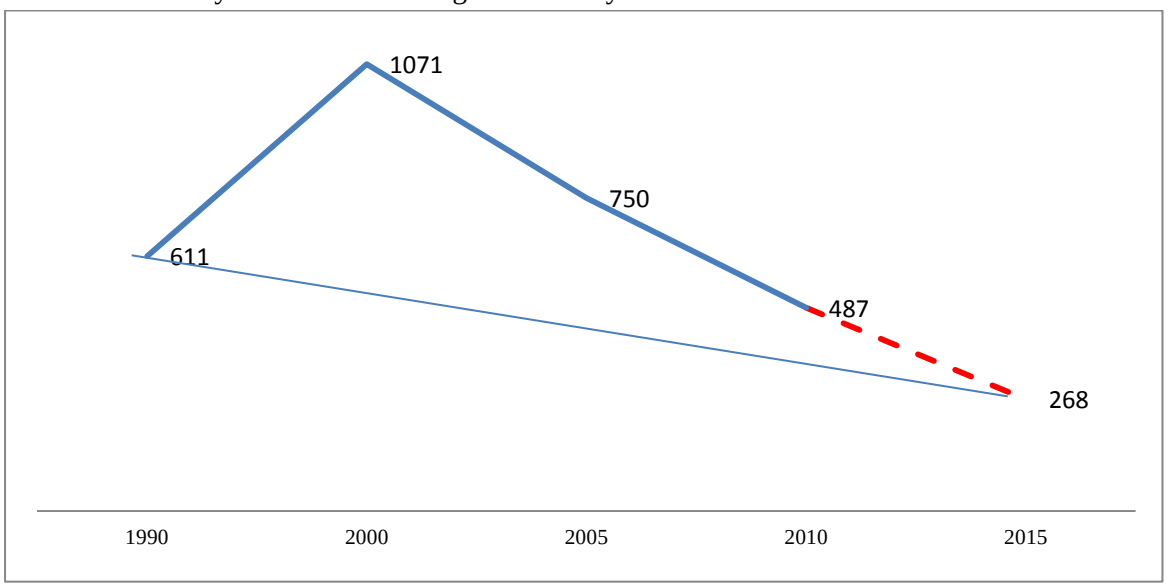
Appendix: Additional Graphs for Maternal Mortality

Maternal Mortality- 1990 and 2015 Figures Used by the Government of Rwanda



(Sources DHS 2005; 2010, NISR 2007)

Maternal Mortality 1990 Figure used by Government of Rwanda and 2015 figure a Quarter of 1990 Figure