Republic of Rwanda

MINISTRY OF EDUCATION

Education Sector Strategic Plan

2013/14 – 2017/18

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INTRODUCTION FORWARD

The education sector in Rwanda has undergone a few major changes since the writing of this document was completed. Notably, these changes relate to the Education Sector Working Groups (ESWG) and to the establishment of the University of Rwanda.

Prominent changes in the sector included the creation of ESWG in new areas. In late 2013 there was a review of the ESWG in order to better reflect the priorities of the ESSP. This resulted in a revised working group structure and standardised terms of reference to ensure improved coordination among ESWG partners.

In 2013, the University of Rwanda was established by merging seven higher education public institutions. It is the only public university in Rwanda and a multi-campus, multi-disciplinary university designed to meet the economic, social and cultural needs of the country. Students choose from a wide range of courses at undergraduate and post-graduate level, have access to modern facilities and are taught by internationally qualified staff.

FOREWORD BY MINISTER OF EDUCATION

The publication of the new Education Sector Strategic Plan (ESSP) 2013/14-2017/18 marks the update of the ESSP 2010-2015 and alignment of plans for Rwanda's education sector in line with the Economic Development and Poverty Reduction Strategy (EDPRS 2). Education is a critical investment in our country's future growth and development. This ESSP will inform and guide the development of the education sector during the next five years to ensure that the investments we are making in our children today supports our national priorities and goals. Our plans are ambitious, but focused on addressing challenges and achieving results to provide our children with the skills and knowledge they need to become productive members of our society and economy. The concepts of universal equitable access and quality education provision underpin this ESSP, and will always occupy the most important place in the sector's planning and implementation activities. The ESSP builds upon our national priority of making quality twelve-year basic education available for all our children and also reflects our overarching mission to make education at all levels more accessible and more relevant to our national needs.

Three goals have been identified to support MINEDUC in achieving its mission of facilitating the development of human capital for the socio-economic development of Rwanda. These goals are: promoting access to education at all levels, improving the quality of education and training, and strengthening the relevance of education and training to meet labour market demands. Equity in access to education is emphasised across all three goals to ensure that disadvantaged students, such as girls, the poor and disabled, have access to meaningful learning opportunities.

This ESSP aims to build on progress made in recent years on improving access to education, and to extend this by increasing the coverage and the quality of twelve-year basic education and school readiness programmes. We will also prioritise skills development to strengthen the quality and relevance of education and to better equip our students to meet the requirements of the diverse labour market. This requires a focus on core literacy and numeracy skills in basic education as well as strengthening technical and vocational education and training and higher education provision coupled with a focus on skills-based science and technology. Foundational to all of this is ensuring that our teachers are well trained and motivated.

I wish to express my gratitude to all the staff of the Ministry of Education and our affiliated agencies, to education staff in the Districts, to the development partners and to all the many other stakeholders who have contributed to the preparation of this plan. I commend the ESSP as the way ahead for education development in Rwanda and urge all stakeholders and partners to use this plan as a first point of reference when considering how we may all support activities in this very significant sector and achieve our goal of equitable access to quality education and training for all Rwandans.

Vincent BIRUTA

Minister of Education

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LIST OF ABBREVIATIONS

7YGP	Seven Year Government Programme (2010-2017)
9YBE	Nine-year basic education
12YBE	Twelve-year basic education
A0, A1, A2	Qualification levels for Post-Basic Education
ABE	Adult Basic Education
BE	Basic Education
CoE	College of Education
CoT	College of Technology
CNLS	*Commission Nationale de Lutte contre le SIDA* (National AIDS Control Commission)
CNRU	*Commission Nationale Rwandaise pour l'UNESCO* (Rwandan National Commission for UNESCO)
CPAF	Common Performance Assessment Framework
EAC	East African Community
ECD	Early Childhood Development
EDPRS	Economic Development and Poverty Reduction Strategy
EICV	*Enquête Intégrale des Conditions de Vie* (Household Living Conditions Survey)
EMIS	Education Management Information System
ESSP	Education Sector Strategic Plan
ETO	*Ecole Technique Officielle* (Upper Secondary Technical School)
FBO	Faith-Based Organisation
FTI	Fast-Track Initiative
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
HE	Higher Education
HEC	Higher Education Council
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HLI	Higher Learning Institution
IAP	Industrial Attachment Programme
ICT	Information and Communication Technology
IFC	International Finance Corporation (of the World Bank)
INSET	In-Service Teacher Training
IPRC	Integrated Polytechnic Regional Centre
IRST	*Institut de Recherche Scientifique et Technologique* (Institute of Scientific and Technological Research)
ISAE	*Institut Supérieur d'Agriculture et d'Elevage* (Higher Institute for Agriculture and Livestock)
JRES	Joint Review of the Education Sector
KIST	Kigali Institute of Science and Technology
LMIS	Labour Market Information System
LS	Lower Secondary
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MIFOTRA	Ministry of Public Service and Labour
MIGEPROF	Ministry of Gender and Family Promotion
MINALOC	Ministry of Local Government
MINEAC	Ministry of East African Community Affairs
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education

MINICOM	Ministry of Commerce
MINISANTE	Ministry of Health
MTEF	Medium Term Expenditure Framework
MYICT	Ministry of Youth and ICT
NCDC	National Curriculum Development Centre
NCSTI	National Council for Science, Technology and Innovation
NGO	Non-Governmental Organisation
NISR	National Institute of Statistics of Rwanda
NUR	National University of Rwanda
ODeL	Open, Distance and e-Learning
OVCs	Orphans and Vulnerable Children
P1, P2 etc.	Primary year 1, 2 etc.
PBE	Post-Basic Education
PTA	Parent-Teacher Association
PTC	Parent-Teacher Committee
QIWG	Quality Implementation Working Group
QTS	Qualified Teacher Status
REB	Rwanda Education Board
RTQF	Rwanda TVET Qualifications Framework
S1, S2 etc.	Secondary year 1, 2 etc.
SACCO	Savings and Credit Cooperative
SEO	Sector Education Officer
SFAR	Student Financing Agency of Rwanda
SFB	School of Finance and Banking
SNE	Special Needs Education
STI	Science, Technology and Innovation
STR	Science, Technology and Research
TEI	Tertiary Education Institution
TDM	Teacher Development and Management
TTC	Teacher Training College
TVET	Technical and Vocational Education and Training
UP	Umutara Polytechnic
UR	University of Rwanda
US	Upper Secondary
VUP	Vision 2020 Umurenge Programme
WDA	Workforce Development Authority

EXECUTIVE SUMMARY

The Government of Rwanda aims to transform Rwanda into a middle income country by 2020. Achieving Rwanda's social and economic development objectives is largely dependent upon its most valuable resource – its people. To achieve these goals, the Rwandan people must be provided opportunities to develop knowledge, skills and attitudes to compete in the labour market and contribute to the social and political life of their country. The **mission** of the Ministry of Education (MINEDUC) is ***to transform the Rwandan citizen into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education focusing on combating illiteracy, promotion of science and technology, critical thinking, and positive values.***

The Education Sector Strategic Plan (ESSP) outlines how the education sector will strive to achieve this mission over the next 5 years. It has been developed in line with Rwanda's second Economic Development and Poverty Reduction Strategy (EDPRS) to support Rwanda achieve national aspirations for economic transformation, rural development, accountable governance and improved productivity and youth employment. The plan is centred on three overarching goals: expanding **access** to education at all levels, improving the **quality** of education and training, and strengthening the **relevance** of education and training to meet labour market demands.

Based upon these goals and priorities, 10 outcomes have been developed for the education sector:

1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.
2. Increased equitable access to education for students with special educational needs within mainstream and special schools.
3. Improved quality and learning outcomes across primary and secondary education.
4. Qualified, suitably-skilled and motivated teachers and trainers to meet the demands of expanding education access.
5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes.
6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.
7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.
8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.
9. Increased access to Adult Basic Education to improve adult literacy and numeracy.
10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.

Chapter 3 of this ESSP elaborates the education sector's priorities for each of these outcome areas and strategies for how these outcomes will be achieved. This is followed by the plan of how the ESSP will be implemented in Chapter 4, which outlines the roles and responsibilities of all stakeholders involved at central, district, sector and school level. Chapter 5 then sets out how the implementation of the ESSP will be monitored and performance evaluated, highlighting links to the EDPRS monitoring framework and how the education sector's contribution towards achieving national priorities will be

monitored. Finally, Chapter 6 provides an overview of the required budget to finance the ESSP and how it will be financed.

CHAPTER 1: INTRODUCTION

By the year 2020, the Government of Rwanda aims to equitably transform Rwanda into a middle income country with a modern free market system built upon thriving agriculture, information and communications technology (ICT) and ecotourism sectors. The achievement of Rwanda's social and economic development objectives will depend to a large degree on the development of its most valuable resource – its people. To achieve this goal, the Rwandan people must be provided opportunities to develop knowledge, skills and attitudes to compete in the labour market and contribute to the social and political life of their country. Reaching this objective will necessitate continued and significant investments in education at all levels to ensure universal access to educational opportunities characterised by their high quality and relevance to the rapidly shifting demands of a globalised economy

Rwanda's vision is oriented toward a future that offers a life of dignity and happiness for all, calling upon its citizens to fulfil their potential for their own benefit and that of their state. A harmonious and prosperous Rwanda can only be realised when each citizen, regardless of age, gender, ability or circumstance, is empowered to contribute to the development process. An accessible, equitable and high-quality education system is needed to develop in every Rwandan the foundational skills of literacy and numeracy, the habits of reading and life-long learning, the skills of analytical reasoning and creativity, and mastery of both the general and job-specific knowledge demanded by the labour market. The Rwandan people must also embrace positive, constructive engagement in the social and political life of their community and country, contributing their unique talents and energies to ensuring better lives for themselves and their neighbours. For these reasons, the Government of Rwanda has committed to developing educational institutions that strive to deliver against national and international standards while cultivating the flexibility and responsiveness of the education system, to allow adaptation to evolving needs. This will entail thorough diagnosis of the available skills and competencies set against the requirements for national, regional and international markets and reforming the education curriculum to meet these evolving demands.

The **mission** of the Ministry of Education (MINEDUC) is ***to transform the Rwandan citizen into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education focusing on combating illiteracy, promotion of science and technology, critical thinking, and positive values.***

The Education Sector Strategic Plan (ESSP) elaborates how the education sector will strive to achieve this mission and provides the foundation for education sector planning for the next five years. It has been developed in line with Rwanda's second Economic Development and Poverty Reduction Strategy (EDPRS) to support Rwanda achieve national aspirations for economic transformation, rural development, accountable governance and improved productivity and youth employment. The plan is centred on three overarching goals: expanding access to education at all levels, improving the quality of education and training, and strengthening the relevance of education and training to meet labour market demands. The ESSP provides a framework for continuous development of the national education system by identifying priority investment areas to improve learning outcomes and increase educational relevance for a globally competitive Rwandan workforce.

Chapter 1 of the ESSP sets out the context and purpose of the plan. **Chapter 2** provides the overview of the sector and sub-sectors. **Chapter 3** lays out the strategic framework. **Chapter 4** outlines the

implementation plan. **Chapter 5** provides the Monitoring and Evaluation framework and **Chapter 6** presents the cost and financing of the plan.

1.1 CONTEXT OF ESSP DEVELOPMENT

Since 1998 the Government of Rwanda has been focused on a development agenda aimed at transforming Rwanda into a middle-income country by the year 2020. The long-term Vision 2020 is being implemented through the medium-term planning framework of the EDPRS for successive five-year periods. This ESSP corresponds with the second EDPRS, covering the period 2013/14 to 2017/18. The ESSP has been produced in concert with the second EDPRS to ensure complete alignment of goals and outcomes over the next five years. The central policy proposition for this ESSP is the extension of the Government's nine-year basic education (9YBE) commitment to twelve years (12YBE). In addition, the plan reflects the new priorities of making pre-primary, primary, secondary (including technical and vocational education (TVET)), and higher education more accessible and more relevant to the national needs. Investing in improving the quality of education across the board is also central to this ESSP.

1.2 PURPOSE OF THE PLAN

The purpose of this ESSP is to provide a planning framework that will enable the education sector to improve the provision of education, including skills development, in order to better meet the requirements of the diverse labour market, by increasing the coverage and the quality of 12YBE. In addition to strengthening TVET and higher education provision, the plan also aims to improve pre-primary education, teacher education and adult literacy provision.

This ESSP provides the overarching framework for a holistic sector-wide approach to the development and delivery of education services in Rwanda. The Medium Term Expenditure Framework (MTEF) will be used as a tool to ensure that budget allocations follow medium and long-term paths. The use of the MTEF also ensures that educational proposals are set within the national fiscal planning and management framework, with close monitoring and regular evaluation. The ESSP will provide the overarching and guiding framework for the elaboration of logically consistent and sequential annual operational plans and budgets for each of the five years of its duration.

1.3 METHODOLOGY

The elaboration of this ESSP was conducted through a highly participatory and consultative process involving the entire education sector, including private sector, central and decentralised institutions and development partners (public, non-public, national and international including civil society). The process involved the collective stakeholders in the sector identifying a series of ten priorities for this ESSP period. These included extending access to 12YBE and to those with special educational needs, improving educational quality, teacher training and development, early childhood development, TVET, higher education, adult basic education, science, technology, innovation and research and the improvement of management support across the sector. Various Working Groups consisting of officials from MINEDUC, its subsidiary agencies, NGOs and civil society, and development partners were then established and charged with the responsibility of elaborating strategic goals and

objectives for these sector priorities. The results of this process were further developed and elaborated and are reflected in the Strategic Framework outlined in Chapter 3.

Alongside the development of the ESSP, the education sector worked with the Thematic Working Groups as they developed the EDPRS 2 Thematic Strategies and with other sectors on cross-cutting issues as they developed their Sector Strategic Plans. Similarly MINEDUC worked closely with District Education Officers and District officials as they developed their District Development Plans.

CHAPTER 2: OVERVIEW OF THE SECTOR

2.1 CURRENT POLICY CONTEXT

The ESSP is shaped by a number of national aspirations and international goals embodied in policy declarations and plans. These include Rwanda's Vision 2020 and Seven-Year Government Programme, the priorities of the EDPRS 2013-2018 and the Millennium Development Goals (MDGs), and Education for All (EFA) Goals. There are also regional commitments made as part of Rwanda's membership of the East African Community (EAC).

2.1.1 Vision 2020

Vision 2020 is Rwanda's long-term development plan that seeks to fundamentally transform Rwanda into a middle-income country by 2020. It sets out ambitious plans to create an internationally competitive, dynamic economy, supported by a productive, skilled workforce. One of the six pillars of Vision 2020 relates to the development of human resources and the creation of a knowledge-based economy. The education sector has a fundamental role in ensuring that Rwanda can achieve these aspirations. Recognising this, Vision 2020 commits Rwanda to achieving universal primary education and progressively rolling out access to higher levels of education, as reflected in the Education Sector's 12YBE policy. Supporting this commitment the key educational priorities of Vision 2020 are quality education supported by a skilled and competent teaching staff; TVET to support skills development, and an emphasis on science, technology and innovation, particularly in natural and applied sciences, and in ICT. These priorities are reflected in the ESSP's Sector Goals and planned Sector Outcomes.

Vision 2020 sets out a number of key indicators and targets, which were revised in May 2012. Education-specific targets for 2020 include an adult literacy rate of 100%, a primary Gross Enrolment Rate (GER) of 100%, and secondary GER of 98%[1]. New indicators include a pupil-qualified teacher ratio of 40:1 at primary level and 30:1 at secondary level by 2020. The target rate of enrolment in tertiary education (including TVET) increased from 6% to 65% to reflect prioritisation of technical and vocational skills development and to support national goals for job creation. Innovative strategies to achieve these ambitious targets have been incorporated in this plan, and the indicators and targets are reflected in the Monitoring and Evaluation framework.

2.1.2 Seven-Year Government Programme (7YGP)

The Seven-Year programme of the Government of Rwanda is the broad programme of action guiding the activities of government during the term of office of the current administration (2010-2017). It rests on four broad pillars: good governance, justice, economic development, and social well-being; with education, science and technology being included under the latter.

The broad education objectives within the 7YGP are to strengthen the quality of education, to promote Rwanda's cultural values, and to develop graduates who are self-reliant job creators who add value to their products for both the local and foreign markets. Key actions include upgrading

[1] This was increased from 60%in the original Vision 2020 targets to recognise ambitions to increase access to 12YBE.

basic education from 9 years to 12 years while paying attention to technical and vocational schools, streamlining the teaching of cultural values and English language, teaching Swahili for the purposes of regional integration, and pursuing a literacy campaign for adults aimed at raising the adult literacy level to at least 90%. Other actions include a focus on pre-primary and special needs education in teacher training and the establishment of a pilot nursery school in each sector, raising the proportion of qualified teachers at primary and secondary levels to at least 95%, raising the living standards of teachers through various incentives, increasing the number of TVET schools to at least three per district, and revising the TVET curriculum so that it is competency-based and more relevant to labour market needs. These ambitions and priorities have been incorporated into this ESSP.

2.1.3 Economic Development and Poverty Reduction Strategy (2013/14-2017/18)

Rwanda's second EDPRS has two central and overarching goals: (i) to generate sustained economic growth rates of at least 11.5% per annum over the duration of the EDPRS, and (ii) to reduce the rate of poverty to below 30% of the population by 2017/18. To achieve these ambitious goals four thematic priority areas have been identified as a focus for prioritisation and planning. These thematic areas are economic transformation, rural development, accountable governance, and improved productivity and youth employment. While the education sector has a role to play in all four of these themes, it is most directly involved in providing the human resource pool required for economic transformation and in addressing issues of improved productivity and increased youth employment. The modalities through which this sector plan contributes to the prioritisation of the thematic areas and the achievement of the overall goals are detailed in Chapter 3 below.

The EDPRS 2 also identifies a number of cross-cutting and foundational issues that require cross-government coordination to support the overarching development and thematic goals. These cross-cutting issues are: capacity building to enable effective implementation, regional integration, gender and family, the environment, climate change and disaster management, disability and social inclusion, and HIV/AIDS and non-communicable diseases. Section 3.4 in Chapter 3 details how the education sector will support these cross-cutting issues over the next 5 years.

2.1.4 Education Sector Policies

The ESSP reflects a number of sub-sector policies, strategic plans and cross-cutting issues developed over recent years. The systematic and effective implementation of these policies will contribute to the operationalisation of the ESSP, and ultimately to the achievement of the objectives of the EDPRS 2. These policies include the following:

- Girls Education Policy (2008)
- Higher Education Policy (2008)
- Quality Standards in Education (2008)
- Special Needs Education Policy (2008)
- ICT in Education Policy (2008, and being reviewed in 2014)
- Technical and Vocational Education and Training (TVET) Policy (2008)
- Teacher Development and Management Policy (revised 2011)
- Early Childhood Development Policy and Strategic Plan (2011)
- Youth and Adult Literacy Strategic Plan (awaiting approval)

- School Health Policy (in development)
- Draft Policy on Teacher Incentives (in development)
- National Science, Technology and Innovation Policy (2005 and being reviewed in 2013/4 to also include a five year strategic plan)

In addition to these policies, the following strategic plans were also developed:

- Nine-Year Basic Education Strategy (2008)
- Draft Strategic Plan for Technical Education (2008-2012)
- Draft Higher Education Strategic Plan (2009)

In August 2010, the President of the Republic of Rwanda made a new commitment to increase access to education to twelve years to enable all Rwandan children to complete full secondary education by 2018. Implementation of this policy began in 2012 with increased access to upper secondary being phased in over three years.

2.1.5 MDGs and EFA

Rwanda has committed to achieving the eight MDGs and the EFA goals. Both focus on the importance of universal basic education and the elimination of gender disparities. The ESSP is consistent with these commitments, and Rwanda is on track to meet both of the education related MDGS, thanks to the innovative 9YBE fast-tracking strategies and girls' education initiatives. However some work remains to be done prior to 2015 to achieve these international goals. This ESSP includes actions that are intended to ensure access to primary schooling for the remaining 4% of out-of-school children, those in deep rural and urban poverty, in hard to reach areas, and those with special educational needs. Gender equity has virtually been achieved in terms of enrolment in general primary and secondary schooling, though significant challenges remain with regard to access to, and participation in, TVET, Higher Education, and Science & Technology. These challenges are addressed in this ESSP. The ESSP's Sector outcomes also reflect the broader EFA goals relating to early childhood development (ECD), youth education and skills development, adult literacy and the quality of education. The post-2015 development agenda echoes many of the same themes as EDPRS2 seeking economic transformation for inclusive growth. It also emphasises that no-one should be left behind, a theme also flowing through this ESSP with its focus on equity and ensuring quality of learning as well as access to education.

2.2 THE STRUCTURE OF THE RWANDAN EDUCATION SYSTEM

In Rwanda the education system is composed of four main levels: Pre-primary, Primary, Secondary, and Higher Education, with a significant TVET stream at both secondary and higher education levels. In addition there is non-formal education, or Adult Basic Education (ABE) as it is now more commonly referred to. Compulsory education spans the nine years from age 7 to age 15, covering primary and lower secondary education, and is commonly known as Nine Years Basic Education (9YBE).

Pre-primary Education is organised in nursery schools and for a period of three years for children between the age of 4 and 6. **Primary Education** lasts six years with the official school age at this level being from 7 years to 12 years. This stage focuses on core literacy and numeracy skills, as well as preparation for secondary studies. Primary education ends with national examinations which determine eligibility for proceeding to Lower Secondary school. **Secondary Education** also lasts for six years with the official age for this level being from 13 years to 18 years of age. It is subdivided into **lower secondary** (the first three years) and **upper secondary** (the last three years), both culminating in national examinations which respectively determine eligibility for upper secondary, and secondary graduation or entry to higher education. At upper secondary level students choose between continuing in general secondary schools, and enrolling in a Technical Secondary School (TSS) or a Teacher Training Colleges (TTC) to train as a primary teacher. **Technical and Vocational Education and Training (TVET)** provides young people and the unemployed with the skills to gain productive employment and also provides those already in employment with an opportunity to upgrade their skills, including entrepreneurs and those wishing to work for themselves. TVET is delivered through the Technical Secondary Schools (TSSs), Vocational Training Centres (VTCs) and Integrated Polytechnic Regional Centres (IPRCs).

At **tertiary level** students can pursue their studies in a range of academic directions or opt to enter an array of technical or vocational fields. Undergraduate degrees currently require four years to complete, though the option of reducing this to three years in order to harmonise with the rest of the region is being explored.

2.3 ACHIEVEMENTS OF THE EDUCATION SECTOR DURING EDPRS I

This section provides an overview of the current status of the education sector. It analyses key indicators against targets set under the previous ESSPs (2008-2012 and 2010-2015) and EDPRS I. It draws on the education sector indicators provided by the MINEDUC's Education Management Information System (EMIS) Unit, together with data derived from EICV3 (the third Integrated Household Living Conditions Survey), which sampled 14,308 households in 2010 and 2011.

During the period of EDPRS I demand for education services grew rapidly, with the school-aged population (aged 7 to 18) growing on average 2.1% per year. Population growth was particularly significant during the first three years of primary school with average annual growth rates up to 5% for the population aged 7 to 9. It is in this context that the education sector sought to expand access to quality education in line with EDPRS I objectives.

2.3.1 Objectives of Education Sector During EDPRS I

The EDPRS I strategy for education was defined within two broad objectives: 1) develop skills for a knowledge-based economy, and 2) promote science, technology and innovation for economic growth. All levels of education contribute to skills development – from pre-primary and early grades which are necessary to provide a solid foundation for basic skills and cognitive development, through primary and secondary school with the development of higher order skills such as problem-solving and communication, and through TVET with more applied learning for the workplace and higher education.

The ESSP 2010-2015 was developed to address key policy and strategic challenges and objectives in the sector, as outlined in the EDRPS I as well as the Vision 2020. The 9YBE programme was identified as the foundation for human resource and skills development, while improved access to and quality of upper secondary schools, teacher training colleges, Higher Learning Institutions and demand-driven TVET courses were prioritised to supply the demand for higher level skills and competencies which are relevant for labour market needs.

2.3.2 Successful Reforms and Innovations during EDPRS I

The education sector has embraced several new priorities since the development of EDPRS I, including the adoption of English as the medium of instruction in schools and the 9YBE fast tracking strategies. There has also been significant institutional reform since the beginning of the EDPRS I, notably the establishment of the Rwanda Education Board (REB) and the Workforce Development Authority (WDA), which are both key institutions to support the achievement of the EDPRS and ESSP objectives, particularly for quality education and TVET. Their roles and responsibilities are elaborated further in Sections 2.5.3 and 4.2.

Following the introduction of fee-free 9YBE, the Government of Rwanda embarked upon fast track strategies in 2009 to speed up access to quality 9YBE for all. It applied a rapid school infrastructure programme involving the community, a strategic realignment of the curriculum and course content, the introduction of an interim double shifting system at the primary level, a greater focus on teacher specialisation and decentralised strategies to improve the procurement and delivery of learning

materials. The large scale, innovative and cost effective programme was a significant achievement of the Government of Rwanda in facilitating access of all children to basic education, and was internationally recognised, winning the Commonwealth Education Good Practice Awards for 2012.

2.3.3 Progress towards Achieving Objectives and Targets of EDPRS I

An analysis of sector performance over the EDPRS I period shows a consistent level of achievement across all of the six Common Performance Assessment Framework (CPAF)/EDPRS indicator targets. Beyond the CPAF/EDPRS indicators, impressive progress can be reported overall during the EDPRS period across several access and quality-related indicators from primary to secondary level and in higher education and the TVET sub-sector, with Rwanda on track to achieve the education-related MDGs.

The CPAF/EDPRS I targets included the primary school completion rate (including girls' completion), the primary school pupil to qualified teacher ratio, the transition rate from lower secondary to upper secondary, the proportion of employers who are satisfied with the performance of TVET graduates, and the percentage of science stream students who pass the national S6 exam with the minimum mark required to enter a public university to study a science discipline (disaggregated by gender).

The primary school completion rate reached 72.7% in 2012 which is a significant improvement on the baseline figure of 52.5% in 2008, but falls short of the 2012 target of 78%. The completion rate for girls is higher than the national average, reaching 77.7% in 2012. The qualified teacher to pupil ratio at primary level stands at 62:1, which is an impressive improvement from the 2008 figure of 67:1.

The transition rate from lower secondary (S3) to upper secondary (S4) has now reached 95.9% - against a 2008 baseline of 86% - far surpassing the 2012 target set in the previous ESSP. However it will be a challenge to maintain this high figure over the coming years as more and more children transition through the full basic cycle, thanks to the success of the 9YBE and 12YBE programmes.

Progress was also recorded in the percentage of students in science streams taking S6 national exams who pass with a minimum for public university entrance to study a science discipline. The current targets of 20% for girls and 30% for boys have been achieved, and now stand at 25% and 38%, respectively.

Beyond the CPAF/EDPRS indicators, good progress can be reported overall during the EDPRS I period across several access and quality-related indicators. At pre-primary level the Net Enrolment Rate (NER) is low at 12.7%, but with increases being made each year to student enrolment. An additional 18,528 children accessed pre-primary education in 2012, and Early Childhood Care and Development (ECD) is now being addressed through a multi-sector taskforce, guided by a national ECD policy and strategic plan.

The primary NER continues to improve for both girls and boys and, at 96.5% has surpassed the 2012 target of 95%. If progress continues to be made, Rwanda will be on track to meet the MDG target of 100% net enrolment by 2015. The NER for girls (98%) remains higher than that for boys (95%). The total number of pupils in primary education increased from 2,190,270 in 2008 to 2,394,674 in 2012. Both the repetition rate (12.7%) and dropout rate (10.9%) continue to decline (from a 2008 baseline of 15.3% and 14.7%, respectively). School attendance has also improved, with the EICV3 report observing an increase in the number of primary aged-children attending primary school from 87% in 2005/06 to 92% by 2010/11.

The number of students in secondary education continues to increase as a result of 9YBE and 12YBE, with a total of 534,712 currently enrolled against a baseline figure of 288,036 in 2008. Girls make up 52.2% of students in secondary education and 50.8% of those students enrolled in science combinations at the upper secondary level.

TVET is more widely accessible now than ever before in Rwanda, in particular more individuals in rural areas are accessing TVET education. Currently for every 10 students in urban areas attending TVET courses there are approximately 8 students in rural areas, comparatively under EICV2 (2005) for every 10 urban students there were only 4 students in rural areas. The number of vocational training centres (VTCs) has increased from 61 in 2010 to 116 in 2012 facilitating a 50% increase in the number of students, with a current enrolment of 13,557, 39.3% of whom are female. There have also been a number of important reforms in the TVET sector, notably the establishment of the WDA whose mission is to promote, facilitate, and guide the development and upgrading of skills and competencies of the national workforce in order to enhance competitiveness and employability. Since its establishment, WDA has worked with stakeholders to introduce the Rwandan TVET Qualifications Framework (RTQF) and competency-based curricula with industrial attachment programmes. In addition, it has conducted work on the training of trainers to improve teaching within TVET institutions. Recent years have also seen greater levels of industry involvement, including closer partnerships with the Private Sector Federation and the establishment of Sector Skills Councils, which are responsible for practicing standards, national occupation standards, occupation gap identification, certification of competencies acquired in diverse training offers, and skills and workforce development within key economic sectors.

The tertiary education sector continues to expand, with a total of 76,629 students enrolled in universities and colleges in 2012. Of these students 49% are enrolled in public institutions and 44.2% are female. A majority of female students (59.5%) are enrolled in private tertiary education institutions (TEIs)[2]. Overall there has been an increase of 29,223 students attending tertiary education since 2008, with comparable increases in both the public and private sector to support the increasing student population. The percentage of individuals aged between 19 and 25 years attending an institution of higher learning doubled from 1.3% reported in EICV2 to 2.6% reported in EICV3.

The EICV3 and 2012 RPHC show that, across all Rwanda, 15 to 24 year olds have higher levels of literacy than the population of 15 years or more. In 2010-11, about 84% of the population of 15 to 24 years and 68% of the population of 15 years or more knew how to read and write. This reflects higher levels of access to education among the population of 15 to 24 years. The literacy rate among the population of 15 to 24 year olds increased from 76.9% reported in EICV2 to 83.7% reported in EICV3. The formal adult literacy rate is measured as the proportion of the population over the age of 15 who are literate. By this measure, Rwanda had an adult literacy rate of 68% in 2010/11. This is an increase from a 65% adult literacy rate in 2005/06.

Both the EICV3 and EICV2 surveys asked questions on satisfaction with education services of the users of these services across all levels of the education system. 82% of the users of education services in 2010/11 were satisfied with these services. This represents an increase of 24% since 2005/06, suggesting that the quality of education services provided in Rwanda is perceived to have

[2] TEIs include all post-secondary education institutions (Colleges, Universities etc), whereas the term Higher Learning Institute (HLI) is reserved for institutions offering qualifications at undergraduate level and above.

improved significantly in this period. However, satisfaction rates are lowest among users in rural areas as well as in the Western Province.

The education sector in Rwanda has made some important strides in improving the quality of education. The acceleration of the 9YBE policy in 2009 was central to these efforts. The 9YBE strategy aimed at reducing class sizes through better planned double-shifting, improving the specialisation of primary teachers, reducing the number of core subjects in primary grades in order to increase the hours per subject taught, and strengthening the system of capitation grants to allow schools to function more effectively.

There has also been progress made in textbook procurement, with the implementation of a decentralised approach which has provided more decision-making responsibility to schools to choose the quantity and type of textbooks and reading materials they require. This has already resulted in a dramatic improvement in pupil/textbooks ratios.

Progress has been made in the area of monitoring of learning achievement which has focused on the measurement of learning outcomes in literacy and numeracy. The results of the first assessment, validated in August 2012, found that 63% of students met or exceeded curricular expectations in literacy and 54% met or exceeded curricular expectations in numeracy. These results, combined with the national fluency assessment conducted in 2012, will form the baseline data for monitoring future learning achievements in Rwanda.

2.3.4 Summary of Comparative Data from EMIS and EICV3

Table 1 below contains some comparative data on key education indicators from both EMIS and the EICV surveys, broken down by education level and gender.

Table 1: Education Indicators from MINEDUC and EICV3

INDICATOR	BASELINE (2009 MINEDUC)			INDICATOR (2012 MINEDUC)			INDICATOR (EICV3)			TARGET 2012	
Gross enrolment rate	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**Total**	**(M/F)**
a) pre-primary	15.9%	15.4%	16.5%	12.9%	12.4%	13.3%	...[3]	...	...	15%	(15%/15%)
b) primary	128.5%	127.4%	129.5%	123.2%	121.7%	124.8%	148.4%	149.8%	147.1%	115%	(115%/115%)
c) Lower secondary	34.6%	34.9%	34.4%	49.2%	46.3%	52.0%	...	...	...	80%	(80%/80%)
d) Upper secondary	16.9%	18.4%	15.4%	27.1%	27.5%	26.7%	...	...	...	25%	(25%/25%)
e) Secondary	25.9%	26.8%	25.0%	38.0%	37.0%	40.0%	20.0%	20.9%	19.0%	...	
Net enrolment rate	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	Total	M/F
a) pre-primary	9.7%	9.3%	10.0%	12.7%	12.3%	13.2%	...	...	...	15%	(15%/15%)
b) primary	92.9%	91.6%	94.1%	96.5%	95.0%	98.0%	...	...	...	95%	(95%/95%)
c) Lower secondary	...	...	...	21.0%	18.9%	23.1%	...	...	...	...	
d) Upper secondary	...	...	...	24.1%	26.6%	25.4%	...	...	...	...	
e) Secondary	13.2%	12.8%	13.7%	28.0%	26.0%	30.0%	NA	NA	NA	28%	(26%/30%)

[3] "..." indicates that data is not available. The EICV measures attendance rates rather than enrolment so calculation of gross and net enrolment rates, completion rates and transition rates are not possible.

INDICATOR	BASELINE (2009 MINEDUC)			INDICATOR (2012 or 2011[4] MINEDUC)			INDICATOR (EICV3)			TARGET 2012	
Completion rate	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**Total**	**(M/F)**
a) Primary	74.5%	70.6%	78.5%	72.7%	65.7%	77.7%	...	...	...	82%	(82%/82%)
b) Lower secondary	91.9%	93.0%	90.9%	NA	NA	NA	...	...	...	94%	(94%/94%)
Transition rate	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**Total**	**M/F**
a) Lower secondary(P6-S1)	95.0%	95.8%	94.3%	86.2%	96.4%	91.1%	...	...	...	92%	(92%/92%)
b) Upper secondary(S3-S4)	90.2%	88.7%	91.6%	95.9%	97.8%	94.0%	...	...	...	70%	(70%/70%)
Promotion rate:	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**		
a) Primary	73.8%	73.2%	743.0%	76.4%	75.6%	77.1%	69.1%	66.7%	71.5%	...	
b) Lower Secondary	94.0%	93.5%	94.5%	81.2%	81.6%	80.8%	95.0%	95.6%	94.5%	...	
c) Upper Secondary				95.9%	96.1%	95.7%				...	
Drop-out rates	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**Total**	**M/F**
a) Primary	12.2%	12.3%	12.2%	10.9%	11.2%	10.7%	3.7%	4.0%	3.4%	11%	(11%/11%)
b) Lower Secondary	1.6%	2.3%	0.7%	13.1%	12.9%	13.2%	2.1%	1.6%	2.5%	5%	(5%/5%)
c) Upper Secondary				2.4%	2.4%	2.5%					
Repetition rates	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**OVERALL**	**MALE**	**FEMALE**	**Total**	**M/F**
a) Primary	14.0%	14.5%	13.5%	12.7%	13.2%	12.2%	26.7%	28.9%	24.6%	12%	(12%/12%)
b) Lower Secondary	4.4%	4.0%	4.8%	5.8%	5.5%	6.0%	2.7%	2.5%	2.8%	6%	(6%/6%)
c) Upper Secondary				1.6%	1.5%	1.8%					

[4] Completion rate data is from 2012, but 2011 data is provided for transition, promotion, drop-out and repetition rates, because calculating these figures requires data from two consecutive years, so 2012 results will not be available until 2013 data is collected.

2.4 KEY CHALLENGES CONFRONTING THE SECTOR

2.4.1 Increasing Access to All Levels of Education

Rwanda has made impressive strides since 2000 in extending access to basic education to as many of its children as possible, as outlined above. The challenge going forward is to target the hardest-to-reach to ensure that all children of the official primary age group are accessing schooling. The findings of the EICV3 indicate that this involves targeting both boys and girls from more rural areas, the poorest of the urban and rural poor, and children with disabilities and various other special learning needs. Targeted policies and strategies addressing barriers to participation and learning for the most vulnerable children, including adolescent girls, children with disabilities, children living with HIV/AIDS and children from poorer backgrounds will be required to address this challenge and are included in the planned strategies within this ESSP.

It is at the secondary school level that the greatest challenge remains in expanding access. While impressive gains have been made during the course of EDPRS I following the introduction of 9YBE and 12YBE, the current secondary NER of 28% will need to increase significantly over the next five years to meet the targets of EDPRS 2. This implies an expansion of the system, particularly at the upper secondary level in line with the 12YBE strategy – expanding infrastructure, and increasing the number of teachers, and teaching and learning materials, all of which require significant investments. The TVET stream within the upper secondary school level will also have to be expanded significantly within the 12YBE programme, including an increase in the number of public and private TVET institutions at the post 12YBE level, in order to meet the targets set for EDPRS 2.

2.4.2. Improving Equity on the Basis of Poverty, Disability and Geographical Location

The EICV3 household survey revealed that there are still significant disparities between children from urban and rural areas and across wealth quintiles, especially at secondary level. Primary school attendance rates differ between the different provinces in the country, with children in the Eastern Province having the lowest attendance rates and those in the Northern Province the highest. Primary attendance rates are 9% higher in the richest consumption quintile as compared to the lowest quintile. Net attendance rates at secondary level for children from the highest consumption quintile are five times higher than in the lowest consumption quintile. Whilst the EICV3 reports that access to both primary and secondary education has generally increased fastest amongst the poorest and more rural students, they also indicate that the goal of equitable access to basic education for all subgroups of the population has not yet been realised. EICV3 also revealed that cost is the single most important factor driving children out of education.[5] In 2010/11 cost accounted for 16% of students who dropped out before completing primary education, and 42% of students who dropped out before completing secondary school.

Another example of disparities shows that the likelihood of a 7 to 8 year old child not starting school at the right age is four times higher if they are from a household within the poorest wealth quintile when compared to a child from the richest wealth quintile. Also a child in the lowest consumption

[5] Whilst basic education is fee-free in Rwanda there are some associated costs with accessing education such as costs of purchasing uniforms etc.

quintile is seven times more likely to be in primary school beyond the age of 12 than a child from a household in the richest consumption quintile, indicating that they more likely to start school late and/or repeat grades. Starting school at the correct age has an impact both upon the system and the individual, with late starters more likely to repeat a grade and/or drop out. The relatively high primary GER of 123.2% is the clearest indication of the inefficiency of the education system, caused in large part by the large number of over-age children in the system primarily as a result of children not starting school at the correct age. This means that Rwanda has an additional 23% of students to cater for in primary schooling than the ideal scenario, with a corresponding requirement of 23% additional resources to be provided. Interventions such as pre-school and school readiness programmes are strategies to address this specific challenge, though in order to be truly effective, they must be strategically targeted at the poorest communities and those parts of the country which are lagging behind.

The cross-cutting issue of access and participation of children with disabilities is one of the key challenges for the sector and has thus been prioritised as one of the ten strategic outcome areas for the ESSP. EICV3 shows that disabilities are a major factor affecting children's early access to school. A 7 to 8 year old child with disabilities is three times less likely to start school at the right age than a child with no disabilities. The EICV3 also revealed that a child with disabilities has an 18% greater chance of repeating a primary school class than another with no disabilities and that his or her chance of dropping out of school is four times higher than those of a child with no disabilities. Not all schools and learning institutions are adequately equipped with appropriate facilities, learning materials and teaching aids and specially trained teachers to integrate children with special needs. Ensuring that all schools in Rwanda are Child-Friendly and Disabled-friendly is a challenge which has to be further addressed during this ESSP. Special schools for children with more severe disabilities also need to be adequately resourced and supported. Education for children with disabilities also demands strong coordination between different Ministries and agencies beyond the education sector, particularly those in the Health, Social Protection and Local Governance sectors, which itself contains the challenge of coordination across multiple sectors and Ministries.

2.4.3 Improving the Quality of Education

An important challenge for the sector remains the need to address quality education throughout the system. The establishment of the Rwanda Education Board (REB) in 2011 was an important development in addressing the quality of education, with REB providing a comprehensive approach to the key priority of quality education and a mechanism of coordination across implementing agencies. There is now a great opportunity to approach the 12YBE reforms from a holistic point of view, addressing the issues of quality improvement and increased access side by side – to ensure an optimum balance between increasing access and improving quality.

The key challenge for the sector during EDPRS 2 lies in consolidating, advancing and accelerating quality improvement measures that have been initiated over recent years, such as improvements in textbook procurement, and the monitoring of learning achievement. Further reductions in average class sizes and pupil-teacher ratios, an improved curriculum supported by better and more readily available teaching and learning materials, improved examination and assessment systems, are all important. Improving learning materials will also focus on addressing the shortage of laboratory equipment and ICT facilities within schools, to strengthen the teaching of science and ICT. A higher

calibre of teaching recruits and teachers, who are better trained, better equipped and resourced, better supported and managed are all strategies outlined in Chapter 3, to address the challenge of quality improvements.

The challenge of improving the English language proficiency and pedagogical skills of teachers is being addressed through the School-Based Mentoring Programme, which aims to improve teaching methodology as well as the language skills of teachers. The programme was initiated in 2012 and a joint Ministry of Education and Development Partner Taskforce is now in place to guide this strategy over the course of this ESSP. Increased regional integration provides the opportunity to attract well qualified teachers from the EAC to support the school-based mentoring programme.

In the TVET sub-sector quality education and training is displayed in the development of skills that are orientated towards the future working environment that students will face, and practical, competency-based training. Progress has been made in this direction with the introduction of competency-based training, but there are still challenges to strengthen private sector involvement and training of trainers to ensure quality and relevance. This ESSP outlines strategies to propel forward quality improvements including strengthening learning in the private sector (for example through internships and industrial attachment programmes), initiatives to support the transition to employment and development of quality assurance systems in the TVET sub-sector.

Within higher education, educational standards of the student intake, qualifications of academic staff, research capacity and full use of ICT continue to restrain improvements to the quality of teaching, learning and research. The establishment of the University of Rwanda aims to be a catalyst to drive forward quality reforms by improving quality assurance, consolidating the skills and expertise of academic staff, creating centres of excellence for teaching and research, and improving utilisation of resources and facilities.

2.4.4 Improving School Readiness and Pre-Primary Education Provision

The NER for pre-primary education is only 12.9% against a target of 15% for 2012. Most pre-primary education services are located in urban areas and are privately provided and thus fee paying. This scenario means that a large proportion of the Rwandan population between the ages of 4 to 6 are excluded from any early learning and development opportunities, especially children living in rural areas and children from poorer backgrounds. This frequently results in children starting schools late, as indicated in the EICV3 survey and discussed above in Section 2.4.2. This in turn is contributing to the large number of over-aged children in schools, which places a large burden on school finances. By preparing young children with a quality pre-school education, children will be ready to start school on time and will be equipped with the proper preparation and skills to transition through school. Studies have shown that children who have access to early childhood services and pre-school education are more likely to start school at the correct age, less likely to drop out of school and achieve better learning outcomes than children who have not benefited from pre-school education.

The Rwandan Early Childhood Development (ECD) Policy and its Strategic Plan was developed and approved by Cabinet at the end of September 2011, providing a framework to ensure a holistic and integrated approach to the development of young children between the ages of 0-6. MINEDUC has been tasked with providing leadership for ECD across all concerned Sectors. Strategies for expanding

access to and quality of pre-primary education form one of ten priority outcomes of the ESSP, as detailed in Chapter 3.

2.4.5 Improving the Relevance of Education and Addressing Labour Market Demands

As Rwanda spends more of its resources on expanding access to education and on improving the quality of its provision, it becomes even more critical to ensure the relevance of the education offered and suitability of its graduates for current and future national, regional and global labour markets. EDPRS 2 aims to create 200,000 jobs each year, but private sector growth and competitiveness is constrained by low levels of productivity and skills. The education sector needs to equip students with the skills and competencies they require to enter the labour market, create jobs, and become productive members of the economy. This is as true of general primary and secondary schooling, teacher and higher education, as it is of TVET and more career-focused learning. The need for a close labour-market orientation is of course more direct and immediate in the case of TVET, requiring more direct engagement with potential labour markets, and a bigger role for employer and industry bodies in policymaking, curriculum development, governance, financing and provision thereof.

As Rwanda's economy grows, diversifies and becomes subject to regional and global influences, ever increasing levels of skills and competencies will be required. Some studies have pointed to significant challenges in the employability of the graduates from the upper secondary, TVET and higher education institutions. National and international evidence suggests that employers, both in the public and private sector, value very highly a common set of "generic business" or "catalytic" skills. These include good skills in communication (written and oral), problem-solving, teamwork, creative and critical thinking, and an understanding of how businesses work. The challenge for the sector is to ensure that the curriculum, pedagogical, and language of learning practices reforms result in a higher proportion of the graduates of the various sub-sectors demonstrating these skills in abundance. These challenges will be confronted head-on during this ESSP as outlined in Chapter 3.

Guided by the ESSP (2010-2015) a number of policies and strategies have been put in place to address skills development within Rwanda to ensure that we have a labour force with the necessary skills and entrepreneurial capabilities to drive growth. However, further attention is required to ensure that the curriculum in academic schooling and TVET is demand-driven and responsive to the needs of the labour market, providing students with transferable skills that they can apply to the world of work. Strategies to address this focus on developing more structured dialogue with the private sector in order to strengthen their role in the implementation and financing of TVET and policy development.

It is also recognised that science and technology are increasingly important fields in the education sector and throughout the system, from primary to secondary level to higher education much progress has been achieved though challenges remain such as shortage of laboratory equipment and materials at secondary and higher education level, as well as a lack of adequately qualified teachers and lecturers.

There is also a need for increased public private partnerships as a means to increase available financing for education and this becomes even more pertinent with implementation of the 12YBE strategy. More attention needs to be devoted to promoting PPPs through appropriate policy

interventions and to creating stronger links with the private sector overall (in particular TVET and post basic education) to ensure that the education system and the skills provided are responsive to the labour market demands.

2.4.6 Strengthening Administration and Management of the Education Sector

Strengthening the institutional framework and management capacity for effective delivery of education services at all levels is critical. It requires addressing capacity at individual, institutional and systems levels to ensure that the education sector has adequately equipped personnel in effective organisations, and that there are systems and networks in place to facilitate cooperation, cross-sector work and strong partnerships. The latter is particularly relevant for ECD, TVET and Higher Education where there are multiple stakeholders involved in delivery, policy and planning, and appropriate mechanisms are required to ensure holistic approaches.

During the five years of this ESSP this will be addressed through specific training to raise individual capacities to mount reforms, coordinate implementation with multiple stakeholders and engage in monitoring and evaluation of the sector; improved use of information systems such as the Education Management Information System (EMIS) and the Labour Market Information System (LMIS) from the school to national level; improved accountability, monitoring and evaluation through School Boards and Parent Teacher Associations (PTAs); and comprehensive training in whole school management and development.

2.5 INSTITUTIONAL OVERVIEW OF THE SECTOR

2.5.1 Central Government

The education sector comprises educational activities that take place under the governance of several ministries. Of these, MINEDUC has the major responsibility and has been designated in EDPRS 2 as the lead Ministry for the education sector with responsibility for policy formulation, and setting norms and standards for the education sector. MINEDUC also undertakes planning, monitoring and evaluation at the national level.

The other Ministries which have significant involvement in education provision and development are:

Ministry of Finance and Economic Planning (MINECOFIN) which sets broad economic policy and planning frameworks, oversees financial planning, the Medium Term Expenditure Framework (MTEF), the EDPRS 2 and the Long-Term Investment Framework. It plays an important role in the performance assessment and monitoring of budget execution.

Ministry of Public Service and Labour (MIFOTRA) which sets and administers salary levels and conditions of service for all civil servants, including teachers.

Ministry of Local Government (MINALOC) which oversees decentralisation functions of education; administers the Assistance Fund for Genocide Survivors (FARG) and community development funds; monitors performance at decentralised levels (provinces and districts, including performance contracts) and manages the Vision 2020 Umurenge social protection programme (VUP) which impacts on education as well as health.

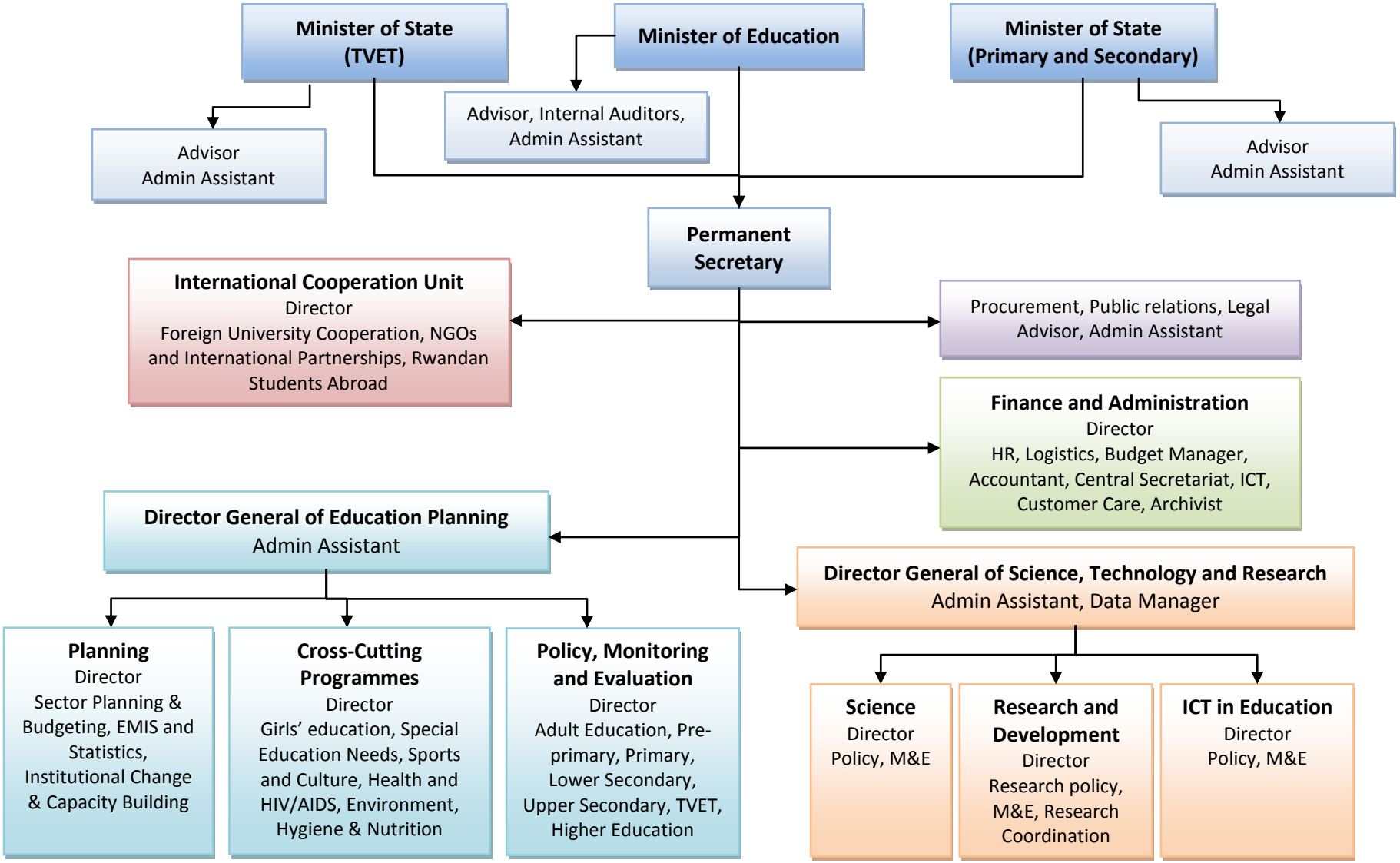
MINEDUC and its affiliated agencies also work closely with a number of other Ministries on cross-sectoral issues. These include:

- **Ministry of Trade and Industry (MINICOM**) and the **Rwanda Development Board (RDB)** on issues relating to skills development and employment, and
- **Ministry of Health (MINISANTE)** on educational programmes related to issues such as health, nutrition and HIV/AIDS prevention, and early childhood development;
- **Ministry of Agriculture (MINAGRI)** on issues relating to school feeding and provision of milk to primary school children ~~students;~~
- **Ministry of Youth and ICT (MYICT)** on issues relating to youth skills and ICT literacy;
- **Ministry of East African Community Affairs (MINEAC)** to coordinate work on Rwanda's education commitments as part of regional integration;
- **Ministry of Gender and Family Promotion (MIGEPROF)** on girls' education.

2.5.2. MINISTRY OF EDUCATION (MINEDUC)

The Ministry of Education sets policy, norms and standards for the education sector and undertakes planning, monitoring and evaluation at the national level. Figure 1 below shows the current MINEDUC organisation chart, which illustrates the range of responsibilities.

Figure 1: Structure of the Ministry of Education



2.5.3 Semi-Autonomous Agencies

In the education sector there are a number of semi-autonomies agencies. These are public institutions established by Acts of Parliament. They are affiliated to MINEDUC but have administrative and financial autonomy. These institutions include the Rwanda Education Board (REB), the Higher Education Council (HEC), the National Science and Technology Commission (NSTC), the Workforce Development Authority (WDA), the Rwandan National Commission for UNESCO (CNRU), the Institute of Scientific and Technological Research (IRST), and public Tertiary Education Institutions (TEIs). All these institutions have particular mandates to implement specific education policies which are designed at Ministry level.

Rwanda Education Board

The Rwanda Education Board (REB) was established by Law No. 44/2010 of 07/12/2010 determining its mission, organisation and functioning. REB is under the supervision of MINEDUC with the aim of providing a quality education to all Rwandans. REB brings together main implementation departments to ensure more effective coordination and more streamlined management.

REB's key responsibilities are contributing to education policy development, and coordinating and implementing education activities in the following areas:

(a) Curricula, Production, Materials and distribution, with responsibility for curriculum development for all levels of education except TVET and higher education. It ensures that all school curricula are well-understood and effectively used by teachers via regular visits to schools, training seminars to orient teachers, periodic reviews, research and evaluation of curricula.

(b) Teacher Education Management and Professionalisation, with responsibility for teacher development, including implementing programmes aimed at improving the welfare of teachers at all levels of education except TVET and higher education, and establishing conditions of service and guiding appointments, career development, evaluation, promotion and transfer of teachers except those in TVET and higher education.

(c) Education Quality and Standards, with responsibility for setting and monitoring educational standards at all levels except TVET and higher education.

(d) Examinations and accreditation, responsible for national examinations at all levels of education except TVET and higher education.

(e) Higher education student financing, responsible for modalities of selecting students receiving loans for higher education, managing loan disbursement and recovery and maintaining at long time a financially sustainable Higher Education system.

(f) ICT in Education and Open and Distance e-Learning (ODeL), responsible for the overall implementation and supervision of ICT in education and ODeL activities, including coordinating provision of infrastructure and technical support, capacity development, teacher training relating to ICT and ODeL, and overseeing ODeL provision,

Higher Education Council (HEC)

The Higher Education Council (HEC) is a semi-autonomous agency established by law No. 23/2006 of 28/04/2006. It is responsible for securing coherent provision of quality higher education in Rwanda in line with Government policies and priorities and advising the Minister on all matters relating to the accreditation of higher education institutions. It is also responsible for monitoring and evaluating the quality and standards of the higher learning institutions and enhancement of teaching and research.

Workforce Development Authority (WDA)

The Workforce Development Authority (WDA) was established in 2009 as a public institution with regulatory responsibilities for TVET and has administrative and financial autonomy. It is responsible for coordinating TVET provision and providing strategic oversight of the TVET sector, this includes the identification of TVET subjects; the development of standards and curricula; inspections of TVET institutions; training of vocational and technical teachers; examination and certification; regulating and accrediting TVET institutions; supporting entrepreneurship development; and the establishment of a National TVET Qualifications Framework. It is establishing subsidiary Integrated Polytechnic Regional Centres (IPRCs) in each Province and Kigali City.

National Commission for Science and Technology (NCST)

The National Science and Technology Commission (NSTC) has been established as an independent advisory board to the Minister responsible for development, promotion and coordination of Rwanda's Science, Technology and Innovation and is based in the Office of the Prime Minister.

Rwandan National Commission for UNESCO (CNRU)

The Rwandan National Commission for UNESCO (CNRU) is responsible for coordinating activities related to UNESCO's activities in Rwanda.

2.5.4 Education Decentralisation

The Government of Rwanda has embarked on decentralisation as a way of empowering the population to participate in development activities that have an influence them, including education. District authorities are actively involved in the planning, delivery and monitoring of education in their Districts.

In accordance with the decentralisation policy, responsibilities for sector programme planning, implementation and monitoring lie at the District level. In this regards, educational service delivery fall into the District Education Offices' responsibilities. These include:

- Preparation of the Five-Year District Education Development Plan and the Three-Year District Education Strategic Plan
- Implementation of education policy and strategic plans
- Preparation of the budget and MTEF

- Monitoring and evaluation of activities in education
- Recruitment, deployment and payment of permanent teaching staff, within ceilings set by MINECOFIN
- Provision of information on employed teachers to MINEDUC through REB
- Provision of education statistics
- Transfers of teachers and students within the same district
- Follow-up of NGO education-related activities and reporting back to Provinces and MINEDUC
- Monitoring of school financial reports, use of capitation grants, teachers' salaries and school feeding.

Sector & Cell

The Presidential Order No. 57/01 of 15/10/2006 makes the Sector a direct service provider to the population and collection of data and information needed by higher levels for development planning. At the sector level, educational responsibilities are performed by a Sector Education Officer (SEO).

The Cell and the Village are responsible for educational needs assessment and prioritisation, mobilising community and building collaboration and solidarity among community members in school construction and maintenance through community works, funding the education funds, identifying children who are in the school age and sensitising parents to send them to school, and advise them those who are attending or those who dropped out of school.

The administrative cell, particularly, has the official mandate of managing and monitoring nursery schools and ECD centres.

Schools

Head teachers are fundamental to effective school leadership and management, and therefore ensuring the quality of education and efficiency with which it is delivered. It is anticipated that as school management is strengthened schools themselves will make more decisions and manage increasing amount of funds transferred directly to the school from the capitation grant. This management role is actively supported by Parent Teacher Associations (PTAs) who receive training on school management. The implementation of policies including ensuring access and retention and quality of education primarily lie with schools.

Integrated Polytechnic Regional Centres (IPRCs)

Within the TVET sector, IPRCs are an implementing and facilitating body to ensure adequate and appropriate TVET offer within their province. This includes working with WDA to build necessary capacity to support TVET delivery, role modelling TVET best practice, and ensuring improved access to TVET through appropriate decentralisation.

Technical Secondary Schools (TSSs) and Vocational Training Centres (VTCs)

Technical Secondary Schools (TSSs) and Vocational Training Centres (VTCs) are the grassroots TVET providers. They implement TVET programmes according to set standards in line with local demands, and assure competence development through practice-based learning, industrial attachment programmes, and work readiness and entrepreneurial training.

2.5.5 Other Stakeholders and Partners

Development Partners

The role of Development partners in education is crucial. They play an important role in increasing the flow of funds through budget support, funding education programs and projects, and providing technical assistance where necessary.

Role of Private Sector in Education

The Private Sector role in education is now more crucial than ever. As the Government is prioritising education and training to support economic development, improved productivity and wealth creation, the private sector and civil society need to do the same. Public Private Partnerships (PPP) at all levels with special attention on TVET and Higher Education is seen as a booster to the private sector to open and run schools especially at secondary and tertiary levels. In addition to the private sector being involved in implementation, they also have a critical role to play in policy formation and strategic planning to ensure the relevance of education and training, particularly for TVET and Higher Education.

NGOs and Civil Society

Though the government has the prime responsibility and authority over education, civil society organisations, mostly faith-based organisations, play a major role in ensuring the engagement and participation in policy formulation, implementation and monitoring of strategies for educational development.

CHAPTER 3: STRATEGIC FRAMEWORK

3.1 SECTOR STRATEGIC GOALS

Three goals have been identified to support MINEDUC in achieving its mission of facilitating the development of human capital for the socio-economic development of Rwanda. These goals are: promoting **access** to education at all levels, improving the **quality** of education and training, and strengthening the **relevance** of education and training to meet labour market demands. **Equity** in education is integrated across all three goals to ensure improved access to quality, demand-driven learning for all students, with a focus on ensuring equity for disadvantaged students, including girls, the rural and urban poor, and children with disabilities.

This section sets out the targets to be achieved under each goal. The strategies for achieving these goals are detailed in Section 3.3.

Goal 1: To expand access to education at all levels

During this five year plan, progress in providing universal access to fee-free and compulsory primary and lower secondary education (9YBE) for all children will be consolidated, whilst access to upper secondary schooling will be significantly expanded (12YBE).

At primary level, the goal is to enrol the remaining 4 per cent of out-of-school children in school, increasing the NER from 96.5% to 100%. This group of out-of-school children includes both boys and girls from more rural areas, the poorest of the urban and rural poor, and children with disabilities and various other special learning needs. The sector will aim to increase the primary completion rate from 72.7% to 75%, and reduce the GER from 123.2% to 100%, as students pass through the system more efficiently and at the appropriate age for grade.

There will be a significant expansion of the secondary education system to meet the goals of EDPRS 2. The aim is to increase the percentage of children (NER) enrolled in lower secondary schools from 21% to 40%, and in upper secondary from 25% to 42%, with a focus on girls and children from the poorest households. This will include increasing the number of graduates from the technical stream of upper secondary, in both public and private sector.

Early Childhood Development (ECD) is recognised as a vital foundation for learning, particularly for children from more disadvantaged backgrounds. A one year school readiness programme for 5 and 6 year olds will be rolled out across all districts. By 2017 it is expected that the GER in pre-primary will have increased from 13% to 30%. The ESSP will also increase the provision of adult basic education (ABE) programmes to meet the Seven Year Government Programme target of 90% adult literacy by 2017.

Equitable access to relevant, high-quality, and affordable tertiary level education will be increased, including higher education and technical training. It is targeted that total enrolment in higher education will increase from 73,098 to 102,777 students by 2017, with an emphasis on expansion of private sector provision and use of open and distance learning to facilitate increased access.

Goal 2: To improve the quality of education and training

The quality of education relates to all dimensions of a child's social, physical and emotional development, but at a minimum it can be measured by students' learning achievement. At primary level, a continued focus will be placed on the acquisition of basic numeracy and literacy skills in the early grades. The sector aims to increase the percentage of students meeting minimum standards in English, Kinyarwanda and maths in P3, P5 and S2, with baseline data to be captured during this ESSP.

Given limited financial resources to realise the ESSP, immediate attention will be given to improving the efficiency of the education system, by reducing repetition and drop-out. It is targeted for the primary repetition rate to decrease from 12.7% in 2012 to 7.7% in 2017; and the dropout rate to reduce from 10.9% to 5.7%. At lower and upper secondary level, the dropout rate will fall from 13.1% to 11.3% and from 2.4% to 2.4%, and repetition rate from 5.8% to 2.6% and from 1.6% to 1%, respectively.

At primary level, it is aimed that the pupil to qualified teacher ratio will decrease from 62:1 to 48:1, and at secondary level from 34:1 to 31:1. Other key indicators of quality include an increase in the pupil textbook ratio to reach 1.7:1 at the primary level and 1:1 at the secondary level. Attention will be given to increasing the percentage of teachers able to teach effectively in the language of instruction (English and Kinyarwanda). At pre-primary, the proportion of trained care-givers will increase to 20%.

TVET programmes will be high quality and demand-driven providing students with the skills and competencies they required for employment. This will be facilitated by an increase in the percentage of trained TVET trainers from 4% to 25%, the development and revision of the TVET curriculum to ensure that it is competency-based and meeting labour market demands, and more structured public-private dialogue. At the tertiary level, the recruitment and retention of high performing staff will be prioritised under the University of Rwanda, with training being proposed to increase the proportion of undergraduate lecturers with at least a masters and graduate lecturers with a PhD.

The management of policy, information, finances and human resources across the system will be improved to ensure efficient and effective education delivery. At the school level, this will be reflected in an increased number of primary and secondary schools with functional PTAs, and at least 50% of head teachers trained in school management.

Goal 3: To strengthen the relevance of education and training to the labour market

A key goal of the EDPRS 2 is to move from an agricultural-based economy to a service and industry-based economy. Success is dependent on the creation of a workforce with the right skills, attitudes and competencies. Developing these will require investment in education at all levels of the education system, from early childhood to higher education.

Research has indicated that there is a strong association across countries between the quality of education, as measured by test scores in core subjects, and economic growth. This demonstrates the need for a workforce with strong foundational skills in basic literacy and numeracy, as well as transferable skills such as communication, problem solving and ICT. A competency-based curriculum and assessment system will focus on these core areas. At primary and secondary schools, the

percentage of schools with electricity, computers and access to the internet will be increased to support the use of ICT in education.

The planned expansion of TVET will be accompanied by strengthened private sector partnerships (e.g. through Sector Skills Councils, workforce planning forums, National TVET forum) to ensure that it meets the needs of the labour market, with a target of 81% of TVET employers being satisfied with the performance of TVET graduates. This will be supported by an improved TVET quality assurance system.

An increased proportion of students at upper secondary, TVET and tertiary level will be enrolled in science and technology, and the percentage of students taking science streams passing S6 with minimum requirements to study science at a public HLI will increase from 33% of boys and 25% of girls to 50% and 40%, respectively. There will also be a focus on improving capacity for research and development to promote a culture of innovation to support economic transformation.

3.2 SECTOR PRIORITIES

Ten sector outcomes have been identified to deliver against the three overarching goals of improved access, quality and relevance of education and training. Targets have been projected against available resources and policy options prioritised as part of a comprehensive and integrated education sector plan. As such, it is intended that all parts of the plan will be realised over the five year period. The following section highlights core components of the ESSP that will be prioritised in order to deliver against the targets of the second EDPRS.

Priority 1: Equitable access to nine-year basic education for all children, and expanding access to twelve-years basic education.

The ESSP aims to improve access to education and training at all levels – from early childhood to higher education. Within this, there is a particular focus on consolidating the achievement of universal access to primary and lower secondary education (9YBE) and expanding access to the final three years of basic education through the provision of general upper secondary and TVET.

Effort will be made to improve completion rates, particularly for the poorest, and to reduce repetition and drop out. To achieve this, priority will be given to ensuring that all schools have sufficient, well maintained facilities and equipment to meet infrastructure standards, including access to electricity and water. Access to mainstream schools for children with special needs will also be improved. The percentage of schools with disabled-friendly facilities and equipment for children with special needs will increase, as will the number of teachers trained in teaching students with special education needs.

Expansion of public TVET providers will focus on ensuring that core infrastructure, equipment and qualified trainers are in place, whilst the proportion of accredited and quality assured private sector providers will be increased.

Priority 2: Improved quality and learning outcomes across primary and secondary education.

Given limited financial resources, immediate attention will be given to reduce repetition and drop-out by improving the number and quality of skilled and motivated teachers, and availability of teaching and learning resources. Children at risk of dropping out will be supported to remain in education through strategies that engage parents and the community.

Revision of the 12YBE curriculum is a priority for this ESSP. This includes the development of a new competency-based curriculum for the TVET stream, and harmonisation of curriculum standards across the East African Community (EAC). Other key activities include the reform of examination and assessment practices, improvements in the quality and supply of teaching and learning resources, and roll out of the appropriate use of ICT in teaching and learning.

At primary level, a continued focus will be placed on the acquisition of basic numeracy and literacy in the early grades. This will be monitored through national and systematic assessment of learning achievement in core subjects at key points. The results of assessment will be utilised to inform teaching practice to improve reading and numeracy skills. This will provide a strong foundation for students to move from 'learning to read' to 'reading to learn' across all subjects in the curriculum.

Priority will be given to ensuring a sufficient number of qualified, suitably skilled and motivated teachers and trainers. Pre-service and in-service training of teachers will focus on improving proficiency in the language of learning, subject knowledge, and teaching skills and capacities, particularly in the key areas of literacy and numeracy. Progress made during the previous ESSPs in improving teacher conditions of service, and the management, utilisation and deployment of teachers will be continued.

Effective leadership and management of educational institutions and education systems (particularly where multi-stakeholder cooperation is required e.g. ECD, TVET and Higher Education) can create an environment for learning and ensures the efficient use of limited resources. The ESSP will support training and performance assessment of head-teachers and school management teams, including PTAs. Improved coordination of all public and private sector actors in the TVET Skills Development System via structured public-private dialogue (e.g. through Sector Skills Councils) will improve harmonisation of different initiatives.

Priority 3: Improved relevance of education and training to the labour market, including secondary education, demand-driven TVET and higher education.

Priority will be given to expanding access to TVET programmes as a pathway to improve productivity and to support job creation and the development of off-farm economic activities. Expanding TVET access will give special emphasis to girls and students with special educational needs. Enrolment for training within specific priority sectors will be increased, to ensure the relevance of training to the labour market.

TVET curricula will be updated (and new ones developed) with increased involvement of the private sector, including industry, employers and higher education institutions. The resulting curricula will be competency-based and put more emphasis on practical training. The relevance of training will be assessed and evaluated together with industry to identify if the training needs of the labour market are being met, and to adapt the curricula on a regular basis. This includes focusing on life-long

learning and supporting a continuous upgrade of skills for workers as well as students who are entering the TVET system directly from school.

The basic education system should provide students with foundational skills in literacy and numeracy, as well as transferable skills such as problem solving, communication and ICT. These 'catalytic' skills will be developed through revision of the primary and secondary curriculum. Effective career-guidance services at secondary level will be strengthened.

Strengthening Rwanda's skills base in science and technology is vital for delivering the EDPRS 2's goals for economic transformation, supporting innovation, wealth creation and export diversification to propel economic growth. The sector commits to strengthening performance in science and technology at all levels of education by improving teaching, facilities and learning materials, strengthening research and improving the application of science, technology and innovation in relevant sectors of the economy.

Knowledge creation and the development of a culture of innovation are vital if Rwanda is to attract foreign direct investment. At tertiary level, there will be an emphasis on delivering high quality research in partnership with the private sector. The quality of research and teaching in TEIs will be strengthened, particularly in the area of science and technology, including ICT. Higher education has a critical role to play in providing sufficient number of appropriately skilled graduates to support Rwanda's 7YGP target to generate 200,000 off-farm jobs each year and to raise productivity across all sectors to meet private sector demands.

3.3 SECTOR OUTCOMES FOR THE NEXT 5 YEARS

This ESSP has been developed around ten outcomes for the sector, for which the three overarching Strategic Goals – access, quality and relevance of education - are all pertinent. The outcomes for the sector are:

1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.
2. Increased equitable access to education for students with special educational needs within mainstream and special schools.
3. Improved quality and learning outcomes across primary and secondary education.
4. Qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.
5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes.
6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.
7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.
8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.
9. Increased access to Adult Basic Education to improve adult literacy and numeracy.

10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.

1. Increased equitable access to 9 years of basic education (primary and lower secondary schooling) for all children, and expanding access to 12 years of basic education (academic, and technical and vocational upper secondary).

This first outcome responds specifically to the first Strategic Goal of the ESSP: improving access to education, from primary level through secondary education, with a specific focus on addressing inequalities and disparities which exist throughout the country. As identified in the challenges section of this plan, while the education sector has made impressive progress in increasing access to both primary and 9YBE over the past number of years, challenges still remain to ensure that all children – in particular children from poorer backgrounds – can access and complete a fully cycle of both primary and secondary education. This implies both an expansion of the general and technical upper secondary system in line with the 12YBE strategy – infrastructure, teachers, teaching and learning materials - as well as a more innovative approach to inclusive education targeting specific measures to improve the enrolment, transition and completion rates of the most vulnerable populations. EICV3 identifies the disparities of access associated with poverty at both the primary and secondary level which demand more targeted and innovative solutions if Rwanda is to achieve the Education for All (EFA) targets and ensure that all children in the country can complete a full cycle of basic education.

2. Increased equitable access to education for students with special educational needs within mainstream and special schools.

In order to ensure full access and participation in education for all Rwandan children and youth, specific measures will be prioritised for children with special educational needs. A general principle underlying the education sector is one of inclusiveness, ensuring that the system and schools are adequately resourced and prepared to integrate children with special educational needs –in terms of access infrastructure, specific learning materials and teaching aids, and also with properly trained teachers, trainers and staff at schools and learning institutions. Ensuring that all schools in Rwanda are Child-Friendly and Disabled-friendly will help meet this challenge, while special schools for children with more severe disabilities can also provide quality education if adequately resourced and supported. The strategies developed to achieve this outcome also touch upon curriculum, teacher training systems and learning and teaching material policies. Education for children with disabilities also demands a strong coordination between different Ministries and agencies beyond the education sector, including in the Health, Social Protection and Local Governance sectors.

3. Improved quality and learning outcomes across primary and secondary education.

With the impressive gains made in increasing access to education, the education sector has placed a greater focus on the quality of education and learning outcomes over the past number of years. Quality education comprises a myriad of inter-related components beginning with the relevance and application of the curriculum, ensuring that it responds to the current and future labour market

demands both within Rwanda and regionally and provides children with the knowledge and skills required to become productive citizens. This ESSP will place a greater emphasis on the acquisition of literacy and numeracy skills, which are the foundation for all future learning and skills development, without which the productivity of the future labour force will be undermined. Measuring learning outcomes throughout the system, based on standards, and putting in place a system which can respond to those assessment results, involving teachers, inspectors, District and central level authorities is also prioritised. The adequate supply of appropriate teaching and learning materials, including textbooks and reading materials also has a significant bearing on quality, as does the capacity of teachers and educators to manage and use those resources in the schools and in the classrooms. The provision and improved use of information technology in the teaching and learning process at all levels will also underpin this plan. By improving the quality of instruction, particularly at the primary level, repetition rates are projected to fall over the course of the ESSP. This will see a gradual reduction of the primary GER, which currently stands at 127%. It will significantly reduce costs as fewer resources will be required to pay for students repeating grades - a major economic justification for prioritising quality in the education sector.

4. Improved supply of qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.

Teachers and trainers are the backbone of the education system, and the number, quality and motivation of these professionals has a strong influence on the overall quality of the system and the learning outcomes of students. In an expanding system, further preparation and recruitment of highly skilled teachers is envisaged, in order to meet targeted reductions in the pupil-teacher ratio for both primary and secondary level. The introduction of the innovative school-based mentoring programme underpins one of the sector's approaches to improving the skills of teachers. It focuses on improving both English language proficiency and teaching methodology. This combined with other targeted in-service training and professional development, and a strengthened pre-service system will help produce and build a skilled and well qualified teaching force. The implementation of a continuous professional development system, combined with the use of a more effective teacher development and management information system, will help to motivate the teaching workforce and will support more efficient teacher recruitment, deployment, promotion and in-service training mechanisms.

5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes

As a national priority TVET will take on a greater importance within the education sector during the life-time of this sector plan. Strategies will focus on providing students with practical skills in occupations which are immediately relevant to the current labour market needs. The TVET stream within the upper secondary school level will be expanded as part of the 12YBE programme accompanied by more general expansion of TVET institutions, both public and private, at post 12YBE level, and with a particular emphasis on enrolling more girls and young people with special needs. It is expected that an ever increasing number of students will choose to enrol within the TVET stream rather than the general education stream, and so the TVET sub-sector faces the twin challenge of increasing access capacity while strengthening the quality and relevance of courses and qualifications offered. To ensure the quality of TVET provision, a competency-based curriculum

focused on key priority sectors and linked to labour market needs will be implemented, a larger number of trainers will be trained and recruited and stronger links created with the private sector, including through increased work placements and industry-based training opportunities of the form of traditional and modern apprenticeship, conventional TVET in industry and in-company training. A strong partnership between government and the private sector is seen by all stakeholders as the cornerstone of the TVET system development over the course of the ESSP.

6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs

Increasing access to higher education is critical for Rwanda to compete in the global economy. This needs to be accompanied by improvements in the quality of provision and harmonising approaches across the East African Community so that graduates have the requisite knowledge and skills to support economic development and meet the labour market's needs both in Rwanda and throughout the region. This will be facilitated by the establishment of the University of Rwanda (UR). The UR will merge all seven existing public higher learning institutions, with the aim of improving the quality and relevance of higher education via improved coordination, governance and strengthened capacity under the one university structure. Consolidated partnerships with international universities will strengthen the Rwandan institutions of higher learning in the area of quality, joint research projects and sharing of latest educational technology, resources and innovative best practice.

With the success of basic education programmes an ever increasing number of students wish to enrol in higher learning institutions. Meeting this increased demand requires innovative approaches, which combine full-time, part-time, and Open, Distance and e-learning (ODeL) opportunities for students. The recruitment and retention of high-performing staff will ensure a greater level of quality and relevance of higher education courses, and will support the development of quality research capacities within universities. Further training for academic staff is planned for them to upgrade their skills.

7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.

This outcome is responding to the education sector's commitments within the National ECD Policy, which was adopted in September 2011. The policy provides a framework to ensure a holistic and integrated approach to the development of young children between the ages of 0-6. It is targeted to address the EICV3 survey findings which reported that children from poorer backgrounds were less likely to start school at the correct age, which is contributing to the large number of over-aged children in schools, and in turn places a large burden on school finances. Provision of pre-primary education through targeted school readiness programmes or more general pre-primary education will help to ensure that children are ready to start school on time and have begun to develop basic skills that will provide a foundation for learning at primary school and beyond. Studies have shown that investments in this area can be a highly cost-effective approach to prevent inequalities later in life and to support future learning.

8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.

The education sector has responsibility for the critical areas of Science, Technology, and Innovation(STI), which are widely seen as dominant factors behind rapid economic and industrial growth. The Government's Vision 2020 statement, its National Policy on Science, Technology and Innovation, and the EDPRS 2 are all based on the premise that, through embarking on a concerted effort to build science, technology and innovation capacity Rwanda will greatly enhance its prospects of achieving the growth, poverty reduction, wealth creation and export diversification objectives. Strategies to improve STI capacity include promoting knowledge acquisition and deepening knowledge creation, knowledge transfer and a culture of innovation in order to promote sustained growth of GDP including enhanced opportunities for growth in rural areas; to improve skills and knowledge among the population and to integrate technical education with commerce, industry and the private sector.

The lack of research and development, particularly linked to new product discovery and product development, has been highlighted as one of the key constraints to growth, for example in the agro-processing area. This ESSP includes a renewed and intensified focus on research and development in higher education and research institutions. Within basic education, students need to be inspired to pursue science and technology subjects. To achieve this, teaching of these subjects needs to be supported by adequate laboratory equipment and materials to support practical learning, as well as adequately qualified teachers. The introduction and application of science and technology from the early grades is of critical importance if Rwanda wishes to develop graduates who are science and computer literate, a requirement for the country in order to attract hi-tech firms to establish their businesses in Rwanda. There will be enhancement of the existing business incubation centres in TEIs to support the development of sustainable business ventures, and to provide a channel for innovation and application of research to support economic transformation and graduate job creation.

9. Increased access to Adult Basic Education to improve adult literacy and numeracy.

The adult literacy rate has been increasing impressively in Rwanda over the past number of years, and currently stands at 68%, according to the 2012 RPHC. However, there remains a gender disparity with a female adult literacy rate of 64.7% (according to EICV 3), compared to a male adult literacy rate of 75.7%. There are also significant geographic disparities, with much higher literacy rates being found in Kigali city (86.7%), whilst the Southern Province has the lowest literacy rates (65.7%). Adult computer literacy rates remain very low nationwide. Ensuring that the adult population is equipped with basic literacy and numeracy skills remains a priority within the education sector. Basic literacy and numeracy skills provide a foundation for all Rwandan's to engage in their country's development. It enables individuals to more fully engage in the social and political life of their communities, and equips them with the skills to improve labour productivity and to contribute to economic growth, particularly through small and medium enterprises and micro-enterprises. Having a dynamic, productive, literate population also makes Rwanda more attractive as a country to invest in for multi-national companies and international investors. Continuing to support national adult

literacy programmes and initiatives to strengthen adults' basic skills remains a priority for the education sector.

10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.

The tenth and final outcome for the ESSP is concerned with how the education system is managed, resourced and coordinated, to ensure that it is fit for purpose and providing the best possible structure and leadership to help achieve all of the other priority outcomes of the plan. It involves adopting and strengthening innovative and coordinated approaches to data management and M&E systems to help eliminate duplication and create efficiencies between agencies and institutions. It includes streamlining human resource management processes and systems and strengthening planning functions at both the central and decentralised levels as well as ensuring greater coordination across these levels and between planning departments and implementing agencies and institutions. A key area will also be using ICT solutions to facilitate information flow, quality services, data generation and management. Without a focus on improving overall system administration and management services, the education sector will not make the most use of the resources which it has at its disposal, both human and financial.

3.3.1 Linkage between Education and the EDPRS 2 Thematic Outcomes

An educated workforce with relevant skills and competencies is critical to the delivery of Rwanda's EDPRS 2. Investing in quality education at all levels will provide the foundation for economic growth and reduced poverty. As such, the education sector will make a significant contribution to all four of the EDPRS Thematic Outcomes.

Economic Transformation for Rapid Growth

Economic Transformation is the process of sustained high economic growth during which the fundamentals of an economy shift from a traditional agricultural base and rural labour force to a more industrial and diversified economy. The thematic outcome of Economic Transformation sets out an ambitious strategy to sustain rapid growth and facilitate Rwanda's progress towards the revised targets of the Vision 2020.

Transformation of the economy will be impossible to achieve without an adequately skilled labour force. Similarly growth needs to be underpinned by a labour force with appropriate skills to maximise productivity. Education is therefore a critical foundation for the delivery of this Thematic Outcome. The ESSP will improve the relevance of secondary education to equip school leavers with the skills, knowledge, and practical experience needed to engage in the process of economic growth. The number of graduates from TVET and higher education institutions will be increased, as will the quality of training provided to ensure that graduates have the skills demanded by the private sector.

Science, Technology and Innovation, a sub-sector of education, has the potential to make a significant contribution to the objective of the Thematic Outcome to grow export-oriented industry and services. A lack of research and development (R&D) has been highlighted as one of the key

constraints to growth, for example in the agro-processing area. This ESSP includes a renewed and intensified focus on R&D and business incubation in higher education. Specific R&D partnerships will be developed with the private sector aimed at innovative produce development in areas such as food-processing, light manufacturing, agribusiness, beverages, plastic products, and the green economy.

Rural Development

The vision for Rural Development is to reduce poverty while ensuring economic growth in the rural areas. The economic growth target will be driven by rural on and off farm activities that require a workforce with appropriate skills. This includes providing people with the skills to enable development of small-scale enterprises and agri-businesses.

Education will provide rural communities, including the poor, with the capabilities needed to participate in rural development. Key strategies for rural development include increasing agricultural productivity, land reform, and off-farm employment. These outcomes will be underpinned by foundational investments in human capital, including education. Beyond access to basic education, the ESSP will also expand opportunities to adult literacy programmes, and technical and vocational education and training, which will provide rural people with the skills they need to adopt new agricultural practices and benefit from a diversified rural economy.

Finally, education can play a role in promoting rural development using the messages that can be conveyed through the education system. This includes a wide range of areas such as health promotion and access, community development, agricultural information dissemination, civic education, and promotion of peace and justice. In addition a key mission of TVET and higher learning institutions is community outreach via technology transfers, which seek to apply new technologies to improve productivity in agriculture production and other sectors.

Accountable Governance

The thematic outcome of Accountable Governance aims to improve the accountability and transparency of government by increasing the engagement of Rwandan citizens in the development process and the decentralisation of public services.

An educated population is better empowered to participate in the development of their communities and to hold officials accountable for the deployment of resources. Continued investment in basic education and adult literacy is a necessary foundation on which to build accountable governance. The education system can also be used to instil the values and knowledge required to enable young people to engage with local government. Community participation in the governance of schools and training institutions is already recognised as good practice with the education sector. The ESSP will continue to emphasise the need for involvement of parents and community leaders in the management of schools, to drive improvements in the quality and efficiency of education services.

Productivity and Youth Employment

This ESSP will directly support the achievement of the EDPRS thematic outcome of Productivity and Youth Employment by improving the supply of a relevantly skilled workforce. Education is a key factor in improving productivity and addressing underemployment. The quantity and quality of education has a significant impact on the employability of the workforce, with investors attracted to destinations where a sufficient proportion of the local labour force has relevant skills.

The recent increase in the number of general secondary school leavers has benefited the industrial and service sectors. However, unemployment remains relatively high amongst university graduates, whilst critical skills gaps continue to constrain the growth of the private sector. This suggests that education and training opportunities need to be better matched to the demands of the labour market. To address this challenge, this ESSP will aim to increase the number of students graduating with relevant TVET and tertiary qualifications. This expansion will be balanced against continued investment in primary and general secondary education to produce students with strong foundations in literacy and numeracy. Such students will have the transferable skills needed to adapt to future job markets.

The ESSP will deliver a significant increase in access to high-quality, demand-driven programmes in technical and vocational education and training. These programmes are intended to meet the demand of the current and future labour market more directly to ensure a closer fit between the technical skills requirements of the economy and the output of the TVET system. The ESSP proposes much closer coordination of and participation in the provision of TVET on the part of employers, industry bodies, the private sector more broadly, and those responsible for leading and steering the economic development process. Also planned is a large-scale increase in practice-based learning opportunities, including apprenticeships, internships, industrial attachments and work placements. Through business incubation centres graduates will also be supported in developing business proposals and accessing finance so that they can translate their entrepreneurial capabilities and innovative ideas into viable business opportunities.

At general secondary level, the relevance of the school curriculum to the workplace will be improved by introducing competency based learning that provides students with employable skills. This will deliver school graduates capable of entering the labour-market with a broad set of employable competencies (skills, essential knowledge and appropriate attitudes). Employable skills are defined as technical proficiency that is informed by essential technical knowledge and work attitudes, alongside good verbal and written communication, problem-solving skills linked to numeracy and financial literacy, a facility for further learning and skills acquisition, an entrepreneurial orientation, and basic competence in the use of ICT.

Foundational issues

In addition to the above thematic areas which reflect the priorities of the EDPRS 2, there are a number of foundational issues that are required to underpin the planned thematic outcomes and national goals set forth in EDPRS 2. As described above the education sector is essential to provide the human capital necessary for Rwanda's development. In this respect education can be seen as foundational issue, however in order to strategically focus on how the education sector can support national development in this ESSP the sector outcomes have been developed so that they are

aligned with the EDPRS 2's thematic outcomes, particularly those relating to Productivity and Youth Employment.

Table 2 below summarises how the Education sector's priorities and planned outcomes are aligned to the thematic areas and outcomes of the EDPRS 2. The indicators provided are the 12 high level indicators chosen by the education sector to monitor overall performance in line with the EDPRS 2 monitoring matrix. Further indicators which will provide more detailed monitoring of progress across the education sector are provided in the monitoring and evaluation framework in Chapter 5.

Table 2: Sector Priority and Outcome Matrix

EDPRS 2 THEMATIC AREA	THEMATIC OUTCOME	SECTOR PRIORITY	SECTOR OUTCOME	SECTOR OUTCOME INDICATOR
Productivity and Youth Employment Foundational issue	1.2 Graduates prepared for job market with critical skills needed 1.4 Decreased critical skills gaps 2.1 More productive private sector 4.1 Reduced unemployment	Equitable access to nine-years basic education for all children, and expanding access to twelve-years basic education.	**1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.**	- Primary Completion Rate (F/M) - Transition rate from primary to lower secondary (F/M) - Transition rate from lower to upper secondary (F/M)
Productivity and Youth Employment Foundational issue	1.2 Graduates prepared for job market with critical skills needed 1.4 Decreased critical skills gaps 4.1 Reduced unemployment	Equitable access to nine-years basic education for all children, and expanding access to twelve-years basic education.	**2. Increased equitable access to education for students with special educational needs within mainstream and special schools.**	- Number of children with disabilities enrolled in school (primary and secondary)
Productivity and Youth Employment Foundational issue	1.1 Curricula for educational institutions meeting skills requirements of employers 1.2 Graduates prepared for job market with critical skills needed 1.4 Decreased critical skills gaps 1.5 Changing attitudes to work 2.1 More productive private sector 4.1 Reduced unemployment	Improved quality and learning outcomes across primary and secondary education.	**3. Improved quality and learning outcomes across primary and secondary education.**	- Percentage of students meeting minimum standards in English, Kinyarwanda and maths in P3 and P5 - Pupil: Qualified Teacher Ratio (Primary/Secondary)[6]
Productivity and Youth Employment Foundational issue	1.2 Graduates prepared for job market with critical skills needed 2.1 More productive private sector 2.2 More productive public sector	Equitable access to nine-years basic education for all children, and expanding access to twelve-years	**4. Qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.**	

[6] This outcome indicator on the pupil: qualified teacher ratio is used to assess progress on outcomes 3 and 4

EDPRS 2 THEMATIC AREA	THEMATIC OUTCOME	SECTOR PRIORITY	SECTOR OUTCOME	SECTOR OUTCOME INDICATOR
		basic education. Improved quality and learning outcomes across primary and secondary education.		
Productivity and Youth Employment	1.1 Curricula for educational institutions meeting skills requirements of employers 1.2 Graduates prepared for job market with critical skills needed 1.4 Decreased critical skills gaps 1.5 Changing attitudes to work 2.1 More productive private sector 4.1 Reduced unemployment	Improved relevance of education and training to the labour market, including secondary, demand-driven TVET and Higher Education.	**5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes.**	- Percentage of TVET graduates[7] employed[8] six months after graduation - Percentage of employers satisfied with TVET graduates
Productivity and Youth Employment	1.1 Curricula for educational institutions meeting skills requirements of employers 1.2 Graduates prepared for job market with critical skills needed 1.4 Decreased critical skills gaps 1.5 Changing attitudes to work 2.1 More productive private sector 4.1 Reduced unemployment	Improved relevance of education and training to the labour market, including secondary, demand-driven TVET and Higher Education.	**6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.**	- Percentage of employers satisfied with university graduates - Percentage of university graduates employed[5] one year after graduation
Productivity and Youth Employment		Equitable access to nine-years basic education for all children, and expanding	**7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years**	- Percentage of children aged 4-6 enrolled in pre-primary education programmes

[7] This includes graduates from VTCs, TSSs and IPRCs
[8] This is to include graduates who are employed and those who are self-employed

EDPRS 2 THEMATIC AREA	THEMATIC OUTCOME	SECTOR PRIORITY	SECTOR OUTCOME	SECTOR OUTCOME INDICATOR
Foundational issue		access to twelve-years basic education. Improved quality and learning outcomes across primary and secondary education.	**of early learning for four-to-six-year olds.**	
Productivity and Youth Employment	1.1 Curricula for educational institutions meeting skills requirements of employers 1.4 Decreased critical skills gaps 2.1 More productive private sector 4.1 Reduced unemployment	Improved relevance of education and training to the labour market, including secondary, demand-driven TVET and Higher Education.	**8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.**	- Proportion of students enrolled in science and technology fields at: general upper secondary, TTCs, TSSs and Higher Education
Productivity and Youth Employment	1.1 Curricula for educational institutions meeting skills requirements of employers 1.3 Access to skills training for adults 1.4 Decreased critical skills gaps 1.5 Changing attitudes to work 2.1 More productive private sector 4.1 Reduced unemployment	Improved relevance of education and training to the labour market, including secondary, demand-driven TVET and Higher Education.	**9. Increased access to Adult Basic Education to improve adult literacy and numeracy**	- Percentage reduction in the total number of illiterate adults
Productivity and Youth Employment	2.2 More productive public sector 2.1: Improved citizens' scores on	Equitable access to nine-years basic education for all children, and expanding	**10. Improved administrative and management support services, including the management of policy, information, finances,**	[9]

[9] No indicators were selected for this outcome for the top 12 indicators being used to monitor progress in the sector. See full M&E framework in Section 5 for indicators being used to monitor this outcome.

EDPRS 2 THEMATIC AREA	THEMATIC OUTCOME	SECTOR PRIORITY	SECTOR OUTCOME	SECTOR OUTCOME INDICATOR
Accountable Governance	the provision of services 2.2: Improved awareness of service delivery standards and rights	access to twelve-years basic education. Improved quality and learning outcomes across primary and secondary education. Improved relevance of education and training to the labour market, including secondary, demand-driven TVET and Higher Education.	**and human resources across the education sector**	

3.4 STRATEGIES FOR ACHIEVING OUTCOMES AND CROSS CUTTING ISSUES

3.4.1: Strategies for Achieving Sector Outcomes Including Innovative Methods

1. Increased equitable access to 9 years basic education for all children, and expanding access to 12 years basic education.

The required expansion of the system at the upper secondary level in line with the 12 year basic education strategy requires a continued infrastructure programme. Classroom construction will continue to be completed using the 'unconventional approach' that harnesses support from communities to reduce costs. The success and innovative nature of this approach has been internationally recognised, with Rwanda winning the Commonwealth Education Good Practice Awards in 2012. A strategy for the rollout of electricity, water and connectivity to schools will also be pursued in partnership with MININFRA and other relevant Ministries. Combined with the infrastructure programme will be a strategy to train and recruit additional teachers to meet pupil-teacher ratio targets.

The education sector will implement evidence-based policies and strategies addressing barriers to participation and learning for the most vulnerable children, including adolescent girls, children with disabilities, children living with HIV and children from poorer backgrounds. These strategies are required to eliminate disparities in terms of access, retention and completion, which have been identified by the EICV survey and through other studies. A distinct budget line has been maintained to support specific initiatives to address barriers facing girls, and strategies to be followed include the provision of gender-sensitive water and sanitation facilities and other measures to promote menstrual hygiene management. School Health initiatives to promote good hygiene practices and support school children to protect themselves against HIV will continue at both primary and secondary level. School nutrition programmes will be strengthened, drawing upon community participation in an effort to address issues of hunger associated with poverty. The role of the PTAs will be strengthened to address the issue of out of school children and drop-out. In addition the District Fund for Education has been expanded, to support access to education for children from poorer backgrounds. Section 3.5.3 elaborates on these strategies and the planned interventions to ensure more inclusive access to 12YBE for all Rwandan children.

2. Increased equitable access to education for students with special educational needs within mainstream and special schools.

In order to ensure full access and participation in education for all Rwandan children and youth, specific measures will be prioritised for children with special needs. While disability is a cross cutting issues across all of the ten sector outcomes, the issue also merits a distinct outcome with specific stand-alone strategies and initiatives. The budget allocation for special needs education has been increased considerably, rising annually over the course of the ESSP. The education sector aims to be fully inclusive, implementing strategies to ensure that schools are adequately resources and prepared to integrate children with special needs. This will require all school construction programmes to be disabled-friendly with wheelchair access and a barrier free terrain. A specific budget line for the provision of special needs education equipment to secondary schools has also

been established, providing specific learning materials and teaching aids, with the intention of increasing the number of teachers who are trained to provide specific support to learners with special needs. Education for children with disabilities also demands a strong coordination between different Ministries and agencies beyond the education sector, including in the Health, Social Protection and Local Governance sectors and with the private sector.

3. Improved quality and learning outcomes across primary and secondary education.

Over the lifetime of this ESSP, a regionally harmonised school curriculum will be developed, to provide a solid foundation for learning and skills development, fostering creative and critical thinking, problem solving and analytical skills. The curriculum will respond to specific skills and competencies required to prepare students for the modern economy and to contribute to youth employment. It will encourage entrepreneurship and creative business ideas, strategically positioning the education curriculum to the future labour market needs. It will also acknowledge the importance of improving literacy by placing an increased emphasis on the development of key reading and writing skills across the grade levels, and in particular in early primary.

Improving reading levels will require concentrated efforts on a variety of fronts. This includes ensuring that current and pre-service teachers are trained in effective reading classroom practices and provided with evidence-based reading instructional materials, that primary school timetables allocate a minimal amount of time each week to both the teaching of reading and to personal reading, that students across the grade levels have sufficient access to high quality and engaging recreational or supplementary reading materials, and that schools and communities institute campaigns to raise awareness of the importance of reading and to develop students' interest in reading. The learning and teaching material system for the procurement and distribution of textbooks, readers and supplementary learning materials and teaching aids will be fully operational, and will result in continued improvements in the student/textbook ratio as well as access to reading material for all schoolchildren.

The national system of assessing learning achievement will be strengthened, supported by key development partners, placing a greater emphasis on the acquisition of literacy and numeracy skills, which are the foundation for all future learning and skills development. This will allow for the regular monitoring of learning achievement, measured against set standards, and the setting of qualitative targets for the sector and the generation of evidence of learning outcome improvements and challenges, which will inform policy making and classroom practice.

The innovative school-based mentoring programme will be rolled out throughout the country, placing an experienced and skilled mentor at the school level, to improve the skills of teachers, both for English language proficiency and teaching methodology. The provision and improved use of information technology in the teaching and learning process at all levels will also underpin the ESSP.

Innovation for Education

Encouraging innovations in the education sector is a central element of MINEDUC's strategic focus. Introducing innovative solutions to address existing challenges in the sector will act as a catalyst for achieving overall sector goals. In 2012 the Ministry of Education launched *Innovation for Education*, a DFID-supported fund that is testing innovations which aim to demonstrate effective and equitable ways of improving children's learning. The fund supports civil society and the private sector to pilot innovative projects that have the potential to be adopted by the Government and implemented nationwide. Innovation for Education currently supports 26 innovative projects with an overall value of 12 billion RWF. The projects are being implemented in classrooms, schools and other education institutions throughout Rwanda. They are focused on the following six themes:

- Effective teaching and learning
- Use of appropriate technologies in education
- Skills development
- Inclusive education
- Accountability and empowerment
- Climate change

All projects have a strong focus on evidence collection. Each project will collect data to assess the impact that the project is having on children's education. These findings will be judged against the cost effectiveness of the project and whether it can be scaled up by Government.

4. Improved supply of qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.

From 2013/14 there will be a new budget line for the teacher development fund. This fund will help make the teaching profession more attractive by supporting good performing teachers with cows, laptops and tuition fees for their children. It will also make provision for motorbikes for teachers in rural areas, all of which are innovative and cost-effective strategies for motivating teachers and making the teaching profession more attractive for new entrants and in-service teachers alike.

In a still-expanding system, further preparation and recruitment of highly skilled teachers is envisaged, in order to meet targeted reductions in the pupil-teacher ratio. The implementation of a continuous professional development system, combined with the use of a more effective teacher development and management information system, will help to motivate the teaching workforce and will support more efficient teacher recruitment, deployment, promotion and in-service training mechanisms. A national training and development programme in school leadership and management will be rolled out to build head teachers' capacity for effective school management, which will be accompanied by a system of school leadership and management performance assessments. Innovative strategies to improve and measure teachers' English language proficiency will also be implemented, by developing internationally comparative standards, establishing a baseline for current proficiency levels, and by tracking improvements over time, linked to monitoring and evaluation of the effectiveness of the school-based mentoring programme.

5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes

The greater emphasis devoted to TVET in this plan will require an expansion in the number of TVET institutions, as well as an increase in the access capacity of existing institutions. Construction of TVET infrastructure will follow the 'unconventional model' where appropriate. This approach has been successfully implemented in schools nationwide for the 9 year and 12 year basic education programme and will reduce the cost of construction. In order to quality assure the expansion in infrastructure and that TVET institutions are adequately equipped, TVET infrastructure and equipment standards and guidelines will be developed. To allow a greater number of students access TVET courses a double-shifting system will be adopted by all TVET schools from 2013. This will reduce the cost pressures as TVET expands within the 12YBE policy. The targeted trainer-pupil ratio in TVET will be allowed to increase not only because of the double shifting policy, but also because ICT instruction will be adopted where possible to allow for larger class sizes. This cost-effective approach reduces the trainer salary burden and TVET schools will also be further encouraged to increase their internally generated revenues.

Strategies to increase the number of accredited and quality assured private and public TVET providers include the finalisation and implementation of the accreditation and quality assurance framework, as well as the conduct of a national training programme in accreditation, required of heads of TVET institutions. A competency-based curriculum focused on key priority sectors and linked to the labour market needs will be implemented with private sector participation, a larger number of trainers will be trained (including the up-grading of existing trainers and the setting-up of a pool of Rwandan master trainers) and recruited and stronger links created with the private sector, including through increased work placements and industry-based training opportunities. A stronger partnership between government and the private sector will be developed over the course of the ESSP, including a national campaign encouraging employers to implement work-based training (traditional and modern apprenticeship, conventional TVET in industry and in-company training).

A number of new budget lines have been developed to cater for the expansion of TVET. These include the operating costs of VTCs to fund the institutions as fees are substantially reduced within 12 year basic education. The operating costs for TSSs are included within the capitation grant allocation to upper secondary schools for 2012/13. From 2013/14 they are assumed to be within districts' budget as part of overall capitation grant allocation for TVET schools (both TSSs and VTCs). Together these operating costs will be the biggest budget component for the TVET sub-sector. These capitation grants will be provided to both public and private TVET providers to encourage continued private sector provision of TVET. Within the implementation period of this ESSP a sustainable financing mechanism for TVET and skills development, jointly owned by public and private actors will be elaborated and its implementation prepared.

6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs

A detailed management plan for the merging of public Higher Education Institutions and the establishment of the University of Rwanda will be implemented to increase institutional efficiency and coordination in the provision of public higher education. In order to meet the increased demand for tertiary education the higher education sector's capacity will be maximised by increasing the number of evening classes, part-time courses and distance learning courses and opportunities for

postgraduate study. This expansion will be supported by the construction of additional public facilities including classrooms, laboratories and student hostels, according to needs and projected increases in student numbers. In order to improve the quality and relevance of higher education, a harmonised approach within the East African Community will be pursued for entry requirements, course content and qualifications.

A staff retention plan will be implemented to ensure that high performing and experienced staff are recruited and retained within the system. Linked to this is the development of an increasing number of partnerships with international universities and higher learning institutions, which will strengthen the Rwandan Institutions of Higher Learning in the area of quality, faculty training, joint research projects and knowledge and exposure to the latest educational technology such as open, distance and e-learning. The student loan financing system will be strengthened with a more efficient student loan recovery system, and weighted more in favour of providing third level access to students from poorer backgrounds.

7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.

In increasing access to pre-primary education a community-based strategy will be employed, with community contributions complementing Government financing and inputs. The Ministry of Education will provide oversight to the standards and quality of pre-primary programmes through the development of national ECD standards and ECD packages for caregivers and pre-school teacher training. School-based physical infrastructure for pre-primary learning spaces will be expanded through the unconventional construction approach and by extending primary schools to accommodate pre-primary sections.

Extending the capitation grant to the pre-primary sub-sector will be explored during the period of the ESSP. There are opportunities to approach the use of the capitation grant in an innovative manner, by targeting the grant towards poorer sectors and communities, which will help prevent poorer families being excluded from accessing pre-primary education because of their inability to contribute financially. Strategies of community contribution include contribution towards the costs of hiring pre-school teachers and also in school feeding programmes, where they exist. Community contributions will not be limited to finances, but also include parents acting as care-givers, providing and cooking food and other such inputs, to allow families to contribute according to their means. Development partners are also expected to contribute to both the costs of expanding access to pre-primary education and also in technical support for the development and oversight of standards. The pre-primary curriculum will also be revised as part of the planned revision of the school curriculum. The Ministry of Education also plays a coordinating role across Government for the implementation of the integrated Early Childhood Development Strategic Plan, which is concerned with the holistic development of children between the ages of 0-6. That coordinating role will continue through the national ECD task force.

8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.

Strategies for strengthening science, information technology and innovation cut across all sub-sectors of the education sector incorporating specific targets which have been set for the provision of laptops at the primary level, equipping schools with science equipment and kits particularly at the secondary level, delivery of a national science teacher training programme in the academic and practical aspects of science teaching, greater levels of enrolment (both male and female) in and quality of science and technology subjects in higher education and expanding access to well-equipped TVET centres - all of which have been identified as strategically important for Rwanda to become the ICT hub of the region. To minimise costs in ICT in education, a facility for refurbishing old computers will be developed. In addition maintenance of existing computers and infrastructure will be prioritised, reducing the speed with which equipment needs to be replaced.

The education sector has responsibility for the critical areas of Science, Technology, and Innovation (STI) across government. This includes the development of policies in STI in critical areas of science, including the National STI policy itself and areas such as research policy, bio-safety, and biodiversity. Other areas include the development of high level research capacity such as though regional and international partnerships, high level research conferences and research grants, and the other policy objectives of knowledge transfer and developing a culture of innovation. To facilitate this role, a new budget line has been created for "Knowledge transfer and developing culture of innovation", which will cover the development and implementation of a plan for the establishment of a convergence centre and the expansion of the Rwanda Innovation Endowment Fund (RIEF), see below. Another initiative designed to ensure that the academic sector works closely with the private sector is the Knowedge Transfer Partnership (KTP) programme, see below. Within TEIs this will also be supported via business incubation centres. Research and Development capacity will also be built across all relevant sectors involving research grants, partnerships with the private sector to access foreign funding, focusing on R&D projects with potential economic application.

Rwanda Innovation Endowment Fund

The Rwanda Innovation Fund (RIEF) is a partnership between the Government of Rwanda and One UN in Rwanda, with technical support from the United Nations Economic Commission for Africa (UNECA). It provides grants and support to projects that foster innovations to apply knowledge and technology. The focus area for these projects are agriculture, manufacturing, energy and ICT. The RIEF provides an opportunity for researchers, entrepreneurs and the business community to work together to create innovative and sustainable businesses, with the fund supporting teams to produce locally applicable, innovative technologies that can spur socio-economic transformation of Rwanda.

Knowledge Transfer Partnership Programme (KTP)

A study entitled *Mapping Science and Technology for Industrial Development in Rwanda: Linking Research and Development between Industries and Higher Learning Institutions* was undertaken, and supported by the AfDB**.** Delivery of these partnerships is being managed through an intervention called Knowledge Transfer Partnership (KTP). Memoranda of Understanding between MINEDUC,

Industry and HLI have already been signed for three of the partnership projects (Sulfo, Rugali Farms, SOPYRWA). Industrial and academic supervisors have been appointed and associates have been recruited. The other two partnerships (Gasabo 3D and Inyange) have been planned and formal agreements between the industries and specific Higher Learning Institutions are being developed.

9. Increased access to Adult Basic Education to improve adult literacy and numeracy.

The costs of expanding access to adult basic education in line with the Vision 2020 target of universal adult literacy will be greatly reduced by the new National Service policy where Senior 6 leavers will spend 9 months following graduation providing voluntary literacy classes. This innovative and cost-effective strategy will allow for ambitious adult literacy targets to be met within the existing budget. Adult educators will be trained, based on the norms and standards, and will provide a structured literacy course, guided by the adult literacy curriculum. In order to monitor the effectiveness of the programme, learning achievement standards will be developed and regular assessments of learners conducted. As part of Rwanda Reads, a culture of reading will be promoted and facilitated supported by increased access to relevant reading materials for neo-literate adults, while a national campaign to encourage the development of low-cost, relevant books and reading materials will be conducted.

10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.

This ESSP aims to ensure that all managers and governance bodies within the education sector demonstrate the requisite skills and competences for effective leadership and will pursue strategies such as the development of a framework of competencies and minimum standards, as well as the development and implementation of a national plan for management leadership and governance training, incorporating monitoring performance. Improved planning, monitoring and evaluation and integrated data-management across the sector is also essential. Crucial to this will be the strengthening of the planning function within MINEDUC, as well as the Education Management Information System (EMIS). A budget allocation for developing the school EMIS is included in the plan along with the cost for decentralised infrastructure required in line with this. From 2014/15 onwards the budget includes recurrent costs to pay for the EMIS technical team which is to be established and the maintenance of infrastructure. Expanded and improved human resource management (HRM) processes, procedures and systems will be put in place through a review of current HRM policies and practice and increased HRM capacity within MINEDUC to lead on and coordinate HR reforms across all education institutions and levels in the sector. A review of internal and external communications will be undertaken to improve the regularity, predictability, consistency and accessibility of communications inside and outside the sector.

3.4.2 Strategies for Mainstreaming Cross-Cutting Issues

The education sector has identified seven cross-cutting issues, which are aligned with the EDPRS 2 cross-cutting issues of science and technology, gender, disability and social inclusion, HIV/AIDS, the environment and climate change, capacity building and regional integration. The issues are relevant

across all levels of education and require close partnership with different government ministries and other stakeholders to ensure that collectively we can achieve national development goals, as well as our education goals. The following section details strategic priorities for each of these cross-cutting issues and strategies for mainstreaming them as part of the delivery of education services in Rwanda.

1. Promoting Science, Technology and Innovation

Science, Technology and Innovation (STI) are dominant factors behind rapid economic and industrial growth, as recognised in EDPRS 2. The Government's Vision 2020, the National Policy on Science, Technology and Innovation, EDPRS 2, and the 7 Year Government Programme are all based on the premise that, through embarking on a concerted effort to build science, technology and innovation capacity (including ICT development), Rwanda will greatly enhance its prospects of achieving the growth, poverty reduction, wealth creation and export diversification objectives.

The STI Policy forms the basis for an operational integration of the science and technology education programme. The key priority during the timeframe of this ESSP will be to address underdeveloped skills in all areas of science and technology and the limited resources in teaching institutions to support the teaching of quality science and technology education. Strategies to achieve this include: the improvement of the science and technology environment in schools; promotion of gender equity in science and technology streams; building capacity to manage, monitor and evaluate the impact of science and technology education; developing high quality, demand-driven and relevant science and technology curricula; strengthening training teachers in science and technology, and ensuring that quality research is conducted with practical application to national needs, both for improving the well-being of people in Rwanda and supporting economic growth. The Rwanda Innovation Endowment Fund launched in 2012 is focused on the supporting the latter, providing funding for research that supports entrepreneurship and the production of innovative technologies to spur socio-economic transformation of Rwanda.

ICT is a central component of the science and technology education programme. During EDPRS 2 a critical area for cross-cutting work is partnership between MINEDUC and MININFRA to extend access to electricity to schools to support learning and the use of ICT in education. In addition the use of ICT in education will be promoted during the course of this ESSP by developing capacity of teaching staff to integrate the use of ICT into education practices via training on the use of ICT in teaching practice, development of ICT standards and competencies and provision of technical and pedagogical support in schools, developing and distributing quality digital content and ensuring that this content is adapted to the Rwandan context and aligned with the national curriculum and expanding Open, Distance and e-Learning (ODeL), principally through the newly established University of Rwanda.

2. Girls' and women's education

The Government of Rwanda is committed to gender equality across all aspects of Rwandan life. Girls' education is a central component of strategies to ensure that there is inclusive basic education for all, and beyond basic schooling to ensure that women are appropriately skilled to contribute positively to economic and social development. The Girls' Education Strategic Plan was approved in 2009 and forms the framework for interventions to increase girls' participation and achievement at

all levels of education. National sensitisation programmes exist to encourage parents and communities to send and keep their girls in school, such as the First Lady's national awards for the best performing girls and the School Campaign. Dedicated sanitation and hygiene facilities are provided for girls' in all newly constructed schools and will be extended to existing schools over the timeframe of this ESSP. The National Taskforce for the coordination of girls' education was established in 2005 and similar taskforces have now been established in every District.

Whilst overall there is gender equity in access to basic education, some challenges remain with regards to girls' performance and supporting girls' who wish to study science and technology, including some fields of TVET and higher education, as outlined in Section 2.4. To address these issues the ESSP is promoting targeted strategies to support girls' education and training in line with the Girls' Education Strategic Plan. These include:

- strengthening gender sensitive and learner-centred methodologies;
- training of educationists, trainers and education planners in gender issues;
- regular review of education curricula and learning materials from a gender perspective;
- sensitizing families and local communities about the importance of girls completing and improving achievement in formal education;
- promoting affirmative action policies, where appropriate, to ensure equal opportunities for girls;
- strengthening integration of girls' education into plans and budgets at all levels.

A key partner in implementing these strategies is MIGEPROF, who MINEDUC will work with on these cross-cutting interventions to ensure that efforts between both ministries to support girls' education and training are coordinated.

3. Special needs education (SNE) including education for orphans and vulnerable children (OVCs)

Providing education for children with disabilities and special educational needs is an important pillar for promoting social inclusion within Rwanda and for achieving our educational goals of equitable access to basic education for all. Providing all children with equal learning opportunities regardless of their physical and mental capabilities empowers them to actively engage in social and economic development activities. Previously, the education of learners with special needs focused exclusively on those with disabilities but current policy has broadened this perspective and now defines learners with special educational needs as all vulnerable groups of learners, including orphans, street children, children infected with or affected by HIV/AIDS or children heading households. The ESSP's approach to catering for these children's educational needs are guided by the Special Needs Education Policy (2008) and the MIGEPROF policy and strategic plan on OVCs (2007). The focus of the ESSP's strategies is to integrate learners with special needs within the formal system, where possible. Civil society is particularly active in this area and has supported the formation of clusters for SNE/OVCs organised around the child friendly school concept. To further support this outcome work will be undertaken to increase the capacity of the education system (from pre-primary to higher education) to accommodate students with special needs. This includes:

- providing a minimum package of material support to learners with special educational needs;

- training, deploying and supporting teachers and technical staff in SNE;
- sensitising parents, learners and communities on the importance of education for learners with special needs, and the concept of students with special educational needs not just being those with physical disabilities but also OVCs;
- integrating provision for learners with special needs within plans.

These plans will be supported by operationalising a cross-sectoral national SNE/OVC taskforce to ensure adequate structures are in place for SNE provision, with a view to eventually establishing District level taskforces to spearhead the effective education of all learners requiring SNE in inclusive and/or specialised education settings.

4. School health, HIV/AIDS prevention and sports

Schools are one of the principal forums through which children learn how to make healthy lifestyle decisions and are taught about the importance of good hygiene, nutrition, sanitation and disease prevention. Schools need to reflect these lessons in their practice providing a safe, sanitary and inclusive place to learn. All school improvement plans and school management and evaluation programmes will be expected to prioritise the promotion of health, nutrition, hygiene and sanitation services in schools. These plans and programmes should also include provision for physical education in schools which will complement the priority of developing playgrounds and sports fields. In order that teachers are given models of good practice during their training, good health and hygiene practices including first aid will be prioritised in TTCs. Support will be given to girls in obtaining sanitary towels and special facilities for girls will be established to reduce absenteeism.

The education sector also has a central role in the multi-sectoral response to HIV and AIDS prevention through increasing awareness and enabling a positive attitude to HIV/AIDS via the curriculum, teacher training, peer education, debating and life skills clubs. MINEDUC will work with MINISANTE on this and other initiatives to support good health and hygiene practices in the home and at school. This includes ECD parenting programmes include training on health, nutrition and hygiene issues

An additional area of strategic intervention is to develop a national school feeding/gardening programme which is owned by communities, including provision of milk to primary pupils. To achieve this MINEDUC will work with MINAGRI, the World Food Programme (WFP) and districts.

5. Environment and climate change

Sustainable economic growth is dependent upon the quality of the environment and therefore in part on people's understanding of environmental issues and how they engage with their ecosystem. The education sector is influential is raising awareness of environment and climate change and helping to build skills that will help Rwanda achieve sustainable economic growth. This will be addressed in the revised curriculum, to increase understanding of climate change and effective environmental management.

Opportunities also exist to ensure that the delivery of education is environmentally sustainable, for example including water harvesting systems in school buildings to improve the efficiency of water

use and ensure good sanitation, and use of alternative energy sources such as solar panels and biogas.

A major partnership is being undertaken between the Ministry of Education and Michigan Institute of Technology in the USA to build a Global Climate Observatory. An interim Observatory has already been established on Mount Mugogo and the permanent site will be on the summit of Mount Karisimbi. The project depends on the completion of a Cable Car to access the summit. Education tours enabling secondary school students to visit the Climate Observatory will be encouraged. This is part of the strategy, and will allow the students to gain greater knowledge of the environment, the changes taking place as a result of Climate Change, and the mitigation and adaptation measures being undertaken to address these changes.

6. Regional integration

Regional integration is an integral part of Rwanda's plans for economic development. It forms the sixth pillar of Rwanda's Vision 2020 strategy and is embodied in Rwanda's decision to join the East African Community in 2007. In relation to the education sector it is hoped that EAC membership will lead to a more flexible education system and labour market. As part of the EAC's Common Market Protocol and Development Strategy, all partner states have agreed to undertake concerted efforts to foster cooperation in education and training within the EAC, including harmonisation of curricula, examinations and qualifications, to strengthen education standards and recognition of skills across the region. In the short term for Rwanda the free movement of people is a potential mechanism to help overcome the skills shortages in the teaching profession, as already seen with the recruitment of teachers from the EAC as school-based mentors to improve English language proficiency of teachers. EAC membership also facilitates students who wish to study abroad to gain skills in regional institutions. In the longer term the harmonisation of curricula and recognition of qualifications will facilitate easier movement of people seeking employment across the EAC and support the drive for higher education standards across the region.

As the EAC moves forward with initiatives to harmonise curricula and standards MINEDUC will work closely with MINEAC and the EAC Secretariat in Arusha to discuss and harmonise educational aims and objectives among partner states. This will be supported by agreement on institutional governance and quality assurance frameworks, harmonised examinations and accreditation systems, agreed learning outcomes and standards embodied in a harmonised curriculum which includes agreement on core subjects and how cross-cutting issues such as special needs education, HIV/AIDS and gender are to be addressed. Consideration will also be given to financing modalities at all levels of education, particularly post-basic education where costs and fees currently vary considerably between partner states.

Rwanda has been chosen to host the East African Commission for Science and Technology (EASTCO) and the Directorate of Science, Technology and Research is working closely with their regional counterparts to establish this Regional Commission.

7. Institutional capacity building

MINEDUC has ambitious goals, and clear and politically supported mandates. Although strong policies and leadership are in place in MINEDUC and its affiliated agencies, there is a need for

strengthened capacity among staff at all levels of education management to support high quality, efficient planning, delivery and monitoring of education services. This is reflected in the tenth ESSP outcome which focuses on improved administration and management support services across the education sector.

A Ministry-wide capacity needs assessment was conducted in 2012 identifying the major capacity needs in the education sector. The needs assessment report presents the existing capacity needs of the Ministry and categorises them into institutional, organisational and human resource aspects for each of the public-sector organisations that are part of the education sector (MINEDUC, REB, WDA, HEC and the decentralised levels). Following this identification of needs a participatory process of prioritisation and planning took place at the end of 2012, resulting in the formulation of a Capacity Development Plan that identified key capacity development priorities for the Ministry. These have been captured in this ESSP's strategies under the sector's tenth strategic outcome.

3.4.3 Expected Outputs for each Outcome

Table 3 below summaries the expected outputs for each of the education sector's ten strategic outcome areas.

Table 3: Sector Outcomes and Outputs

No	Outcomes	Outputs
1	**Increased equitable access to 9 years basic education for all children, and expanding access to 12 years basic education.**	1.1. All schools have sufficient, well-maintained, child-friendly facilities and equipment to meet target PCR and infrastructure standards. 1.2. Evidence-based policies and strategies addressing barriers to participation and learning for the most vulnerable children, including adolescent girls, children with disabilities, children living with HIV and children from poorer backgrounds implemented. 1.3. School health and hygiene education programme implemented in all schools. 1.4. Parent Teacher Associations strengthened to address the issue of out of school children and drop-out.
2	**Increased equitable access to education for students with special educational needs within mainstream and special schools.**	2.1. All schools have disabled-friendly facilities and equipment for children with special needs. 2.2. Increased number of teachers who are trained to provide specific support to learners with special needs. 2.3. Revised curriculum addresses specific needs of children with disabilities.
3	**Improved quality and learning outcomes across primary and secondary education.**	3.1. Regionally harmonised school curriculum developed, providing a solid foundation for learning and skills development. 3.2. Annual examination and formative assessment policies in place and implemented, aligned with the curriculum. 3.3. National system for measuring learning achievement in core subjects established and conducted on regular basis. 3.4. Improved student/textbook ratio as well as access to reading material for all schoolchildren. 3.5. Capacity of schools and teachers strengthened to use readers in the classroom to build the reading skills of children.
4	**Qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.**	4.1. Comprehensive Teacher Development and Management information system in use to plan teacher demand, supply and training of teachers. 4.2. Improved teacher welfare and conditions of service 4.3. Increased proportion of teachers demonstrating subject knowledge and teaching skills in the language of learning.

No	Outcomes	Outputs
		4.4. Increased proportion of head-teachers and school managers demonstrating capabilities for effective school management. 4.5. CPD system to promote career-path for teachers implemented.
5	**Increased equitable access to relevant, high-quality, demand-driven TVET programmes.**	5.1. Stakeholders in the TVET sector are guided by inclusive policies and strategies that are informed by a comprehensive TVET information system (essential national labour planning and TVET policy forums are to feature, with well-structured planning, coordination, monitoring and evaluation systems). 5.2. Human capacity is developed in the TVET system (include Training of Trainers (ToT) and school management issues). 5.3. All TVET providers have adequate facilities, infrastructure and equipment to ensure a locally relevant implementation of competency-based curricula. 5.4. Increased, curricular-relevant income-generating capacities of TVET providers to improve the quality of TVET provision. 5.5. TVET competency-based curricula placed on RTQF linked to the labour market and focused on key priority sectors. 5.6. Increased involvement of industry through structured public-private dialogue (including the National Integrated Employment Program and industry-based training option).
6	**Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.**	6.1. Increased number of higher education places available, including through full-time, part-time, open, distance & e-learning options. 6.2. All TEIs have sufficient facilities to support quality teaching and learning (laboratories, libraries, lecture rooms, etc) 6.3. Sustainable model of student financing, including an efficient student loan recovery system implemented. 6.4. Increased research capacity developed within the HL sub-sector. 6.5. Staff retention plan implemented to ensure that high performing and experienced staff are recruited and retained within the system.
7	**Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six-year olds.**	7.1. Increased number of schools with pre-primary section. 7.2. National standards for school readiness programmes developed and in use in all pre-schools. 7.3. Pre-primary curriculum revised as part of the planned revision of the school curriculum. 7.4. All pre-primary teachers and caregivers trained with national training package.
8	**Strengthened performance in science, technology and innovation at all levels**	8.1. STI policies developed and Implemented in critical areas of science, including strengthening of the structure of STI in Rwanda

No	Outcomes	Outputs
	of education, and application of science, technology and innovation (STI) in relevant sectors of the economy.	8.2. Research capacity in R&D strengthened across all relevant sectors of the economy. 8.3. All secondary schools equipped with science equipment and kits. 8.4. National science teacher training programme expanded 8.5. Increased enrolment in and quality of science and technology subjects in higher education 8.6. Knowledge Transfer and develop a culture of innovation.
9	**Increased access to Adult Basic Education to improve adult literacy and numeracy.**	9.1. Learning achievement standards developed and regular assessments of learners conducted. 9.2. Increased access to relevant reading materials for neo-literate adults. 9.3. Capacity of literacy tutors enhanced through structured training. 9.4. Improved assessment, accreditation and certification of Adult Basic Education providers and programmes.
10	**Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.**	10.1. All education managers and governance bodies demonstrate requisite skills and competencies for effective leadership and governance. 10.2. All institutions have the resources and systems for effective and efficient management. 10.3. Increased integration, coordination and lack of duplication across key management systems and institutions. 10.4. Improved planning, M&E, and integrated data-management across all agencies. 10.5. Expanded and improved Human Resource Management processes, procedures and systems. 10.6. Improved communication systems and structures across the sector.

3.4.4 Sector Priorities for Districts

Districts are at the forefront of education delivery in Rwanda due to the decentralisation of service delivery. They are the main link for schools to government and responsible for coordinating resources to schools. Because of the universality of basic education across Rwanda all three of the ESSP's goals on increasing access to education, improving the quality and improving the relevance of learning are focal points for the education component of the Districts Development Plans (DDPs).

MINEDUC has worked with districts during the elaboration of the ESSP and their DDPs, with consultations on the education sector goals and strategic outcomes. Accordingly DDPs have been elaborated based on the identified education sector priorities and outcomes. The District priorities for the next five years will be focused on the following areas in line with the education sectors overarching goals and sector outcomes:

Increasing access to education

- Increasing Net Enrolment Rates (NER) and reducing primary Gross Enrolment Rates (GER) through parents' sensitisation to help them understand the value of education and to encourage them to enrol their children in school on time
- Reducing dropout rates and repetition rates at all levels
- Increasing completion and transition rates at all levels
- Reducing the pupil: classroom ratio through construction of more classrooms
- Improving the school environment to make every school a safe, child-friendly place to learn, by constructing more child friendly schools, and improving facilities within schools for example by constructing separate toilets
- Reinforcing community participation to support early childhood development and pre-school provision
- Sensitising and encouraging the illiterate population to attend adult literacy centres

Improving the quality of education

- Increasing access to teaching and learning materials in schools
- Reducing the pupil: qualified teacher ratio, by recruiting more qualified teachers and deploying teachers to rural areas or to schools with high pupil: teacher ratios.
- Identifying teachers to receive further training in English proficiency and other domains to improve the quality of teaching
- Reinforcing monitoring and evaluation through inspection
- Training District Education Officers (DEOs) and Sector Education Officers (SEOs) in school management

Improving relevance and labour-market fit of education

- Strengthening and scaling up TVET programmes in schools

Within these 3 overarching education goals and focus areas Districts have been requested to identify priority areas according to their needs, and to identify targeted strategies or interventions to ensure equitable access, improved quality and strengthened relevance of learning. For example Districts with higher pupil: teacher ratios will focus on recruitment and deployment of teachers to reduce this ratio.

In addition to the 3 main education goals, Districts are also addressing foundational issues to improve the efficiency with which the education system operates and to strengthen the institutional framework at District level, this includes:

- Capacity development of DEOs, SEOs and head teachers to improve the level of support they provide to schools.
- Strengthen the Parents Teachers Associations and the local community to accelerate the educational developments.
- Reinforce the horizontal communication channels between decentralised structures e.g. local and central.

MINEDUC has also worked with districts to identify common indicators to monitor achievements in the education sector. These indicators have been incorporated in the M&E frameworks of the ESSP and DDPs.

CHAPTER 4: IMPLEMENTATION OF THE PLAN

The ESSP provides the overarching framework for a sector-wide approach to the development and delivery of education services in Rwanda. This ESSP will be accompanied by a National Implementation Framework (NIF) based on the ten sector outcomes and associated outputs outlined above. The NIF will then break down these outcomes and outputs further to identify specific core activities by year of implementation, with more detailed targets and outputs for monitoring progress. The NIF will be developed in line with the budget framework provided in this ESSP and the 3 year MTEF. The ESSP and the NIF will then provide the basis for costed annual operation plans, and implementation plans for specific strategies such as 12YBE and TVET. The purpose of the NIF is to provide a stronger bridge between the broader policies and strategies of the ESSP and the Annual Action Plan and Budget which looks at specific programme deliverables and budgets. In the past, the Annual Planning and Budgeting process has often not been related sufficiently to key policies and priorities, but the NIF helps to concretise how these strategies will be delivered on the ground. Annual Action Plans then become the day-to-day planning tool for the education sector to implement and monitor the ESSP in relation to the new budget programme structure.

The annual Education Sector Action Plan covers all the activities carried out by the central administration and its affiliated institutions and agencies (REB, WDA, HEC etc). Each institution and agency puts forward its draft plans and budget. Districts provide data (student and teacher numbers, school construction requirements) to inform budget planning. MINEDUC leads a process of negotiation and consolidation to produce a costed annual Action Plan which is validated by the MINEDUC management team. MINEDUC then presents the plan to stakeholders (MINECOFIN, development partners) for discussion at the Joint Sector Review held in April. Between April and June, negotiations will continue with MINECOFIN to finalise the budget. The finalised Education Sector Action Plan is agreed by June each year.

4.1 SEQUENCING OF INTERVENTIONS

A priority for implementation of the ESSP is working with MINEDUC's affiliated agencies to develop and/or update their 5-year business plans or equivalent. Subsequently, plans for REB, WDA and HEC will be developed according to the priorities and sector outcomes highlighted in this ESSP.

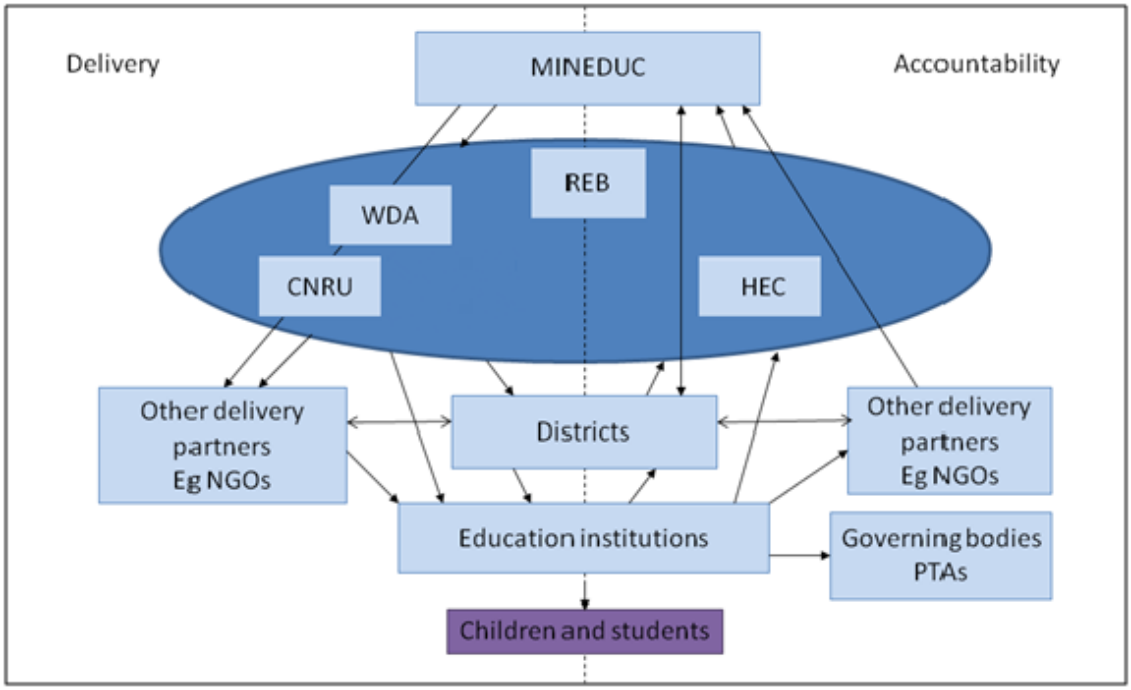
The further timing and sequencing of interventions is provided in Annex 7.1, which provides a breakdown of Sector Priority and Policy Actions, specifying annual outputs.

4.2 ROLES AND RESPONSIBILITIES OF PARTNERS AND STAKEHOLDERS

The principal institution responsible for ensuring the implementation of the ESSP is MINEDUC. MINEDUC sets policy and strategic direction for the sector and undertakes planning, monitoring and evaluation at the national level. As set out in Section 2.5 MINEDUC is supported by a number of semi-autonomous bodies who have mandates to implement specific education policies. These include the Rwanda Education Board (REB), the Higher Education

Council (HEC), the National Council for Science, Technology and Innovation (NCSTI), the Workforce Development Agency (WDA), the Rwandan National Commission for UNESCO (CNRU) and public Tertiary Education Institutions (TEIs). The relationship between these institutions and other actors in the education sector is depicted in Figure 2 below:

Figure 2: Management and coordination of the education sector



The roles and responsibilities of partners & stakeholders are reflected in different level of partnership are summarised below:

Level of Interventions		Roles
Central	**MINEDUC**	• To design and develop strategic policies, laws and directives; • To set up monitoring and evaluation mechanisms; • Data collection, analysis and dissemination; • To conduct education reviews and evaluations; • To set up capacity development and innovative strategies; • To set up guidelines for earmarked transfers; • To ensure that regional commitments are honoured and implemented; • To coordinate research in education; • To oversee the development and implementation of a national strategy for the development of science and technology.
	REB	• To design and distribute curricula, teaching materials, guides, methodologies and establish teaching methods for nursery, primary, secondary, specialised schools and adult literacy education in accordance with the current educational development; • To prepare educational standards and monitor their implementation; • To establish regulations determining how national examinations are conducted at various levels of education; • To coordinate programs and activities aimed at developing teachers, building their capacities and improving their management; • To promote the use of information and communication technology in education; • To support the establishment and implementation of distance learning programmes and monitor their impact. To coordinate programs and activities related to loans and scholarships provided to higher education students; • To cooperate and collaborate with other regional and international institutions having similar responsibilities.
	WDA	• To promote, facilitate, and guide the development and upgrading of skills and competencies of the national workforce in order to enhance competitiveness and employability; • To coordinate programs and activities aimed at developing trainers, building their capacities and improving their management; • To coordinate the development of curricula and educational standards for TVET; • To promote skills development through vocational training; • To promote business incubation and entrepreneurship development; • To regulate and accredit TVET institutions and training providers; • To cooperate and collaborate with other regional and international institutions having similar responsibilities.
	HEC	• To quality assure higher learning institutions;

Level of Interventions	Roles
	• To uphold international standards so that graduates are credible and competitive anywhere in the world; • To ensure that qualified faculty are conversant with the state-of-the-art in their disciplines through research; • To encourage students to engage in research and critical thinking; • To ensure access to affordable higher education; • To support training of higher education staff; • To maintain a sound relationship with the community making higher education relevant; • To cooperate and collaborate with other regional and international institutions having similar responsibilities.
Local Government	• To implement education policies and strategies; • To prepare DDPs aligned to ESSP; • To prepare operational plans and budgets; • To monitor school management, including use of capitation grants and teaching methodology; • To recruit and deploy teachers; • To provide educational statistics; • To coordinate educational activities and staff; • To supervise the establishment of new schools in conformity with norms and standards.
Private Sector	• To invest in the education sector through the establishment and maintenance of schools at all levels including pre-primary, primary, secondary, TVET and higher learning institutions; • To support curriculum development and advising on labour market needs for skills development • To provide other partnership opportunities including internships and work placements for students.
Civil Society and other organisations	• To support MINEDUC in the promotion of educational policies, strategies and plans; • To contribute to the delivery of educational services; • To collaborate and coordinate with other civil society organisations, NGOs, and other actors including the government and development partners to implement the ESSP; • To strengthen community participation and mobilisation to implement educational activities; • To participate in the evaluation of policies and programmes; • To conduct educational research.

Managing the implementation of the ESSP

The Directors General of MINEDUC, REB, HEC and WDA are responsible to the Permanent Secretary of MINEDUC for managing the implementation of the Plan. The DGs identify with their teams which parts of the Plan they are responsible for and plan out with them how the objectives will be achieved over the five-year period. Tasks are agreed, responsibilities and human resource needs identified, costs and budgets refined, and detailed work plans are developed within each Directorate. The National Implementation Framework being developed

to accompany the ESSP provides a useful tool to support this process, especially in relation to decentralised delivery.

Specific accountabilities are determined within each Directorate General. Teams and units report to their DGs quarterly and issues and constraints are identified. The DGs report to the Permanent Secretary on progress and issues arising quarterly and this is the principal internal accountability mechanism.

As set out in Section 3.4.4, DEOs are responsible for formulating district-level annual action plans which form part of the wider District Development Plan. The education elements are in line with the priorities set out in the ESSP. Plans are validated by District Education Committees chaired by the Mayor or the Vice-Mayor for social affairs.

Links between central and decentralised levels

To achieve their mission and comply with the country's policy on decentralisation, MINEDUC works closely with Districts, providing policy guidance and support. Similarly Districts work closely with REB, WDA and other education partners on the implementation of education services. These close working relationships enable the implementation of the ESSP and supports the achievement of EDPRS objectives.

With decentralisation and public service reforms a number of responsibilities now lie with DEOs. These include the implementation of policy and strategic plans, preparation of district plans and budgets, monitoring and evaluation of education activities and school financial reports, and teacher recruitment and transfers. There has also been decentralisation of procurement of teaching and learning materials. Sector Education Officers (SEOs) have been recruited to support DEOs in carrying out these activities and to improve linkages between the district education office and schools. However these is potential for their role to also support head teachers in improving quality at school level, rather than only providing administrative support to DEOs.

4.3 COORDINATION AND INFORMATION SHARING

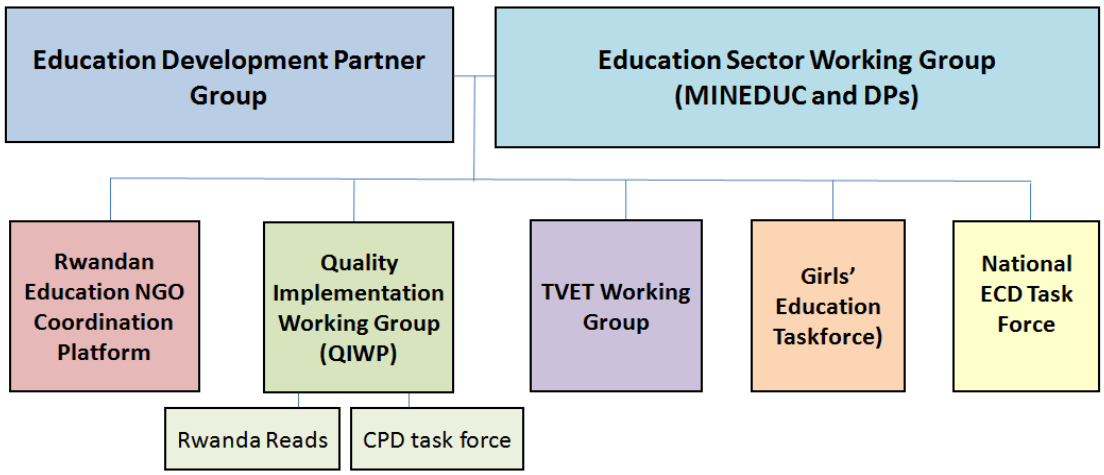
4.3.1. Coordination and Partnerships

The effective coordination within the education sector, managed through the Education Sector Working Group (ESWG), is based on a good and efficient working relationship between all stakeholders. The Ministry of Education and the Development Partners are committed to coordinate and collaborate with each other in accordance with the Partnership Principles set out in a Sector Wide Approach Memorandum of Understanding, which was first developed and signed in 2006. Government, donor and civil society constituencies are well co-ordinated individually and collectively, resulting in strategic and prioritised dialogue across the sector. For example, the establishment of the Quality Implementation Working Group (QIWG), under the leadership of REB, has provided a structure to develop and implement a coordinated and comprehensive approach to quality education.

4.3.2 Information Sharing

Consultations and information sharing on education sector plans and budgets are undertaken collectively through the Joint Reviews of the Education Sector (JRES), the ESWG and sub-groups, which bring together the relevant government departments and agencies with development partners, as summarised in Figure 3 below. Currently there are four sub-groups which report to ESWG at the quarterly meetings. They are the QIWG, the Girls' Education Taskforce, the national ECD task force and the TVET working Group, which seeks to advance the current TVET policy framework in establishing closer linkages and coordination between enterprises and training supply. These groups meet monthly or as required. All consultation processes and working groups follow terms of reference, which are reviewed every two years.

Figure3: Education Sector Coordination Structure



Key processes for information sharing and consultation are quarterly meetings of the Education Sector Working Group and two annual Joint Reviews of the Education Sector (one forward-looking review in April and one backward-looking review in September). The Joint Reviews are planned and conducted by MINEDUC and Development Partners in accordance with ToR's developed by MINECOFIN, and have included joint field visits to monitor projects and examine key issues at the local level. Reports are generated to disseminate key information to all stakeholders and there is evidence of strong collaboration in ensuring they are of a high quality and include all pertinent issues and relevant data.

Internal communication is managed by the MINEDUC. Weekly management meetings bring together heads of departments and agencies from MINEDUC, REB, HEC and WDA to share information and coordinate the planning, implementation and monitoring of sector plans and strategies. When required, representatives from the private sector, development partners, decentralised authorities and other relevant Ministries also attend the weekly management meetings.

Communication and coordination between central and decentralised levels is critical to ensure that policy is correctly translated down to district level, incorporated into district plans and therefore has an impact on the learner in the classroom. Similarly communication and

coordination between the districts and schools is important to enable more effective school-level management and planning. Formalised channels of information sharing and coordination are institutionalised in the sector, with regular meetings between District Education Officers and central level departments organised as well as a system of coordination and communication between DEOs and SEOs and school management. Likewise communication upwards to the central Ministry is facilitated within the sector for the formulation of policy and monitoring and evaluation of the sector. Whilst there is room for improvement in this area, the recent construction of school classrooms to fast track 9YBE demonstrates how the Ministry and districts education authorities can successfully work together to plan, implement and monitor policy in a coordinated manner.

MINEDUC produces an annual report, which is disseminated to all stakeholders nationwide. The annual report details progress which has been made within the education sector in achieving ESSP objectives. This is supplemented by the annual publication of comprehensive Education Statistics, which are available on the MINEDUC website.

4.3.3. Coordination with specific groups and stakeholders

Civil Society

The Rwanda Education NGO Coordination Platform (RENCP) was established in 2010, as a forum for NGOs working in the education sector to coordinate their programmes and to better share information both internally and with MINEDUC. RENCP's representation on the ESWG has provided space for civil society and NGOs to coordinate their activities and share experiences at macro-level consultations. RENCP has played an important role in several policy developments, including aspects of the Teacher Development and Management Plan and the School-Based Mentor Programme. Thanks to this coordinated approach, there is now an increasing potential role for NGOs to support government to implement ESSP in areas where they have specific expertise and experience, such as equity (special needs, girls, OVC, ECD) and quality (teacher training, Rwanda Reads, school management/PTAs).

The Private Sector

The ESSP recognises the importance of the education and training system to be responsive to private sector skills demand, as epitomised in the third education sector goal on *relevance of education*. To be responsive and relevant requires strong coordination and involvement with the private sector. The ESSP also sees a need for increased public private partnerships as a means to increase available financing for education on any level (from ECD to higher education) and this becomes even more pertinent with the 12YBE strategy. While private sector representatives are normally invited to the review and planning processes within the sector, and were consulted in the development of this plan, strategies to strengthen coordination with the private sector are envisaged over the course of the ESSP. In particular, the further development of the TVET system will involve strong partnership between government and private sector, including at decentralised levels. Here, the Private Sector Federation (PSF) can play a strong coordinating role with the Workforce Development

Authority on whole range of issues, ensuring that the education and training provided responds to labour-market demands.

Cross-Sector Coordination

Coordination across Government Sectors is vital, in particular on key issues such as ECD, school health and nutrition, girls' education, and regional integration. This has often been addressed through inter-ministerial task forces. For example, the ECD Task Force, which developed both the ECD Policy and Strategic Plan, is comprised of representatives from the Ministries of Education, Health, Gender and Family Promotion, Justice, Local Government, and Finance. While MINEDUC is tasked with providing overall ECD leadership, all concerned Ministries must contribute to ensure that services and programmes for children between the ages of 0 and 6 are fully harmonised, coordinated and provide a holistic approach to the development of the child. To achieve this cross-sectoral integrated partnership, the proposed institutional framework contained within the ECD Policy will become fully operational during the lifespan of the ESSP, with a commitment from all concerned Ministries to work together and coordinate programmes to achieve the objectives of the ECD policy.

School Health and Nutrition is another important area which requires continued and strengthened inter-Ministerial coordination. MINEDUC has led the process of developing School Health and Nutrition Policies, as well as a school health guide and training plan. The Ministries of Health, Agriculture and Local Government have been involved in this process, and there is a need for a focused and formalised approach to school health and nutrition which can take advantage of the combined expertise across several line Ministries and agencies. This will ensure that all children in Rwanda learn in healthy environments and receive and skills and knowledge required to live safe, healthy and productive lives. This is particularly the case for school feeding, a key component of the School Nutrition Policy and one which will require significant investment and cross-sectoral coordination to facilitate the transition to a home-grown model.

The inter-sectoral nature of TVET also requires strong coordination among stakeholders from different economic sectors to ensure that the supply and demand of skills are aligned and that there is effective planning, prioritisation, implementation and monitoring of skills development activities. One critical mechanism for this public-private dialogue is the Sector Skills Councils. WDA will work in close partnership with RDB, MINICOM, MIFOTRA and private sector partners to support implementation of the National Employment Plan and harmonisation of efforts to strengthen skills development.

Close collaboration with the National Institute of Statistics (NISR) is also needed to ensure that the dissemination of statistics is conducted in such a way to ensure equal access for all data users as well as achieving consensus on the quality and accuracy of official education statistics. Statistical coordination between the NISR and MINEDUC will strengthen the development of evidence-based strategies, based on comprehensive data, in particular in the area of vulnerable children, including children with special needs.

4.4 RISK ANALYSIS AND MITIGATION STRATEGIES

Table 4 below summarises the primary risks to achieving the desired sector outcomes and the mitigation strategies planned to minimise the likelihood of these risks occurring. Each risk has been assessed according to the likelihood of it occurring and the impact on achieving the sector outcome if it does occur; then given a ranking from 1 to 5 with 5 as the most serious risk, as depicted in the matrix below.

Likelihood of occurring (L)	High	3	4	5
	Medium	2	3	4
	Low	1	2	3
		Low	Medium	High
		Potential Impact (I)		

Table 4: Risk Analysis and Mitigation Strategies

Sector outcome	Identified risk	Severity of risk			Mitigation strategy
		L	I	Overall	
1. Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.	Classroom construction does not match expansion of secondary enrolment	M	M	3	Construction planned and prioritised at district level according to projected needs.
	Expansion of electricity and water connectivity does not meet anticipated levels.	M	M	3	Work with MINIFRA on a joint action plan for the expansion of school's access to utilities. Combined with exploration of alternative energy sources such as biogas and solar power.
	Inadequate levels of partnership and cross-ministerial work on issues relating to school health and hygiene, or multi-ministerial responsibilities causing lack of ownership	L	M	2	Development of multi-stakeholder task force to address specific challenges with clear TORs outlining responsibilities and action plans to agree on activities and to hold parties accountable.
2. Increased equitable access to education for students with special educational needs within mainstream and special schools.	The extent of the proposed mainstreaming of provision may be constrained by comparable expansion in the quantity or quality of teaching and learning resources, disable-friendly facilities and trained teachers to meet the needs of students with special needs in all schools.	M	M	3	Targeted provision of resources based on current students' needs, followed by broader roll out, with planned procurement process to ensure resources are of adequate quality and quantity to meet needs. Teacher training will be provided through both pre-service and in-service channels. Plans for training provision have been costed in the ESSP and will be targeted in conjunction with needs identified at District level.
3. Improved quality and learning outcomes across primary and secondary education.	Rwanda's priorities not fully reflected in the EAC's regionally harmonised curriculum	L	M	2	Preparation of Rwanda's position paper on key educational issues. On-going participation in EAC meetings. Strong partnership with EAC and between MINEDUC and REB on curriculum issues.
4. Qualified, suitably-skilled and motivated teachers and trainers to meet	New teacher development and management information system is not adequately linked with payroll, EMIS and planning processes at	L	M	2	Multi-stakeholder training on new system and procedures put in place on its use and linkages with other systems.

Sector outcome	Identified risk	Severity of risk			Mitigation strategy
		L	I	Overall	
demands of expanding education access.	district and central level				
	Teachers lack sufficient skills and/or confidence in teaching in English, particularly when combined with using more student-centred pedagogy	H	H	5	School-based mentoring programme will provide bespoke training and on-the-job support for teachers. Focus on English language training and teaching English pedagogy in pre-service training.
5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes	Weak linkages between information systems managed by various stakeholders (including TVET information system, labour market information system and EMIS)	M	M	3	Information system linkages to be incorporated into design of new TVET information system, based on multi-stakeholder inputs and followed up by training on the new system.
	Limited stakeholder engagement in policy, strategy and TVET implementation	L	H	3	Strengthened partnerships through more structured public-private dialogue, thematic working group and Sector Skills Councils.
	Insufficient opportunities for students to have practice-based learning	M	H	4	Development of production centres within TVET institutions. Develop closer partnerships with employers and PSF to facilitate practice-based learning, and set up MoU's between TVET institutions and employers.
6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.	Operational challenges in the establishment of the University of Rwanda and during its initial years of operation, including the establishment of the College of Open and Distance Learning	M	M	3	Comprehensive transition plan is in place with phased integration of colleges to minimise disruption for existing students, and consultation strategy to take into consideration staff and students' concerns. Costed business plan for ODL has been developed with plan for phasing in activities.
	Operational challenges in the establishment of the new student financing scheme which limit loan recovery.	M	H	4	Legal framework for loan recovery to be reviewed to support enforcement of loan recovery. Investment in loan recovery processes and movement of responsibility for loan management to HEC, with potential for this to be run by an education development bank in the longer term.

Sector outcome	Identified risk	Severity of risk			Mitigation strategy
		L	I	Overall	
7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for 4-6 year olds					
8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.	Research capacity does not develop at expected level with research partnerships slow to develop.	L	M	2	Directorate of Science, Technology and Research currently undertaking review of baselines across all STEM subjects and developing strategies to improve research capacity relevant to Rwanda's socio-economic development.
9. Increased access to Adult Basic Education to improve adult literacy and numeracy.	Insufficient number of trainers, available reading materials and mechanisms to coordinate all stakeholders involved in this activity.	M	M	3	To strengthen training mechanism for adult literacy trainers. MINEDUC to coordinate all initiatives in this area. Mobilise the population to use new libraries/availing reading materials in Districts/Sectors/cells
10. Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.	Insufficient training, professional development and support for education managers and governance bodies	M	M	3	Planned training for PTAs in primary and secondary schools. Capacity needs assessment undertaken in 2012 for education sector identifying capacity development needs and corresponding activities required.

CHAPTER 5: MONITORING AND EVALUATION

5.1 SECTOR MONITORING ARRANGEMENTS

The lead institution for the monitoring of the education sector is MINEDUC. Within the Ministry, this is led by the Policy, Monitoring and Evaluation Unit, supported by the Planning Unit, plus professionals from within MINEDUC and its associated agencies as required. MINEDUC is responsible for the collation and analysis of data in line with Education Sector Monitoring Matrix (see below). There is quarterly monitoring of activities and progress against agreed outputs in the Education Sector Annual Action Plan. The implementing agencies (REB and WDA) carry out quarterly monitoring and report to MINEDUC for analysis. Progress reports and a consolidated annual activity report are submitted to the Prime Minister's Office and published.

In addition, for internal monitoring and evaluation there are regular senior management meetings in MINEDUC with representatives from all the affiliated government education agencies, at which progress on activities, projects and programmes are reviewed. Senior management also appoint dedicated task forces to review and report on key education initiatives and priorities.

At District level, there are regular Joint Action Forums with stakeholders to review District Development Plans and achievement against targets. There is also close liaison between DEOs and the Ministry of Education, REB and WDA via planning and inspection processes. Districts and schools are required to provide data for national level monitoring and evaluation. Regional inspectors in every province carry out routine school inspections, reporting directly to REB's Education Quality Standards Department and to district education officers (DEO's). In addition, schools carry out their own self-assessments of performance, based on targets they have set themselves in their School Improvements Plans. These self assessments include data and indicators that they may not be reported to another level, but rather is used to inform their own planning and to improve their performance. Each school and district is required to draw up their own monitoring framework, with the involvement of PTAs.

The principal review process at national level takes place at the biannual Joint Reviews of the Education Sector (JRES), one which is forward-looking (April), and one which is backward-looking (September). At the backward-looking review, budget execution and education achievements against agreed indicators and targets are reviewed, whilst at the forward-looking review priorities for the year ahead are identified and plans reviewed informing policy development and annual operational plans. The JRES is supported by all education stakeholders, including a range of government institutions, development partners, civil society and district and school officials. A summary report indicating performance against the core education indicators of the Common Performance Assessment Framework (CPAF) is jointly signed by MINEDUC and the lead development partners before submission to MINECOFIN.

5.2 SECTOR EVALUATION PLANS

The education sector's evaluation plans include a combination of formative and summative evaluations. The formative evaluations will take place at the end of key project phases and focus on the effectiveness and immediate impact of projects. In particular, they will focus on whether or not activities are on track and if outputs are being achieved. They will then identify lessons learnt from the initial phases of implementation that can be used to improve further delivery on the project being assessed or other projects.

The summative evaluations will take place at the end of projects/programmes focusing on the impact and sustainability of projects and whether or not overall outcomes have been achieved. Again they will also assess what lessons can be learnt for delivery of other projects.

Table 5 below provides a summary of the projects and programmes currently scheduled for evaluation during this ESSP. Additional projects and/or programmes may be added to this schedule as appropriate.

Table 5: Projects and programmes scheduled for evaluation

Projects/programmes for evaluation	Timeframe	Who
Establishment of ECD model centres	TBC	MINEDUC with REB
Teacher incentives programmes	TBC	MINEDUC with REB
One Laptop per Child project	TBC	MINEDUC
Establishment of the University of Rwanda	2014/15	MINEDUC
12YBE implementation	2014/15	MINEDUC and REB
Skills Development Project	TBC	WDA
IPRC expansion and development	2014/15	WDA

5.3 EDUCATION SECTOR MONITORING MATRIX

The below matrix provides a summary of the key sector indicators that will be used to monitor sector outcomes, the current baseline and the annual targets between 2013/14 and 2017/18.

The indicators are a combination of progress and process indicators. This combination has been chosen to ensure that the sector is monitoring both the achievement of specific activities as well as overall performance of the sector. The indicators have been chosen based on indicators used under the previous ESSPs and EDPRS for consistency and so that a time series of data is available for analysis. They are also based on the availability of data, being disaggregated where appropriate according to sub-sector (primary, lower secondary etc) and by gender. The indicators have also been aligned with education indicators in DDPs.

Table 6: Sector Monitoring Matrix[10]

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
Increased equitable access to 9 years of basic education for all children and expanding access to 12 years of basic education.	GER in primary	123.2% F: 124.8% M: 121.7%	121%	117%	111%	106%	100%	EMIS + NISR population projections	MINEDUC
	NER in primary (F/M)	96.5% F: 98.0% M: 95.0%	97%	98%	98%	99%	100%	EMIS + NISR population projections	MINEDUC
	Primary completion rate	72.7%	74%	74%	74%	74%	75%	EMIS	MINEDUC
	Transition rate from primary to lower secondary	86.2%	86.8%	87.3%	87.9%	88.4%	89%	EMIS	MINEDUC
	GER in lower secondary (M/F)	49.2%	60%	67%	74%	78%	86%	EMIS + NISR population projections	MINEDUC
	NER in lower secondary (M/F)	21.0% M: 18.9% F: 23.1%	25%	29%	32%	36%	40%	EMIS + NISR population projections	MINEDUC
	Transition rate from lower secondary to general upper secondary	95.9%	85%	80%	70%	65%	65%	EMIS	MINEDUC

[10] All data are from MINEDUC statistics (including those of its semi-autonomous agencies such as HEC and WDA) except where otherwise stated.
[11] Indicators in bold are included in EDPRS 2 or identified as key sector outcomes to be reported on at the biannual joint reviews of the education sector.
[12] Baseline available in 2012. Repetition and drop out statistics are 2011 figures, because they require data from 2 consecutive years. National examinations pass rates are also 2011 figures due to the timing of examinations.
[13] Targets calculated on the basis of costing decisions from November 2012.

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
	GER in upper secondary	27.1%	28.1%	29.1%	30%	31%	32%	EMIS + NISR population projections	MINEDUC
	NER in upper secondary (M/F)	25.4% M: 24.1% F: 26.6%	29%	32%	35%	39%	42%	EMIS + NISR population projections	MINEDUC
	% of primary schools with access to: - Electricity - Alternative energy sources (solar, biogas etc) - Water	 25% 9% 34%	 34% 13% 47%	 43% 17% 60%	 52% 22% 74%	 61% 26% 87%	 70% 30% 100%	EMIS	MINEDUC
	% of secondary schools with access to: - Electricity - Alternative energy sources - Water	44% 18.6% 45%	49% 21% 56%	54% 23% 67%	60% 25% 78%	65% 28% 89%	70% 30% 100%	EMIS	MINEDUC
	Primary pupils: classroom ratio[14]	83:1	85:1	86:1	85:1	84:1	83:1	EMIS	MINEDUC
	Primary pupils per class	43:1	42:1	42:1	41:1	41:1	40:1	EMIS	MINEDUC
	Lower secondary pupil: classroom ratio	40:1	40:1	40:1	40:1	40:1	40:1	EMIS	MINEDUC
	Upper secondary pupil: classroom ratio	39:1	39:1	38:1	38:1	38:1	38:1	EMIS	MINEDUC

[14] Note that the pupil per classroom ratio differs from the pupil per class ratio. The latter is significantly lower due to the double shifting policy in Rwanda.

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
Increased equitable access to education for students with special educational needs within mainstream and special schools	**Number of children with disabilities enrolled in school (primary and secondary)**	Baseline to be determined in 2014						EMIS	MINEDUC
	% school with disable-friendly facilities for children with special needs	Baseline to be determined in 2014						Inspection reports	REB EQS
	Total number of teachers who have received in-service training on teaching students with special educational needs (and as a proportion)	361 (1%)	2,342 (3%)	4,554 (6%)	6,856 (9%)	9,584 (12%)	12,797 (15%)	TMDIS	REB
Improved quality and learning outcomes across primary and secondary schools	% students meeting minimum standards in English (E), Kinyarwanda (K) and maths (M) in P3, P5 and S2	63%(P3 K) 44%(P3 M) 77% (P5 K) 62% (P5 M) 2% (P5 E) Baseline including S2 to be determined in 2014.	68% (P3 K) 53% (P3 M) 80% (P5 K) 68% (P5 M) 16% (P5 E)	74% (P3 K) 63% (P3 M) 82% (P5 K) 73% (P5 M) 29% (P5 E)	79% (P3 K) 72% (P3 M) 85% (P5 K) 79% (P5 M) 43% (P5 E)	85% (P3 K) 81% (P3 M) 87% (P5 K) 84% (P5 M) 56% (P5 E)	90% (P3 K) 90% (P3 M) 90% (P5 K) 90% (P5 M) 70% (P5 E)	Monitoring of Learning Achievement Reports	REB
	% students passing national S3 exam	84.8%	85%	85%	86%	86%	86%	Published exam results	REB & WDA
	% students passing national	88.2%	89%	89%	90%	91%	91%	Published	REB & WDA

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
	S6 exam							exam results	
	Primary pupil: textbook ratio (per subject on average)	3	2.7	2.5	2.2	1.9	1.7	EMIS, REB CPMD reports	REB
	Primary repetition rate	12.7%	11.7%	10.7%	9.7%	8.7%	7.7%	EMIS	MINEDUC
	Primary dropout rate	10.9%	9.3%	8.4%	7.6%	6.6%	5.7%	EMIS	MINEDUC
	Lower secondary pupil: textbook ratio (per subject on average)	1.5	1.4	1.3	1.2	1.1	1	EMIS, REB CPMD reports	REB
	Lower secondary repetition rate	5.8%	3.8%	3.5%	3.1%	2.9%	2.6%	EMIS	MINEDUC
	Lower secondary dropout rate	13.1%	12.7%	12.4%	12.1%	11.7%	11.3%	EMIS	MINEDUC
	General upper secondary pupil: textbook ratio (per subject on average)	5.8	5.0	4.2	3.4	2.6	1.8	EMIS, REB CPMD reports	REB
	Upper secondary repetition rate	1.6%	1.4%	1.2%	1.1%	1.1%	1.0%	EMIS	MINEDUC
	Upper secondary dropout rate	2.4%	2.6%	2.1%	2.6%	3.0%	2.4%	EMIS	MINEDUC
	% schools with functioning libraries	13% (primary)	14.6%	38.4%	56.2%	72.5%	85.9%	EMIS	
		43% (secondary)	44.3%	46.7%	68.4%	72.3%	86.8%		
	Ratio of secondary schools to career guidance specialists	Baseline to be determined						EMIS/District reports	MINEDUC

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
		in 2014							
Qualified, suitably-skilled and motivated teachers and teachers to meet demands of expanding education access	**Primary pupil: qualified teacher ratio**	62:1	58:1	55:1	52:1	50:1	48:1	EMIS/TMDIS	MINEDUC
	Secondary pupil: qualified teacher ratio	34:1	33:1	32:1	32:1	31:1	31:1	EMIS/TMDIS	MINEDUC
	% teachers meeting the independent level (B1 and above) of English proficiency (primary, secondary)	3%	16%	30%	43%	57%	70%	TMDIS Teacher skills assessment reports	REB
	Primary teacher attrition rate	7.3	5.7	4.0	3.6	2.9	1.8	TMDIS	REB
	Secondary teacher attrition rate	8.4	7.0	5.6	4.9	3.4	2.7	TMDIS	REB
	% head teachers trained and school managers trained annually[15]	20%	42%	50%	50%	50%	50%	REB teachers dept	REB
Increased equitable access to relevant, high-quality, demand-driven TVET programmes	**Percentage of TVET graduates[16] employed[17] six months after graduation**	77.5% for IPRC North (Tumba College of Technology)	30%	35%	40%	45%	50%	Tracer survey report	WDA
	Percentage of employers satisfied with TVET graduates	71.6%	72%	74%	76%	78%	81%	Employer satisfaction survey report	WDA
	TVET enrolment[18]	74,320	86,814	98,162	109,569	122,664	134,185	TVET IS	MINEDUC/

[15] Note that, with an increasing number of school managers, the number of managers trained significantly increases between 2014 and 2017, though the proportion remains at 50%.

[16] This includes TVET graduates from VTCs, TSSs and IPRCs.

[17] This percentage is to include those who are employed and self-employed.

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
									WDA
	% TVET students passing final exam[19]	90.95%	91.15%	91.45%	92%	92.45%	92.60%	WDA annual report	WDA
	Pupil: trainer ratio	41:1	43:1	47:1	50:1	50:1	50:1	WDA annual report	WDA
	Proportion of TVET trainers receiving pedagogy training	4%	5%	10%	15%	20%	25%	WDA annual report	WDA
	% TVET curricula that is used that is competency-based	28%	51%	66%	81%	96%	100%	WDA annual report	WDA
	% inspected TVET institutions with adequate facilities, infrastructure and equipment	68%	69%	69%	70%	71%	72%	Inspection reports	WDA/REB
	Number of TVET institutions with career guidance specialists	20	120	220	320	325	328	WDA annual report/Districts report	WDA
Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality	**Percentage of employers satisfied with university graduates**	79.4% (2010)	>85%		>90%		>90%	Employer survey	HEC
	Percentage of university graduates employed one year after graduation	75.8%[20]	>75.8%		>80%		>90%	Tracer survey	HEC
	Enrolment in tertiary education (public)	37,632	39,409	41,275	49,110	52,872	56,938	EMIS	MINEDUC
	% students in public tertiary institutions in Rwanda	62.6%	62.14%	61.71%	61.28%	60.85%	60.43%	HESLD Annual Report	REB

[18] Including private and public, TSSs, VCTs, and higher education TVET institutions.
[19] As a proportion of those who sat the final exams, not of total enrolment in final year.
[20] Almost 24.2% of higher education graduates are either unemployed or underemployed, National Integrated Employment Program (NEP), 2013-2014.

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
research outputs	receiving financial support from government								
	% of staff with at least a postgraduate certificate of education/pedagogy	6%	10%	15%	20%	25%	30%	HEC Annual Report	HEC
	Proportion of undergraduate lecturers with at least a Masters	68%	72%	74%	75%	76%	85%	HEC Annual Report	HEC
	Proportion of post-graduate lecturers with at least a PhD	15%	17%	18%	19%	20%	28%	HEC Annual Report	HEC
Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early learning for four-to-six year olds.	GER in pre-primary (M/F)	12.9% M: 12.4% F: 13.3%	15.7%	19.8%	23.8%	26.9%	29.9%	EMIS + NISR population projections	MINEDUC
	NER in pre-primary	12.7% M: 12.3% F: 13.2%	14%	17%	21%	25%	28%	EMIS + NISR population projections	MINEDUC
	% sectors with school-readiness programmes	Baseline to be determined in 2014						District reports	MINEDUC
	New ECD centres	399	771	447	363	466	393	EMIS	MINEDUC
	% primary schools with a pre-school section	39%						EMIS	MINEDUC
	% pre-primary teachers and care givers trained[21]	-	4%	8%	12%	16%	20%	TMDIS	REB
Strengthened	Total number of laptops in OLPC	226,500	245,756	259,252	261,535	244,674	219,730	OLPC Annual Report	OLPC

[21] Annual percentage of total care givers who are trained, not cumulative total.

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.	% primary schools with internet connectivity	6%	6.9%	7.7%	8.5%	9.4.%	10.1%	EMIS	MINEDUC
	% primary schools with required science facilities (science kits / corners)	28% (kits)	33%	37%	44%	52%	61%	EMIS	MINEDUC
		3% (corner)	5.6%	8.2%	11.7%	13.2%	16.3%		
	% secondary schools with internet connectivity	18%	30%	45%	61%	80%	100%	EMIS	MINEDUC
	% secondary schools with access to computers	64%	70%	75%	85%	90%	95%	EMIS	MINEDUC
	% secondary schools with required science facilities (science kits / corners / laboratories)	60% (kits)	66%	72%	78%	84%	90%	EMIS	MINEDUC
		5% (corner)	9.5%	14.1%	19.8%	23.3%	28.0%		
		15% (labs)	17.0%	19.1%	21.2%	23.3%	25.2%		
	Number of core primary and general secondary subjects whose content is digitalised	18 primary subjects are digitalised	5	40	53	58	69	REB ICT and ODL department reports	REB
	Proportion of students enrolled in science and technology fields at upper secondary and tertiary education level	41% (sec.) 13% (tert.)	43% 15%	45% 17%	47% 19%	49% 21%	50% 23%	EMIS	MINEDUC
	% of students taking science streams who pass S6 with minimum requirements to study science at a public university	33% M: 38% F: 25%	36% 41% 28%	38% 43% 31%	40% 45% 34%	43% 48% 37%	45% 50% 40%	Examinations reports	REB
	% qualified and certified	13%	14%	34%	54%	76%	87%	TMDIS	REB

SECTOR OUTCOME	SECTOR OUTCOME INDICATOR[11]	BASELINE (2012/13)[12]	Targets[13]					Means of verification	Responsibility for reporting
			2013/14	2014/15	2015/16	2016/17	2017/18		
	teachers in ICT literacy and related pedagogies								
Increased access to Adult Basic Education to improve adult literacy and numeracy.	Number of adults enrolled in literacy centres	145,065	163,917	182,770	201,623	220,476	239,329	EMIS	MINEDUC
	% reduction in the total number of illiterate adults	2.3%	5%	3%	6%	5%	3%	District literacy reports + NISR population projections	MINEDUC and DEOs
	% of population aged 15 years and above who are literate	68%	73%	76%	82%	87%	90%	2012 RPHC	NISR
Improved administrative and management support services, including the management of policy, information, finances, and human resources across the education sector.	% primary schools with a functional PTA	95%	95%	96%	97%	98%	99%	EMIS	MINEDUC
	Total number of PTAs	3,709	4,081	4,355	4,562	4,803	5,204	EMIS	MINEDUC
	% primary schools with PTC member trained in school management	47%	60%	70%	80%	90%	100%	EMIS	MINEDUC
	% secondary schools with a functional PTA	85%	88%	91%	94%	97%	100%	EMIS	MINEDUC
	% secondary schools with PTC member trained in school management	32%	40%	50%	60%	70%	80%	EMIS	MINEDUC
	% parents/public surveyed who are happy with education services delivered	60%	65%	70%	75%	80%	85%	EICV	NISR

CHAPTER 6: COST AND FINANCING OF THE PLAN

6.1 FUNDS AVAILABLE

Over the period of the ESSP the following funds have been projected.

(RWF Millions)[22]	2012/13 (Actual)	2013/14 (Proj.)	2014/15 (Proj.)	2015/16 (Proj.)	2016/17 (Proj.)	2017/18 (Proj.)
Total Resources	**232,303**	**265,456**	**269,097**	**285,725**	**307,697**	**331,660**
Central Budget Ceiling	120,152	134,402	144,905	159,395	175,335	192,868
Of which "own resources"	621	640	659	679	699	720
Of which on-budget external support	8,226	8,002	3,620	2,691	104	107
District budget ceilings	103,711	108,897	114,341	120,059	126,061	132,365
Additional on-budget external support beyond ceilings	6,807	22,157	9,850	6,271	6,301	6,427
Additional central budget allocation	1,633					

For the period from 2012/13 to 2014/15, MINECOFIN have allocated the finance ceilings as above. (Although in the case of the district budget ceilings, the numbers are based on a 5% increment each year as we have not received clear data from MINECOFIN for what these ceilings are).

For the final three years of the new ESSP period, we have assumed a 10% annual increment for the central ceilings (as equivalent to the average annual increase in the first two years) and 5% annual increment for the district ceilings.

Included within the central allocation to the education sector are the revenues MINEDUC raises itself through financial support from UNICEF and the selling of OLPC laptops to private schools. Also included are some on-budget external support from the World Bank (TVET Skills Development Project), African Development Bank (Science & Technology Skills Development Project), the Kuwait Fund (expansion of IPRC Kicukiro) and to a small extent from the Global Fund for HIV, UNICEF and WHO (which support health and HIV knowledge in schools).

Additional funds available projected here include external support which is expected but not yet confirmed or on-budget. This external support could all be on-budget and this will be encouraged for the sake of transparency and facilitating the sector's strategic planning. The breakdown of these resources is in the annex.

[22] All costs are in Rwandan Francs (RWF). For international comparisons, RWF 1,000 is approximately USD 1.64 (August 2012).

In 2013/14 it is expected that the budget will be revised upwards given an increase in external support from the World Bank's Skills Development Project which will require a corresponding increase in counterpart funding.

It is important to note that Sector Budget Support for education is incorporated within the combined district and central budget ceilings from MINECOFIN. This Sector Budget Support includes considerable support from DFID, the Global Partnership for Education (GPE) and the Government of Belgium. A number of development partners also have projects in the education sector which complement the budget. Where possible, these projects have been taken into account in the preparation of this sector plan and some have been suggested as moving more on-budget. However, there are a significant number of development partner projects which are more difficult to predict or take into account for strategic planning purposes. This is a weakness for the sector.

6.2 COSTS BY PROGRAMME

The following tables show the summary of the ESSP cost projections (both recurrent and capital costs) over the period 2012/13 – 2017/18, with a breakdown of cost by programme areas.

Table 7: Projected recurrent expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
pre-primary	345	677	851	1,116	1,413	1,760
primary	60,390	74,556	79,906	91,123	88,962	108,012
lower secondary	37,762	44,969	50,769	58,557	69,217	89,424
upper secondary	21,796	23,325	26,788	31,116	37,502	42,561
pre-service teacher training	2,147	2,404	2,620	2,919	3,201	3,513
TVET	18,478	24,637	28,904	33,712	37,898	41,809
higher	37,004	35,275	35,539	35,881	36,293	36,766
non-formal	193	256	325	400	481	569
STR	2,981	1,664	1,606	1,591	1,578	1,573
institutional support	6,906	11,169	10,691	11,012	11,342	11,683
total recurrent expenditure	**188,001**	**218,931**	**237,999**	**267,427**	**287,888**	**337,671**

Table 8 Projected capital expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
pre-primary	-	17,918	10,700	8,946	11,846	10,296
primary	6,893	2,021	2,082	2,144	2,209	2,275
lower secondary	5,021	17,586	11,520	13,078	23,226	25,751
upper secondary	14,596	11,365	7,628	10,911	13,132	13,971
pre-service teacher training	1,495	1,540	1,586	1,634	1,683	1,733
TVET	8,334	28,313	13,451	10,159	12,635	12,622
higher	5,699	5,124	4,013	3,549	2,946	2,499
non-formal	-	-	-	-	-	-
STR	2,264	-	-	-	-	-
institutional support	-	-	-	-	-	-
total capital expenditure	**44,302**	**83,867**	**50,982**	**50,421**	**67,678**	**69,147**

Table 9: Projected recurrent and capital expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
pre-primary	345	18,595	11,551	10,062	13,259	12,055
primary	67,283	76,578	81,988	93,267	91,171	110,287
lower secondary	42,783	62,555	62,289	71,635	92,444	115,175
upper secondary	36,391	34,689	34,416	42,027	50,634	56,532
pre-service teacher training	3,643	3,944	4,206	4,553	4,884	5,247
TVET	26,811	52,949	42,355	43,871	50,533	54,432
higher	42,703	40,399	39,552	39,430	39,239	39,265
non-formal	193	256	325	400	481	569
STR	5,245	1,664	1,606	1,591	1,578	1,573
institutional support	6,906	11,169	10,691	11,012	11,342	11,683
total recurrent + capital expenditure	**232,303**	**302,798**	**288,980**	**317,848**	**355,565**	**406,818**
sub-sector shares						
pre-primary	0.1%	6%	4%	3%	4%	3%
primary	29%	25%	28%	29%	26%	27%
lower secondary	18%	21%	22%	23%	26%	28%
upper secondary	16%	11%	12%	13%	14%	14%
pre-service teacher training	2%	1%	1%	1%	1%	1%
TVET	12%	17%	15%	14%	14%	13%
higher	18%	13%	14%	12%	11%	10%
non-formal	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
STR	2%	1%	1%	1%	0.4%	0.4%
institutional support	3%	4%	4%	3%	3%	3%

6.3 DIFFERENCE TO BE MOBILISED

The following table shows the difference between projected expenditure and existing resource allocations for the education sector.

Table 10: Projected funding gap

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	**TOTAL 2013-18**
Total expenditure	**232,303**	**302,798**	**288,980**	**317,848**	**355,565**	**406,818**	**1,672,010**
Of which recurrent	188,001	218,931	237,999	267,427	287,888	337,671	**1,349,915**
Of which capital	44,302	83,867	50,982	50,421	67,678	69,147	**322,095**
Total resources available	**232,303**	**265,456**	**269,097**	**285,725**	**307,697**	**331,660**	**1,459,635**
Funding gap	**0**	**37,342**	**19,884**	**32,123**	**47,868**	**75,158**	**212,375**
Funding gap as % of expenditure		12%	7%	10%	13%	18%	**12.7%**

There is a significant funding gap which becomes larger over time as recurrent costs within the education sector grow in line with its expansion. A number of strategies will be pursued to close this gap.

First, the sector will negotiate with existing development partners and explore new partnerships to support the education sector. A particular emphasis will be made on ensuring that partners directly support the education sector's plans and thus can be considered at least on-budget if not as sector budget support. In the resource projections expected support from China, Korea, Switzerland and Japan to TVET have been included although these projects are still under negotiation. These negotiations are at an advanced stage. The education sector and its agencies will continue to actively make proposals to potential new international partners. An example is the request for support made to the Indian government to assist with the construction of the new IPRCs in Eastern and Western province.

Second, as outlined in the ESSP's strategic framework, various strategies will be adopted to encourage increased private provision of education. The cost projections have conservatively assumed no expansion of the private sector at upper secondary level (both academic and TVET). However, were the strategies to promote private sector participation successful, this would significantly reduce the cost burden of expansion for the government.

Third, higher learning institutions and TVET schools will be further encouraged to increase their internally generated revenues. Considerable progress has already been made with this, however the greater level of resources raised by institutions themselves then the smaller the funding gap would become.

Fourth, a significant increase in loan recovery from the Student Financing Agency has been projected. REB will aim for this target to be exceeded and thus help reduce the funding gap.

Fifth, a training levy on employers is likely to be introduced. This would be collected at a national level but the proceeds would be earmarked to help support the costs of expanding and ensuring quality within the TVET sector.

Finally, the education sector will request an increased funding allocation from central government to ensure that the government's ambitions for improving national productivity and creating a knowledge-based economy can be realised. In this regard, it is important to emphasise the vast range of strategies that have already been implemented to greatly reduce costs in the education sector:

- All primary schools have adopted a double-shifting system where the same classroom can be used by one cohort of children in the morning and a second cohort in the afternoon. This reduces the need for infrastructure expansion and doubles the number of students one teacher can support without increasing the class size. The downside is a reduction in the quality of education provided.
- The double-shifting system will be adopted by all TVET schools from 2013. This will vastly reduce the cost pressures as TVET expands very quickly with the 12YBE policy.
- The targeted trainer-pupil ratio at TVET will be allowed to increase not only because of the double shifting policy, but also because ICT instruction will be adopted where possible to allow for larger class sizes. This reduces the trainer salary burden.
- Classroom construction will continue to be completed using the 'unconventional approach' which harnesses support from communities to reduce costs. However, workshop construction is not amenable to this model, given the stringent factory simulated training environments desired for a competency-based TVET. The success of this approach has recently been internationally recognised with the education sector winning the Commonwealth Good Practice Awards for 2012. This approach will now be adopted by the TVET sector as it expands its infrastructure. Construction costs are reduced by more than 35% as a result.
- The higher education sector's capacity will be maximised by increasing the number of evening classes, part-time courses and distance learning. In addition, further internal revenues will be secured by both HLIs and TVET schools.
- Pre-primary schools will generate the majority of their resources from local communities. This is true, for example, for the provision of teachers and care-givers' incentives and the provision of toys and learning materials. Construction of centres will also be community-based. However, it is important to note that the expansion of this sector is limited by the lack of resources MINEDUC is able to provide for supporting this construction. Equity of provision is also threatened when dependent predominantly on community resources, since richer communities have more resources available to support their centres.
- The costs of expanding access to adult basic education in line with the Vision 2020 target of universal adult literacy is greatly reduced by the new National Service Policy,

where Senior 6 leavers will spend 9 months following graduation providing voluntary literacy classes.

- To minimise ICT costs in education, a facility for refurbishing old computers will be developed. In addition, maintenance of existing computers and infrastructure will be prioritised, reducing the speed with which equipment needs to be replaced.
- By improving the quality of instruction and availability of learning materials, particularly at the primary level, repetition rates are projected to fall over the course of the ESSP. This significantly reduces costs compared to paying for students to complete the same year of education twice and is a major economic justification for prioritising quality in the education sector.

Annex 7.2 provides details of a lower-cost scenario with a smaller financing gap as indicative of the prioritisation of resources that could take place were the education sector to be unable to close its funding gap. The implications in terms of some of the key targets which would need to reduce are also shown.

Conversely, if the resource mobilisation strategy were particularly successful the education sector would be able to raise its ambitions further. In order to present a strategic plan that is realistic within framework of likely resources available, a number of targets have been set at a lower level than ultimately desired. With a greater level of resources the plan could be scaled up allowing the sector to achieve even more.

ANNEXES

7.1 SECTOR PRIORITY/POLICY ACTION MATRIX

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[23][24]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
More Rwandans receiving the full 12 year basic programme of primary and secondary education – leading to higher productivity and earnings in a range of jobs and activities	1. Increased equitable access to fee-free and compulsory primary and lower secondary schooling for all children, and expanding access to upper secondary.	1.1 All schools have sufficient, well-maintained, disable-friendly facilities and equipment to meet target PCR and infrastructure standards.	2307 9YBE classrooms constructed[25]	1207 9YBE classrooms constructed	1295 9YBE classrooms constructed	2473 9YBE classrooms constructed	2702 9YBE classrooms constructed	59,072
			1246 upper secondary classrooms constructed	694 upper secondary classrooms constructed	1086 upper secondary classrooms constructed	1284 upper secondary classrooms constructed	1259 upper secondary classrooms constructed	33,800
		1.2 Evidence-based policies and strategies addressing barriers to participation and learning for the most vulnerable children, including adolescent girls, children with disabilities, children living with HIV and children from poorer backgrounds implemented.	Research programme of PME unit agreed. Review of SNE policy. Review of School health and nutrition policy. Publication of study on drop out. Girls' education initiatives	Policy reviewed and research conducted	Policy reviewed and research conducted	Policy reviewed and research conducted	Policy reviewed and research conducted	

[23] These are output and should be stated in *output language*. State both the 'action' to be taken and the expected result, e.g. training organised and 500 teachers train*ed*.
[24] The outputs in this matrix are annual figures, not cumulative totals for the five year period
[25] Classroom unit costs includes construction of latrines, provision of water and furnishings.

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
		1.3 School health, nutrition and hygiene education programme implemented in all schools.	Pre-primary, primary and secondary school are connected to the clean water	Pre-primary, primary and secondary school are connected to the clean water	Pre-primary, primary and secondary school are connected to the clean water	Pre-primary, primary and secondary school are connected to the clean water	Pre-primary, primary and secondary school are connected to the clean water	557 (P)
		1.4 Parent Teacher Associations strengthened to address the issue of out of school children and drop-out.	Training organised for PTAs 410 PTAs trained	Training organised for PTAs 410 PTAs trained	Training organised for PTAs 410 PTAs trained	Training organised for PTAs 410 PTAs trained	Training organised for PTAs 410 PTAs trained	362
	2. Increased equitable access to education for students with special educational needs within mainstream and special schools.	2.1 All schools have disable-friendly facilities and equipment for children with special needs	Equipment procured for schools 748 primary and 271 secondary students supported with equipment	Equipment procured for schools 711 primary and 468 secondary students supported with equipment	Equipment procured for schools 711 primary and 665 secondary students supported with equipment	Equipment procured for schools 748 primary and 861 secondary students supported with equipment	Equipment procured for schools 1459 primary and 1058 secondary students supported with equipment	3,803 (P) 1,122 (S)
		2.2 Increased number of teachers who are trained to provide specific support to learners with special needs.	Teachers trained in special needs education (SNE) 1980 teachers trained	Teachers trained in SNE 2213 teachers trained	Teachers trained in SNE 2302 teachers trained	Teachers trained in SNE 2728 teachers trained	Teachers trained in SNE 3213 teachers trained	3,072
		2.3 Revised curriculum addresses specific needs of children with	Establish a project to harmonise	4 curricula revised addressing	4 teachers' guides addressing	416 teachers trained on the use of	2150 teachers trained on the use of	Combined with overall curriculum development

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
		disabilities.	curricula for children with disabilities.	specific needs of children with disabilities.	specific needs of children with disabilities developed.	pedagogical materials relevant for children with disabilities	pedagogical materials relevant for children with disabilities	budget
	3. Improved quality and learning outcomes across primary and secondary education.	3.1 Regionally harmonised school curriculum developed, providing a solid foundation for learning and skills development	Teacher training in new curriculum 1475 primary, 546 LS and 489 US teachers trained	Teacher training in new curriculum 1750 primary, 666 LS and 576 US teachers trained	Teacher training in new curriculum 2017 primary, 789 LS and 598 US teachers trained	Teacher training in new curriculum 2357 primary, 928 LS and 695 US teachers trained	Teacher training in new curriculum 2704 primary, 1157 LS and 809 US teachers trained	3,568 (P) 1,808 (LS) 1,505 (US)
		3.2 Annual examination and formative assessment policies in place and implemented, aligned with the curriculum	166 924 of P6 and 81 471 of S3 and 32 958 of S6 students will sit national examination	167 694 of P6 and 82 351 of S3 and 33 708 of S6 students will sit national examination	168 464 of P6 and 83 231 of S3 and 34 458 of S6 students will sit national examination	169 234 of P6 and 84 111 of S3 and 35 208 of S6 students will sit national examination	170 004 of P6 and 84 991 of S3 and 35 958 of S6 students will sit national examination	
		3.3 National system for measuring learning achievement in core subjects established and conducted on regular basis.	P3 and P5 assessment in Literacy and Numeracy	S2 assessment in Literacy and Numeracy	P3 and P5 assessment in Literacy and Numeracy	S2 assessment in Literacy and Numeracy	P3 and P5 assessment in Literacy and Numeracy	
		3.4 Improved student/textbook ratio as well as access to reading material for all schoolchildren.	Textbooks and supplementary learning materials procured 50% primary, 61% LS, 41% US students with	Textbooks and supplementary learning materials procured 63% primary, 71% LS, 56% US students	Textbooks and supplementary learning materials procured 75% primary, 81% LS, 70% US students	Textbooks and supplementary learning materials procured 88% primary, 91% LS, 85% US students	Textbooks and supplementary learning materials procured 100% students with textbooks	38,503 (P) 46,782 (LS) 17,692 (US) 3,447,259

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
			textbooks 2,337,200 primary; 1,427,909 LS, 158,067 US books procured	with textbooks 3,351,616 primary; 1,659,615 LS, 165,483 US books procured	with textbooks 1,928,024 primary; 1,415,399 LS, 221,598 US books procured	with textbooks 1,770,327 primary; 1,760,182 LS,. 431,465 US books procured	primary; 3,187,792 LS, 485,572 US books procured	
		3.5 Capacity of schools and teachers strengthened to use readers in the classroom to build the reading skills of children	507 807 distributed to schools and 120 teachers trained	533 198 distributed to schools and 150 teachers trained	559 858 distributed to schools and 200 teachers trained	587 850 distributed to schools and 230 teachers trained	617 243 distributed to schools and 250 teachers trained	
	4. Qualified, suitably-skilled and motivated teachers and trainers to meet demands of expanding education access.	4.1 Comprehensive Teacher Development and Management information system in use to plan teacher demand, supply and training of teachers.						33
		4.2 Improved teacher welfare and conditions of service.	Teachers provided with housing and other incentives 872 teachers provided with laptops	Teachers provided with housing and other incentives 913 teachers provided with laptops	Teachers provided with housing and other incentives 959 teachers provided with laptops	Teachers provided with housing and other incentives 1028 teachers provided with laptops	Teachers provided with housing and other incentives 1108 teachers provided with laptops	18,094
		4.3 Increased proportion of teachers demonstrating subject knowledge and teaching skills in the	School-based mentoring programme implemented 70% teachers	School-based mentoring programme implemented 80% teachers	School-based mentoring programme implemented 85% teachers	School-based mentoring programme implemented 90% teachers	School-based mentoring programme implemented 95% teachers	23,106

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
		language of learning.	proficient in English	proficient in English	proficient in English	proficient in English	proficient in English	
			Training delivered for unqualified teachers. 1284 teacher trained	Training delivered for unqualified teachers. 2744 teacher trained	Training delivered for unqualified teachers. 4,201 teacher trained	Training delivered for unqualified teachers. 5697 teacher trained	Training delivered for unqualified teachers. 7,398 teacher trained	1,173
		4.4 Increased proportion of head-teachers and school managers demonstrating capabilities for effective school management.	School management training delivered 5340 primary and 4055 secondary staff trained	School management training delivered 5595 primary and 4852 secondary staff trained	School management training delivered 5849 primary and 5548 secondary staff trained	School management training delivered 6103 primary and 6368 secondary staff trained	School management training delivered 6358 primary and 7634 secondary staff trained	6,424 (P) 6,251 (S)
		4.5 CPD system to promote career-path for teachers implemented						
Male and female graduates prepared for job market with critical skills needed	5. Increased equitable access to relevant, high-quality, demand-driven TVET programmes	5.1 Stakeholders in the TVET sector are guided by inclusive policies and strategies that are informed by a comprehensive TVET information system.	Develop TVET policy, TVET strategy and detailed plan of implementation that are aligned to the ESSP	Annual action plans that are aligned to the policies and strategies and being monitored	Annual action plans that are aligned to the policies and strategies being monitored	Annual action plans that are aligned to the policies and strategies being monitored	Annual action plans that are aligned to the policies and strategies being monitored	
		5.2 Human capacity is developed in the TVET system.	318 trainers trained in competency-based training, ICT, pedagogy,	716 trainers trained in competency-based training, ICT, pedagogy,	1207 trainers trained in competency-based, ICT, pedagogy,	1897 trainers trained in competency-based training, ICT, pedagogy,	2759 trainers trained in competency-based training, ICT, pedagogy,	5,579

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
			equipment repairs and management training, plus English Language mentoring	equipment repairs and management training, plus English Language mentoring	equipment repairs and management training, plus English Language mentoring	equipment repairs and management training, plus English Language mentoring	equipment repairs and management training, plus English Language mentoring	
		5.3 All TVET providers have adequate facilities, infrastructure and equipment to ensure a locally relevant implementation of competency-based curricula.	Develop and implement a prioritised plan or rehabilitation, equipping and construction of schools.	Construction of IPRC East and West	IPRC East and West open for operations			
			Development of norms and standards for infrastructure and equipments.	Inspection of TVET institutions	Inspection of TVET institutions	Inspection of TVET institutions	Inspection of TVET institutions	
		5.4 Increased, curricular-relevant income-generating capacities of TVET providers to improve the quality of TVET provision.	Procedure manual for operations of Production units which are validated and approved Production units for IPRCs Kigali and South-Mpanda	Production centres set up in IPRCs west, East and North and Gishali polytechnic	5 incubation centre set up in 5 VTCs	5 incubation centres set up in VTCs	5 incubation centres set up in VTCs	

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
			VTC strengthened					
		5.5 TVET competency-based curricula placed on RTQF, linked to the labour market and focused on key priority sectors.	TVET survey – timing to be confirmed. Employer satisfaction and tracer surveys undertaken	Employer satisfaction and tracer surveys undertaken	Employer satisfaction and tracer surveys undertaken	Employer satisfaction and tracer surveys undertaken	Employer satisfaction and tracer surveys undertaken	1,050 (Research)
			TVET institutions visited for QA and accreditation 155 schools visited.	TVET institutions visited for QA and accreditation 160 schools visited.	TVET institutions visited for QA and accreditation 166 schools visited.	TVET institutions visited for QA and accreditation 173 schools visited.	TVET institutions visited for QA and accreditation 180 schools visited.	92
		5.6 Increased involvement of industry through structured public-private dialogue	Industry in curriculum development Coordination mechanisms of Public and private companies in place Students take internship in both private and public companies	Involve industry in curriculum development Students take internship in both private and public companies	Involve industry in curriculum development Students take internship in both private and public companies	Involve industry in curriculum development Students take internship in both private and public companies	Involve industry in curriculum development Students take internship in both private and public companies	

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
	6. Increased equitable access to affordable, relevant, academically excellent higher education that also delivers quality research outputs.	6.1 Increased number of higher education places available, including through full-time, part-time, open, distance & e-learning options.	Establishment of the University of Rwanda, including College of Open and Distance Learning	Opening of first two Open and Distance Learning (ODL) Centres	New ODL programmes developed 2 new OLD programmes available	New ODL programmes developed 2 new OLD programmes available	New ODL programmes developed 2 new OLD programmes available	
		6.2 All TEIs have sufficient facilities to support quality teaching and learning (laboratories, libraries, lecture rooms, etc)[26]	Construction of student hostel, workshops and biogas plant at Rublizi and Busogo campuses. Construction of library and laboratories at Nyagatare campus. Construction of girls' hostel for College of Science and Technology	Construction of Architecture building at College of Science and Technology. Construction of new faculty building at College of Education. Procurement of laboratory and library equipment at College of Education. Construction of library, meeting hall at Busogo campus.				

[26] Construction plans listed in year that are expected to be completed.

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
				Construction of classrooms at Rublizi and Busogo campuses. Construction of learning complex at College of Economics and Business. Construction of laboratory and library at Rukara College of Education.				
		6.3 Sustainable model of student financing, including an efficient student loan recovery system implemented.	New student loan scheme launched. Management of student loans moved to Higher Education Council. New legal instruments in place to enforce loan recovery	Feasibility of Education Development Bank in Rwanda completed	All student loans given through the Bank	Recovery of mature loans done effectively and recovery of mature loans done effectively	Recovery of mature loans done effectively and recovery of mature loans done effectively	27,786
		6.4 Increased research capacity developed within the HL sub-	At least 4% of budget earmarked for	The percentage of budget	The percentage of budget	The percentage of budget	The percentage of budget	9,510

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
		sector.	research and publications in UR	earmarked for research and publications to increase annually at least by 4%	earmarked for research and publications to increase annually at least by 4%	earmarked for research and publications to increase annually at least by 4%	earmarked for research and publications to increase annually at least by 4%	
		6.5 Staff retention plan implemented to ensure that high performing and experienced staff are recruited and retained within the system.	Maintain the current salaries for public HLIs since they have been increased, but increase internally generated funds in public HLIs from 27% to at least 40% per year to enable an increase in salaries and benefits.	Maintain the current salaries for public HLIs since they have been increased, but increase internally generated funds in public HLIs from 27% to at least 40% per year to enable an increase in salaries and benefits..	Maintain the current salaries for public HLIs since they have been increased, but increase internally generated funds in public HLIs from 27% to at least 40% per year to enable an increase in salaries and benefits..	Maintain the current salaries for public HLIs since they have been increased, but increase internally generated funds in public HLIs from 27% to at least 40% per year to enable an increase in salaries and benefits..	Maintain the current salaries for public HLIs since they have been increased, but increase internally generated funds in public HLIs from 27% to at least 40% per year to enable an increase in salaries and benefits..	24,668
	7. Improved access to school readiness programmes by 2017/18, accompanied by expanded access to three-years of early	7.1 Increased number of schools with pre-primary section.						
		7.2 National standards for school readiness programmes developed and in use in all pre-schools.						
		7.3 Pre-primary	1 Curriculum	2 parents and	416 teachers	1500 teachers	2150 teachers	6

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
	learning for four-to-six-year olds.	curriculum revised as part of the planned revision of the school curriculum.	revised	teachers guides revised and distributed in schools	trained to use pre-primary pedagogical materials	trained to use pre-primary pedagogical materials	trained to use pre-primary pedagogical materials	
		7.4 All pre-primary teachers and caregivers trained with national training package.	249 teachers and caregivers trained	679 teachers and caregivers trained	1331 teachers and caregivers trained	2066 teachers and caregivers trained	3034 teachers and caregivers trained	749
More productive private and public sectors.	8. Strengthened performance in science, technology and innovation at all levels of education, and application of science, technology and innovation in relevant sectors of the economy.	8.1 STI Policies Developed in critical areas of science including strengthening of structure of STI in Rwanda	Review and Update National STI Policy and Strategic Plan, Develop Research Policy, Develop One Science Policy	Develop One Science Policy	Develop Once Science Policy	Develop One Science Policy	Develop One Science Policy	
		8.2 Research capacity in R&D strengthened across all relevant sectors of the economy.	Establish Research Grant, Fund three research proposals, Convene one High Level research Conference	Fund three research proposals, Convene one High Level research Conference	Fund three research proposals, Convene one High Level research Conference	Fund three research proposals, Convene one High Level research Conference	Fund three research proposals, Convene one High Level research Conference	
		8.3 All secondary schools equipped with science equipment and kits.	12YBE schools provided with science kits. 1038 kits provided.	12YBE schools provided with science kits. 1100 kits provided.	12YBE schools provided with science kits. 1345 kits provided.	12YBE schools provided with science kits. 3489 kits provided.	12YBE schools provided with science kits. 2902 kits provided.	10,877

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
			Science laboratories constructed in secondary schools of excellence. 40 labs constructed	Science laboratories constructed in secondary schools of excellence. 45 labs constructed	Science laboratories constructed in secondary schools of excellence. 48 labs constructed	Science laboratories constructed in secondary schools of excellence. 50 labs constructed	Science laboratories constructed in secondary schools of excellence. 60 labs constructed	
		8.4 National science teacher training programme expanded.	Science and Maths School-based teacher development programme implemented. 4081 schools supported	Science and Maths School-based teacher development programme implemented. 4355 schools supported	Science and Maths School-based teacher development programme implemented. 4562 schools supported	Science and Maths School-based teacher development programme implemented. 4803 schools supported	Science and Maths School-based teacher development programme implemented. 5204 schools supported	8,709
		8.5 Increased enrolment in and quality of science and technology subjects in higher education.	For science and TVET in tertiary education to increase to 90% for students accessing student loan	For science and TVET in tertiary education to increase to 90% for students accessing student loan	For science and TVET in tertiary education to increase to 90% for students accessing student loan	For science and TVET in tertiary education to increase to 90% for students accessing student loan	For science and TVET in tertiary education to increase to 90% for students accessing student loan	
		8.5 Knowledge Transfer and Develop a culture of Innovation	Rwanda Innovation Endowment Fund (RIEF) expanded for an additional 10 Innovators	3rd Phase of RIEF established for additional 10 innovators	4th Phase of RIEF established for additional 10 innovators	5th Phase of RIEF established for additional 10 innovators	6th Phase of RIEF established for additional 10 innovators	

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
Access to skills training for adults, particularly male and female youth and women	9. Increased access to Adult Basic Education to improve adult literacy and numeracy.	9.1 Learning achievement standards developed and regular assessments of learners conducted.						
		9.2 Increased access to relevant reading materials for neo-literate adults.						544[27]
		9.3 Capacity of literacy tutors enhanced through structured training.	Training of literacy instructors. 234 instructors trained	Training of literacy instructors. 321 instructors trained	Training of literacy instructors. 410 instructors trained	Training of literacy instructors. 503 instructors trained	Training of literacy instructors. 598 instructors trained	1,223
		9.4 Improved assessment, accreditation and certification of Adult Basic Education providers and programmes.						
	10. Improved administrative and management support services, including the management of policy, information,	10.1 All education managers and governance bodies demonstrate requisite skills and competencies for effective leadership and Governance.						
		10.2 All institutions have the resources and systems for effective						

[27] Based on development funding allocated to each literacy centre.

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
	finances, and human resources across the education sector.	and efficient management.						
		10.3 Increased integration, coordination and lack of duplication across key management systems and institutions.			Harmonise all information systems in the Ministry and Agencies			
		10.4 Improved planning, M&E, and integrated data-management across all agencies.	Completion of EMIS contract with new EMIS system in place, staff trained, infrastructure provided at decentralised levels and recoding of data 2009-2012					1,298
		10.5 Expanded and improved Human Resource Management processes, procedures and systems.			Automatise the human resources process and regular procedures			
		10.6 Improved communication systems and structures across the sector.		Develop the communicatio n strategy	Internalise the communicatio n strategy within the Ministry,			

THEMATIC OUTCOME	SECTOR OUTCOME	SECTOR OUTPUT (Aggregated)	PRIORITY/POLICY ACTIONS (ANNUAL OUTPUT)[2324]					TOTAL BUDGET FOR 5-YR PERIOD (millions RWF)
			2013/14	2014/15	2015/16	2016/17	2017/18	
					agencies, and districts			

7.2 DETAILED COST PROJECTIONS FOR ESSP

Pre-primary

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Pre-primary								
140101	Training	MINEDUC	4	86	89	177	281	421
140102	Curriculum development and textbooks	REB	3	6	0	0	0	0
140103	Inspection	REB	17	27	33	39	46	53
XX2515	ECD Model Support Centre Budget Funds	Districts	321	17,918	10,700	8,946	11,846	10,296
	Of which construction			**17,918**	**10,700**	**8,946**	**11,846**	**10,296**
TBD	Capitation grants	Districts		557	729	900	1085	1285
TOTAL	TOTAL	TOTAL	**345**	**18,595**	**11,551**	**10,062**	**13,259**	**12,055**

Notes for pre-primary:

All pre-primary provision is to be community-based. Nevertheless, the government will take responsibility for training of trainers, care-givers and ECD management; inspection of centres; and the provision of a capitation grant for all students. The government will take part-responsibility for infrastructure expansion using the 'unconventional' construction method.

Development partners have been assumed to provide technical assistance for the development of a new curriculum. A number of NGOs also directly support ECD centres. Private provision of ECD has been assumed to grow at 5% of its 2011 level each year.

Primary

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Primary								
140203	Teachers' cooperatives (recurrent cost)	MINEDUC	500	515	530	546	563	580
140203	Teachers' cooperatives (capital cost)	MINEDUC	5,000	-	-	-	-	-
140210a	Special needs education	MINEDUC	127	1,179	1,240	1,302	1,496	2,396
140211	Girls' Education	MINEDUC	89	92	95	98	101	104
140212	Health, HIV/AIDS and School Environment	MINEDUC	19	20	20	21	21	22
140212	Health, HIV/AIDS and School Environment (External funding)		92	95	98	101	104	107
140213	School Sports	MINEDUC	444	457	471	485	500	515
140202	Training (in-service)	REB	5,146	1,143	1,387	1,649	1,949	2,299
140202	School-Based Mentoring Programme	REB		4,148	4,573	4,919	5,534	6,203
TBD	Teacher development fund	REB	-	3,232	3,486	3,771	4,164	4,623
140202	School Management Training - VVOB	VVOB	-	318	343	369	397	426
140302	Science & Maths Training	REB	-	945	610	945	1,271	1,647
140206	Provision of science kits in schools	REB	434	4,000	4,045	4,100	4,566	4,368
140207	Curriculum development and textbooks	REB	2,873	6,617	9,608	6,108	5,980	11,159
TBD	Supplementary learning materials	REB		1,204	1,778	1,053	996	1,998
140208	General Education Inspectorate	REB	238	281	329	378	438	505
140208	GEI - Learning Achievement Assessments	REB	80	113	85	120	90	193
140208	GEI - Learning Achievement Assessments	USAID/L3	-	68	-	62	-	-
140217	NECR exams	REB	1,767	2,031	2,241	2,550	3,366	3,773
140218	ICT in Education (OLPC) - recurrent	REB	4,855	2,890	2,276	10,022	2,346	9,555
140218	ICT in Education (OLPC) - capital	REB	1,622	1,742	1,794	1,848	1,904	1,961
XX2501	Teacher Salaries	Districts	36,430	37,166	38,403	44,035	46,389	48,735
XX2502	Capitation Grants	Districts	6,808	7,530	7,754	7,927	8,056	8,131

XX2507	Catch up programmes	Districts	41	34	27	18	9	-
XX2508	Textbooks transport	Districts	152	156	161	166	171	176
XX2511	School construction	Districts	271	279	288	296	305	314
XX2512	District fund for education	Districts	138	142	146	151	155	160
XX2513	Exams	Districts	158	182	201	229	302	338
	TOTAL		**67,283**	**76,578**	**81,988**	**93,267**	**91,171**	**110,287**

Notes for primary:

From 2013/14, there will be a new budget line for the teacher development fund. This fund will help make the teaching profession more attractive by supporting good performing teachers with cows, laptops and tuition fees for their children. It will also make provisions for motorbikes for teachers in rural areas.

From 2013/14, there will also be a new budget line for Science and Maths training. Previous support for this has largely been through JICA, with a minimal budget available at secondary level.

Planned support from VVOB for management training has been projected to continue and to be treated as on-budget. This funding is not yet confirmed. Support to school management will be across primary and secondary schools. Budget lines have been added for each programme to reflect this.

REB's learning achievement assessments will be supported by technical assistance from USAID/L3 until 2016. For the final two years of the ESSP, this cost will fall on REB. UNICEF and UNESCO will also support these assessments. Similarly, USAID/L3 will support the School-Based Mentoring Programme with provision of materials and training of mentors. From 2016/17, this cost has been assumed to fall on REB.

The purchases of new laptops by the OLPC project has been assumed as recurrent spending with the laptops having a lifespan of 5 years, after which they will need to be replaced. This is similar to the provision of textbooks which are assumed to have a lifecycle of 3 years. The presumed expiry of textbooks and laptops cause irregularity in cost projections since when one year a larger than usual number are purchased this means in 3 or 5 years, respectively, this larger number will need to be replaced.

The provision of supplementary learning materials has been included as a separate budget line. This is because of an interest from some development partners in directly funding this particular budget line.

A significant increase in support to Special Needs Education has been targeted. These costs have been calculated as an estimate of equipment requirements for students in school with special needs (alongside a target for proportion of students supported), an allocation for the training of teachers in special needs education and an estimate for the cost of providing equipment for students who are presently out-of-school with special needs. Baseline data for this was not strong. As the ESSP is implemented more data will be required to develop an updated costed plan for special needs education. This note is equally relevant for secondary and higher education special needs budgets.

Junior Secondary

(RWF Millions)		**Agency**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**
Junior Sec.								
140315	School Sports	MINEDUC	192	198	204	210	216	223
140323	9YBE Monitoring and evaluation	MINEDUC	80	82	84	87	90	92
140210b	Provision of SNE equipment to Secondary students	MINEDUC	33	209	181	187	229	434
140302	Science & Maths Training	REB	142	1,439	965	1,561	2,257	3,148
140302	School Management Training	REB	-	676	833	981	1,160	1,433
140302	School Management Training - VVOB	VVOB	-	241	297	350	414	511
140307	Provision of science kits in schools	REB	577	903	979	1,216	3,251	2,797
140308	Curriculum development and textbooks	REB	2,557	6,894	8,251	7,345	9,365	17,186
TBD	Supplementary learning materials	REB		662	792	696	891	1,663
140310	General Education Inspectorate	REB	52	64	76	87	100	122
140320	NECR exams	REB	1,018	1,207	1,453	1,697	1,936	2,163
140321	School construction - science labs	REB	1,209	989	1,018	1,049	-	-
140321	School construction - classrooms etc.	REB	1,813	8,886	4,787	5,293	10,409	11,711
140324	ICT in education - recurrent	REB	497	464	631	928	1,360	1,932
140324	ICT in education - capital	REB	368	1,635	1,948	2,439	3,505	4,423
XX2601	Teacher Salaries	Districts	27,960	28,661	32,130	39,612	46,335	55,462
XX2602	Capitation Grants	Districts	2,161	2,379	2,612	2,853	3,192	3,797

XX2605	Girls' Education	Districts	288	336	384	435	518	608
XX2608	School Feeding	Districts	2,570	2,605	2,683	2,763	2,846	2,931
XX2609	School construction	Districts	1,055	5,174	2,788	3,082	6,061	6,819
XX2612	Exams	Districts	212	251	303	354	404	451
	TOTAL		**42,783**	**63,953**	**63,400**	**73,223**	**94,540**	**117,906**

Notes for junior secondary:

Some budget lines allocated elsewhere in the actual 2012/13 budget have been assumed to be reallocated to the actual programme they correspond to. For example, the provision of special needs equipment to secondary students is currently in the primary budget, but is considered here in the junior secondary budget. The allocation of teacher salaries, capitation grants and school feeding between lower and upper secondary has been separated.

Upper Secondary

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Upper Sec.								
140302	Science & Maths Training	REB	-	115	85	153	245	368
140302	School management training	REB	-	338	417	491	580	716
140406	S&T - Provision of science lab equipment	REB	396	-	-	-	-	-
140407	Curriculum development and textbooks	REB	2,847	2,049	2,229	2,979	5,704	6,612
TBD	Supplementary learning materials	REB		179	193	266	534	619
140409	Inspection	REB	52	64	76	87	100	122
140416	Examination and accreditation	REB	1,940	1,617	3,049	3,241	3,595	4,253
140417	School construction	REB	8,974	5,350	2,752	4,437	5,405	5,460
140307	Provision of science kits in schools	REB	-	275	307	403	1,075	909
140321	School construction - science labs	REB	-	989	1,018	1,049	-	-
140324	ICT in education - recurrent	REB	-	464	631	928	1,360	1,932
140324	ICT in education - capital	REB	-	1,635	1,948	2,439	3,505	4,423
XX2601	Teacher Salaries	Districts	12,536	12,853	13,467	15,575	17,446	19,397
XX2602	Capitation Grants	Districts	1,349	1,845	2,246	2,602	2,989	3,418
XX2608	School feeding	Districts	2,918	3,672	4,155	4,538	4,664	4,788
XX2609	School construction	Districts	5,226	3,115	1,603	2,583	3,147	3,179
XX2707	Exams	Districts	153	128	240	256	283	335
	TOTAL		**36,391**	**34,689**	**34,416**	**42,027**	**50,634**	**56,532**

Notes for upper secondary:

A number of budget lines currently in the 2012/13 budget only for lower secondary education, but actually are for all secondary schools, have been reallocated to properly reflect their split between the programmes.

The upper secondary exams budget for 2012/13 includes students at Technical Secondary Schools. From 2013/14 the cost of all TVET exams are assumed to fall under WDA.

TVET

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Primary								
140603	M&E for TVET programme	MINEDUC	9	10	10	10	11	11
XX2601	Teacher Salaries (assumed share to TSSs)	Districts	1,916	1,964	1,830	1,940	1,948	1,973
XX4212	Technical Education & CoTs	Districts	58	60	62	64	66	68
140601	Mgmt support - Staff & operating costs of WDA	WDA	1,695	1,746	1,799	1,853	1,908	1,965
140601	Management support – research studies	WDA	-	258	159	273	169	290
140601	Mgmt support - Staff & operating costs of IPRCs	IPRCs	3,678	3,676	7,226	10,294	14,278	14,753
140601	Mgmt Support - Staff costs of VTCs	WDA	196	265	461	679	966	1,281
XXTBD	Capitation grants (for operating costs of VTCs and TSSs)	WDA	-	9,977	11,418	13,224	14,983	16,976
140604	Training of trainers - pre-service	WDA	-	-	652	738	836	948
140604	Training of trainers - in-service	WDA	-	193	346	536	813	1,161
140605	Examination and certification	WDA	555	1,035	1,128	1,451	1,825	2,245
	Recurrent cost of TVET ICT	WDA	-	22	38	59	94	139
	Infrastructure devt & equipment - ICT	WDA	-	323	293	407	572	740
140607a	Infrastructure devt & equipment - VTCs	WDA	-	-	-	-	5,886	6,392
140607a	Infrastructure devt & equipment - VTCs	Swiss	-	1,220	1,220	1,220	1,220	1,220
140607b	Infra devt & equip - IPRC Kicukiro	WDA	630	-	-	-	-	-
140607b	Infra devt & equip - IPRC Kicukiro	Kuwait	4,418	2,800	-	-	-	-

140607b	Infra devt & equip - IPRC North	China	-	12,320	-	-	-	-
140607b	Infra devt & equip - IPRC North	WDA	-	4,880	-	-	-	-
140607b	Infra devt & equip - IPRC South	China	-	4,270	4,270	4,270	4,270	4,270
140607b	Infra devt & equip - IPRC East	WDA	-	-	2,440	2,440	-	-
140607b	Infra devt & equip - IPRC West	WDA	-	-	1,434	1,434	-	-
140607b	Infra devt & equip - ETO Tumba (JICA)	JICA	-	3,720	3,720	-	-	-
140607b	Infra devt & equip - Construction of ToT centres	WDA	-	-	1,294	1,333	687	-
140607c	Skills development project (counterpart funding)	WDA	2,119	478	112	32	-	-
140607c	Skills development project (WB)	WB	7,552	4,628	3,410	2,558	-	-
	Adolescent girls' initiative (WB)	WB	699	324	254	-	-	-
	TOTAL		**23,525**	**54,169**	**43,575**	**44,815**	**50,533**	**54,432**

Notes for TVET:

A number of new budget lines have been assumed for TVET. These include the operating costs of VTCs which currently has no budget allocation, but will be essential with the 12YBE policy as fees are substantially reduced. The operating costs for TSSs are included within the capitation grant allocation to upper secondary schools for 2012/13. From 2013/14 they are assumed to be within districts' budget as part of overall capitation grant allocation for TVET schools (both TSSs and VTCs. Together these operating costs will be the biggest budget component for the TVET sub-sector. These capitation grants will be provided to both public and private TVET providers to encourage continued private sector provision of TVET.

Budget lines for ICT have also been included from 2013/14 onwards. This is for the provision of computers and connectivity to TVET schools. Budget lines for both pre-service and in-service training of trainers have also been added from 2013/14 onwards.

Examination costs increase rapidly over the ESSP, as currently there is no budget for VTC students, but this is assumed from 2013/14 onwards. In addition, rapid enrolment expansion greatly increases costs. The budget for TSS students which is under REB in the 2012/13 budget is assumed to shift to WDA from 2013/14 onwards.

Salaries for teachers at TSSs have been notionally allocated to TVET here where currently they are in the overall secondary budget. These salaries decrease over the ESSP as the teacher-pupil ratio is allowed to get higher to accommodate the rapid expansion elsewhere in the TVET system.

The following development partner support has been assumed, although only the World Bank's two projects and the Kuwait Fund are confirmed:

Switzerland planning to provide RWF1.2bn per year over five years ($10mn in total) from 2013 for infrastructure and equipment to VTCs.
The Kuwait Fund to be used to complete the initial phase of expansion of IPRC Kicukiro.
China is considering to provide RWF 12.3bn ($20mn) for the construction of IPRC North.
China is considering to provide RWF 21.3bn ($35mn) spread over 5 years for the construction of IPRC South.
JICA is considering a grant for RWF 7.4bn ($12mn) for the expansion of ETO Tumba.

The World Bank is funding two projects on-budget over the course of the new ESSP. These are the Skills Development Project and the Adolescent Girls' Initiative. The allocation for the Skills Development Project has increased for 2012/13 since the final budget was approved. This requires an increase in the counterpart funding from WDA. This will need to be addressed when the current budget is revised in December 2012.

A number of other development partners currently operate in the TVET sector. For example, VVOB are expected to keep supporting management training in the Southern province. However, in general other development partner plans are not yet clear or confirmed for the ESSP period. The proliferation of donors in the TVET sub-sector makes strategic planning for WDA more challenging. Development partners will be encouraged to move towards pooled funding mechanisms to reduce the administrative management burden on WDA, to improve the transparency and predictability of funding, and to ensure direct alignment of support with government plans.

Higher Education

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Higher Education								
140703	Construction of hostels at NUR and UP	MINEDUC	1,495	-	-	-	-	-
140706	M&E for higher education	MINEDUC	5	6	6	6	6	6
140210c	Provision of SNE equipment to HLIs	MINEDUC	85	88	90	93	96	99
140901	Management Support – Scholarship Provision	REB	11,317	10,760	10,289	9,874	9,505	9,175
	Management support – HESLD	REB	33	34	35	36	38	39

	Management support - HEC	HEC	25,000	23,807	24,521	25,256	26,014	26,794
	Management support - UR	UR	564	581	598	616	635	654
	Construction Costs - UR	UR	4,204	4,189	3,079	2,586	1,955	1,478
	Centre for Open & Distance Learning	UR	-	936	934	962	991	1,021
TOTAL	TOTAL	TOTAL	**42,703**	**40,399**	**39,552**	**39,430**	**39,239**	**39,265**

Allocation for student grants and loans has been moved under this programme for the new ESSP. Presently it is within the budget programme for institutional support.

Non-formal education

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Adult Basic Education								
140801	Training	MINEDUC	89	143	202	265	335	411
140310	General Education Inspectorate	REB	10	12	14	16	18	20
XX1303	Devt fund for adult literacy trainers and trainees	Districts	94	101	110	119	128	139
TOTAL	TOTAL	TOTAL	**193**	**256**	**325**	**400**	**481**	**569**

Notes for Non-formal education:

The budget for inspection of literacy centres is moved to this programme for the new ESSP. Currently this is within the secondary budget programme.

To achieve expansion of the adult basic education sector without massive increase in funding, a new policy of National Service for Upper Secondary graduates is to be introduced whereby they spend 9 months voluntarily giving adult literacy classes in their local community.

Institutional Support

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Institutional support								
140901	Management Support - MINEDUC	MINEDUC	2,799	2,883	2,969	3,058	3,150	3,244
140901	Management Support - MINEDUC - Own Resources		621	640	659	679	699	720
140902	M&E (EMIS)	MINEDUC	174	877	108	112	115	119
140909	ICT-MINEDUC	MINEDUC	70	72	74	77	79	81
140901	Management Support - REB (less SFAR)	REB	3,241	6,677	6,877	7,083	7,296	7,515
140901	Management Support - REB (TDM Info System)	REB	-	20	3	3	3	3
TOTAL	TOTAL	TOTAL	**6,906**	**11,169**	**10,691**	**11,012**	**11,342**	**11,683**

Notes for institutional support:

A new budget line has been added for REB's TDM information system. This is currently under development with significant support from development partners. It is expected to be operational from the 2013/14 budget – with UNICEF to handover the software in March 2013 - and will require an investment in ICT infrastructure and an annual recurrent cost to maintain this infrastructure.

The budget for MINEDUC's EMIS is assumed to have a big increase in the 2013/14 budget year. This is to complete the existing contract for EMIS development with Agile Learning, as well as paying any outstanding costs from previous years. In addition an allocation for developing the school EMIS is included along with the cost for decentralised infrastructure required in line with this. From 2014/15 onwards the recurrent costs are for the EMIS team which is to be established and the maintenance of infrastructure.

The budget for REB's institutional support is assumed to increase significantly from its present allocation. This is to account for a significant number of currently empty positions expected to be filled and new positions to be created. The budget line for MINEDUC's own resources comes from UNICEF support, which is projected to continue through the ESSP, and to a lesser extent from selling OLPC laptops to private schools.

S&T

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
DSTR								
141103	STI Policies Developed and Implemented in critical areas of science, including strengthening of the Structure of STI in Rwanda	MINEDUC	46	62	64	65	67	69
141207	Improved Access to and quality of STI learning in all education and training institutions (knowledge acquisition and deepening)	MINEDUC	150					
141302	Research Capacity in R&D Developed across all relevant sectors (knowledge creation)	MINEDUC	876	888	817	786	754	724
	Knowledge transfer & develop culture of innovation	MINEDUC	533	560	565	576	588	605
141403	Counterpart funding - S&T skills development project	REB	178	-	-	-	-	-
141403	S&T skills development project (AfDB)	REB	1,786	-	-	-	-	-
141207	Improved Access to and quality of STI learning in all education and training institutions (knowledge acquisition and deepening)	REB		155	159	164	169	174
	IRST	IRST	1,517					
	IRST - Own Revenues	IRST	160					
	TOTAL	TOTAL	**5,245**	**1,664**	**1,606**	**1,591**	**1,578**	**1,573**

Notes for S&T:

The budget lines for the Science and Technology programme have been retitled from their official titles in the 2012/13 budget, so that budget titles more accurately reflect budget usage. A new budget line has also been created for "Knowledge transfer and developing culture of innovation". This was previously incorporated by the official budget line titles.

The African Development Bank's Skills Development Project will end this financial year. It is possible that this will be extended beyond the present year but this has not yet been confirmed.

The budget for IRST will move out from the education sector budget from 2013/14. As a result of the shift of IRST to MINICOM and the uncertainty over the continuation of the African Development Bank's Skills Development Project, the total budget to Science, Technology and Research falls. However, there is no drop in funding for the continuing activities. There is also considerable spending on science and technology elsewhere in the budget through the provision of science kits at primary and secondary schools, the construction of science labs at schools of excellence and the science and maths school-based teacher development.

Pre-service teacher education

(RWF Millions)		Agency	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Upper Sec.								
XX2601	Teacher salaries (assumed share to TTCs)	Districts	582	593	593	660	686	725
XX2602	Capitation grants (assumed share to TTCs)	Districts	91	95	101	106	114	124
XX2608	School feeding (assumed share to TTCs)	Districts	223	232	246	260	279	303
	Rukara & Kavumu Colleges of Education		2,444	2,687	2,886	3,098	3,325	3,560
	KIE ODL	KIE	303	336	381	429	481	535
	TOTAL		**3,643**	**3,944**	**4,206**	**4,553**	**4,884**	**5,247**

Notes for pre-service teacher education

Currently the budget for teacher training colleges is incorporated within the upper secondary budget. For the new ESSP, the allocation of teacher salaries, capitation grants and school feeding have been notionally allocated to the pre-service teacher education budget based on student and teacher numbers at TTCs. Other recurrent costs such as for ICT equipment and textbooks have been kept separate for simplicity, since no breakdown is readily available.

Annex 2 – Lower-cost 'realistic' scenario should resources be less than targeted

A second costing scenario has been developed for the education sector to demonstrate the kind of prioritisation of resources that would be made should funding be less than expected in the 'optimistic' scenario. The overview of this scenario's costs are presented below. This is then followed with a summary of the key targets which would be reduced to allow spending to decrease.

Table A1 : 'Realistic' Scenario - Projected recurrent expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	**TOTAL**
pre-primary	345	588	685	863	1,064	1,296	**4,840**
primary	60,390	70,578	75,537	85,997	82,976	99,458	**474,936**
lower secondary	37,407	44,049	49,625	57,127	67,118	85,687	**341,013**
upper secondary	22,175	23,764	26,823	30,351	35,880	40,345	**179,338**
pre-service teacher training	2,147	2,404	2,620	2,919	3,201	3,513	**16,805**
TVET	18,453	21,592	24,832	28,372	31,011	33,070	**157,330**
higher	37,004	35,275	35,539	35,881	36,293	36,766	**216,759**
non-formal	193	256	325	400	481	569	**2,223**
STR	2,981	1,664	1,606	1,591	1,578	1,573	**10,993**
institutional support	6,906	11,169	10,691	11,012	11,342	11,683	**62,803**
total recurrent expenditure	**188,001**	**211,337**	**228,283**	**254,514**	**270,945**	**313,960**	**1,467,040**

Table A2: 'Realistic' scenario - Projected capital expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	**TOTAL**
pre-primary	-	9,623	6,002	5,010	7,030	5,711	**33,377**
primary	6,893	2,021	2,082	2,144	2,209	2,275	**17,624**
lower secondary	4,184	17,974	10,849	12,198	21,992	24,331	**91,528**
upper secondary	15,433	12,281	5,792	8,414	10,560	13,921	**66,401**
pre-service teacher training	1,495	1,540	1,586	1,634	1,683	1,733	**9,672**
TVET	8,334	28,251	13,352	9,720	5,243	4,605	**69,506**
higher	5,699	5,084	3,955	3,500	2,892	2,444	**23,574**
non-formal	-	-	-	-	-	-	**-**
STR	2,264	-	-	-	-	-	**2,264**
institutional support	-	-	-	-	-	-	**-**
total capital expenditure	**44,302**	**76,775**	**43,619**	**42,619**	**51,609**	**55,021**	**313,946**

Table A3: 'Realistic' scenario - Projected recurrent and capital expenditure by programme

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	**TOTAL**
pre-primary	345	10,211	6,687	5,873	8,094	7,007	**38,217**
primary	67,283	72,599	77,619	88,141	85,185	101,733	**492,561**
lower secondary	41,591	62,023	60,474	69,325	89,110	110,018	**432,541**
upper secondary	37,608	36,045	32,615	38,765	46,440	54,266	**245,739**
pre-service teacher training	3,643	3,944	4,206	4,553	4,884	5,247	**26,477**
TVET	26,787	49,843	38,184	38,092	36,254	37,676	**226,836**
higher	42,703	40,359	39,494	39,381	39,185	39,211	**240,332**
non-formal	193	256	325	400	481	569	**2,223**
STR	5,245	1,664	1,606	1,591	1,578	1,573	**13,257**
institutional support	6,906	11,169	10,691	11,012	11,342	11,683	**62,803**
total recurrent + capital expenditure	**232,303**	**288,112**	**271,902**	**297,133**	**322,554**	**368,982**	**1,780,986**
sub-sector shares							
pre-primary	0.1%	4%	2%	2%	3%	2%	**2%**
primary	29%	25%	29%	30%	26%	28%	**28%**
lower secondary	18%	22%	22%	23%	28%	30%	**24%**
upper secondary	16%	13%	12%	13%	14%	15%	**14%**
pre-service teacher training	2%	1%	2%	2%	2%	1%	**1%**
TVET	12%	17%	14%	13%	11%	10%	**13%**
higher	18%	14%	15%	13%	12%	11%	**13%**
non-formal	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	**0.1%**
STR	2%	1%	1%	1%	0.5%	0.4%	**1%**
institutional support	3%	4%	4%	4%	4%	3%	**4%**

Table A4 – 'Realistic' scenario funding gap

(RWF millions)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	**TOTAL 2013-18**
Total expenditure	**232,303**	**288,112**	**271,902**	**297,133**	**322,554**	**368,982**	**1,548,683**
Of which recurrent	188,001	211,337	228,283	254,514	270,945	313,960	**1,279,040**
Of which capital	44,302	76,775	43,619	42,619	51,609	55,021	**269,644**
Total resources available	**232,303**	**265,457**	**269,100**	**285,726**	**307,695**	**331,655**	**1,459,634**
Funding gap	**0**	**22,655**	**2,802**	**11,407**	**14,858**	**37,327**	**89,049**
Funding gap as % of expenditure		8%	1%	4%	5%	10%	**5.7%**

Should resources be less than projected, prioritisation of expenditure will be required. This prioritisation will be based on the principle of protecting investments in quality of education as best as possible, with the greater balance of cost savings coming from slowing the pace of system expansion. The rationale behind this is that there is less value in expanding the system when a decent quality of education cannot be achieved.

The following table summarises some of the key targets which will be adapted should resources prove insufficient:

Table A5 – Target comparison between 'optimistic' and 'realistic' spending scenarios

	Baseline	'Optimistic' scenario target 2018	'Realistic' scenario target 2018
S3 to S4 average transition rate	98%	98%	92%
TVET annual enrolment growth rate	N/A	10%	5%
VTC qualification level continuation rate	33%	60%	50%
TVET school fee as % of recurrent operating and exam costs	100%	50%	60%
Primary teacher pupil ratio	59	42	45
Textbook Pupil ratio	2.5	1	1.2
Teacher Development Fund – proportion of teachers supported	0.5%	5%	4%
Proportion of primary students with access to science kits	4%	75%	50%
Proportion of secondary students with access to science kits	43%	100%	80%
OLPC – Ratio of P4-6 students per laptop	4	5	5
Ratio of secondary students per computer	165	20	25
Proportion of secondary schools with connectivity	2%	100%	80%
Pre-primary annual public enrolment growth rate	0%	20%	13%
Proportion of students with special needs supported with equipment	2%	100%	70%

Notes:

Transition rate for S3 to S4 includes students who continue in academic education and who enter TVET schools.
TVET annual enrolment growth rate is the percentage growth in enrolment as a proportion of entire TVET non-diploma students in both public and private TVET schools.

VTC continuation rate is the proportion of students who continue from one qualification level to the next following the introduction of the new qualifications framework.
TVET school fee is set as a % of TVET school running costs, which include utilities, tools, spare parts, maintenance and repairs and consumables, as well as examination costs. It does not include trainer salary costs. At present there is no budget for supporting TVET school running costs, implying that all costs are covered from fees. With introduction of 12YBE an element of cost-sharing between pupils and government is targeted. The costs not covered by fees will be covered by a capitation grant provided to both public and private TVET providers.
Teacher Development Fund will support good performing teachers with bonuses such as the provision of cows, laptops, motorbikes to rural teachers and tuition fees to teachers' children.
Pre-primary public enrolment growth rate is calculated as a proportion of total enrolment in pre-primary including private provision.

7.3 LIST OF ONGOING AND PLANNED PROJECTS IN THE SECTOR

Institutions	*Projects*
MINEDUC CENTRAL	
	Establishing ECD model centers
	Support to Skills development in Science and Technology project
	Teachers' Cooperatives
REB	
	One Laptop Per Child Project
	School Construction Project
	Science and Technology project
	Strengthening School-Based Collaborative Teacher Training (SBCT) Project
UR	
	Conservation Biology Education project (UR)
	Supporting the National University of Rwanda school of Public Health to improve quality of HIV/AIDS and Health Service Delivery in the Republic of Rwanda
	Single Stream of funding SSF/HIV/AIDS 2010-2013
	Training health researchers into vocational excellence(THRRIVE)
	MIS-Rockefeller foundation (UR)
	Establishing a Center of Excellence for HSS
	ACBF Project & Edulink projects (UR)
	Capacity building in Public Health
	Healthy, environmental change and adaptive capacity; mapping examining and anticipating future risks of water-related vector borne diseases in eastern Africa
	Great Lakes Media Centre(UNR)
	To promote professional social work education and practice to more effectively
	Strengthen the capacity of the University of Rwanda.
	Strengthen the capacity of the University of Rwanda to provide equality education ,research ,consultancy and services that meet labour market requirements and support suitable environmental social economic development of Rwanda
	GIS Software site license and management support
	To raise HIV awareness in high learning institutions of CASRN contribute towards social development and poverty reduction in achieving the Millennium Development Goals in East Africa
	To support Research training
CAVM	
	Classroom construction
	Construction and equipping multi-purpose hall at ISAE
	Open field, soil mechanics, engineering & molecular biology plant & pathology laboratory construction
	Agricultural mechanisation laboratory
	Construction of students hostels
	Construction of a slaughter house
	Welding, fitting, carpentry, smiling, drilling , lather , wood technology workshops

	Construction of automobile Centre
	Construction of fish ponds, facilities for fingerlings production
	Construction of Biogas Plant
	Building and equipping a guesthouse at Busogo campus
	Building and equipping a staff canteen
	Rehabilitating playgrounds and putting in place new ones
	Store extension
	Removing asbestos roof and replacing it with iron sheets
	Construction of underground Irish potato storehouse
	Construction of irrigation system
WDA	
	Skills development project (SDP)
	Adolescent girls` initiative
	Programme me d'appui à la formation
	IPRC Kigali Master Plan and training hotel
	Kuwait fund expansion of IPRC Kigali education facilitation, construction and equipment
	Musanze TVET School in collaboration with Chinese Government Nyaruguru TVET school in collaboration with World Vision of Rwanda
	Gishali police TVET
	IPRC South, Huye TVET School in collaboration with Ministry of Defence
	Adequate Infrastructure in place
UMUTARA POLYTECHNIC	
	Improving students software development skills
	Innovative farm and livestock developed skills identification
	Innovative Breeding And Reproduction Management To Increase Milk Production In The Eastern Region
	Maize Intensification Extension project
	Construction Library & laboratory equipment
	Construction and institutional
	Innovative Support to Girinka Beneficiaries To Increase Milk Production
	Milk recording system
	ICT Capacity building
	Community Development Center and ICT Center
IPRC	
	Expansion and Development of IPRC Project
	Establishment of Training of Trainers Centre (ToTs) supported by KOICA
KAVUMU COLLEGE OF EDUCATION	
	Project KCE Weekend holiday A1 Project.
TUMBA COLLEGE OF TECHNOLOGY	
	Strengthening the Capacity of Tumba College of Technology, supported by JICA
IRST	

	Upgrading the IRST laboratory of Bioethanol as a center of excellence of Rwanda in Biofuel production
	Equipping the newly built Reference Laboratory comprising 7 Laboratories of Physics, chemistry, Biology, Microbiology, Biotechnology, Pharmacy and Civil Engineering.
	Pharmaceutical Incubation Centers (i.e. Various human medicines)
	Laboratory Construction
CE	
	Project for increasing the Library books at KIE
	KIE- Laboratory Equipment
	KIE- Increasing Library Books
	Laboratory Equipment Project at KIE
KIST	
	Landscaping
	Campus girls hostel
SFB	
	Laboratory Equipment
	Construction & equipment (learning complex)
RUKARA COLLEGE OF EDUCATION	
	Construction of Laboratory & Library