

# **BASELINE STUDY REPORT**

TVET and Higher Education for Boosting Road  
Infrastructure Development and Growth of Energy  
Services Project (THE BRIDGES Project)

Funded by the EU – implemented by CARE and TU/e

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## ACKNOWLEDGEMENTS

The development of this baseline study aimed at establishing a baseline measurement for the BRIDGES project objectives, results and indicators which will be used as benchmarks against which progress of achievements, as well as impact, effectiveness and efficiency of the project will be measured and evaluated using verifiable indicators presented in the logical framework during the project implementation phase. I would like to acknowledge the active engagement of stakeholders. In particular, I would like to acknowledge the following partners:

- CARE International staff (Garowe, Mogadishu and Somaliland)
- Ministry of Education (Deputy Director of Examination, MoE&HS Puntland, Quality Assurance Director, MoE&HS Puntland, Assessor, MoE&HS Mogadishu, Director of TVET and non-formal education, MoE&HS Mogadishu, TVET Director, Somaliland, Deputy Examination Board, MoE&HS Somaliland, Second Deputy Secondary Teachers, MoE&HS Somaliland, and Second Deputy Secondary Teachers, MoE&HS Somaliland)
- TVET trainers – energy and road infrastructure courses (Galkacyo Vocational Training Centre, Kismayo Technical Institute, and Hargeisa Technical Institute)
- TVET trainees – Energy and Road Infrastructure (Hayle Barise Technical Development Centre, Mogadishu; Galkacyo Vocational Training Centre; HAVOYOCO Vocational Training Centre, Somaliland; Hargeisa Technical Institute; and Kismayo Technical Training Institute)
- TVET Directors (Galkacyo Vocational Training Centre, Kismayo Technical Institute, and Hargeisa Technical Institute)
- Private sector (Puntland Highway, Deputy Director, Solar Energy Consulting Company in Somalia, Deputy Director General, Somalia Chamber of Commerce and Industry, General Manager, Gollis Energy Company, Chief Technical Officer, Sompower, Managing Director, and Allied Development and Construction)
- Gollis University staff (Lecturer - Engineer and Dean of Engineering School, Lecturer – Energy, Gollis University, Lecturer – Energy, and Gollis University).

## LIST OF ACRONYMS

ADRA	Adventist Development and Relief Agency
AfDP	Africa Development Bank
BRIDGES	Boosting Road Infrastructure Development and Growth of Energy Services
BTI	Burao Technical Institute
CBET	Competence Based Education and Training
CBT	Competency based Training
EU	European Union
IBT	Institute Based Training
EBT	Enterprise Based Training
ICT	Information and Communication Technology
IDPs	Internally Displaced Persons
FGDs	Focus Group Discussions
GAVO	General Assistance and Voluntary Organisation
GTI	Garowe Technical Institute
GVTC	Galkacyo Vocational Training Centre
HAVOYOCO	Horn of Africa Voluntary Youth Committee
HE	Higher Education
HTI	Hargeisa Technical Institute
KII	Key Informant Interviews
KTI	Kismayo Technical Institute
MoE&HS	Ministry of Education and Higher Studies
NEPCO	National electric Power Company
NGOs	Non-governmental organisations
PEPP	Puntland TVET Policy
PHA	Puntland Highway Authority
PV	Photovoltaic
RDA	Roads Development Agency
SECCO	Solar Energy Consulting Company
SNEP	Somalia National Education Policy
SPSS	Statistical Package for Social Scientists
ToR	Terms of Reference
TVET	Technical Vocational and Education Training
TVQA	Technical and Vocational Qualification Authority
TVQF	Technical and Vocational Qualification Framework
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
VQA	Vocational Qualifications Authority
VQF	Vocational Qualifications Framework

## EXECUTIVE SUMMARY

### ***Introduction***

CARE International commissioned a consultancy to conduct the BRIDGES baseline study in Mogadishu, Garowe, Galkacyo, Kismayo and Hargeisa Districts in December 2017. The main objective of the baseline study was to establish a baseline measurement for the BRIDGES project objectives, results and indicators which will be used as benchmarks against which progress of achievements, as well as impact, effectiveness and efficiency of the project will be measured and evaluated using verifiable indicators presented in the logical framework during the project implementation phase. The specific objectives of the baselines study were:

1. Determine the baseline status on all indicators as established in the project's log-frame
2. To review the relevance, feasibility and targets of indicators established in the project's log-frame and provide recommendations on possible improvements
3. To provide a baseline understanding of the market/employment situation

The baseline study employed both qualitative and quantitative data collection including participatory methodologies. The qualitative data collection methods included focus group discussions, key informant interviews, and observations. The quantitative data collection entailed conducting household interviews. Desk review was also conducted. Information generated from both the primary and secondary sources was triangulated in order to test the validity of the results from these sources. These results were used to generate findings, key recommendations and conclusions for this baseline survey.

### ***Key findings***

#### **Baseline status on indicators as established in the project's log-frame**

**Overall Objective:** to promote economic growth through infrastructure development, employment creation and sustainable natural resources management.

1. Increased labor productivity

There is low labor productivity among TVET graduates; this is because a number of TVET graduates do not have adequate skills to meet market needs. This hinders their ability to perform some tasks at work.

2. Changes in socio-economic livelihoods of graduates

There are limited socio-economic livelihood opportunities for TVET graduates. A number of TVET graduates that get placements in the companies, are employed in the lower cadre that attracts low payment thus hindering them from accessing improved socio-economic livelihoods. Likewise, TVET graduates who have ventured in self-employment do not generate adequate income.

The overall objective indicators have been measured through participatory study – focus group discussions and key informant interviews with the private sector.

**Specific objective:** to improve access to markets and social services, improve access to energy services and enhance sustainable use of natural resources through an increased availability of skilled human resources for Somalia/Somaliland's road and energy sectors.

a) Availability of certificate, diploma and degree courses in road/energy sectors

The road infrastructure and renewable energy courses are relatively new in the Institutes; this is based on the key informant interviews with TVET trainers, TVET Directors and the private sector. The focus group discussions with TVET trainees and private sector also established that road infrastructure and renewable energy are relatively new courses in the institutes. Certificate courses in electricity exists but not renewable energy - solar. Electricity courses at certificate levels are offered in a number of vocational training institutes – Hayle Barise Technical Development Centre, KTI, HTI, GTI and GVTC. Courses on road infrastructure are not offered in TVET centres. There are no diploma courses on road infrastructure and energy sectors in TVET centres. In higher learning institutions such as Gollis University, road infrastructure and energy related courses are offered at diploma levels. Currently, there is no vocational training institute offering road infrastructure and energy sector courses at degree levels. Gollis University offers Civil Engineering course at the degree level but in formal education.

b) Training institutes offering CBT and; trainers/lecturers trained

The CBT training approach is not in use in the public TVET Institutes; none of the trainers in the TVET Institutes are trained on CBT approach, as reported in the key informant interviews with TVET trainers. In the private sector, a total of 6 staff from Solar Energy Consulting Company in Somalia (SECCO) based in Garowe, Puntland have been trained on CBT approach. In the higher learning institution - Gollis University uses the CBT approach in training. A total of 19 lecturers from Gollis University have been trained on CBT approach; 4 lecturers from the Department of Renewable Energy Institute and 15 lecturers from the Engineering Department.

c) VQF with assessment and certification functions

Puntland and Somaliland have a VQF though not operational – the VQF was developed by the Ministry of Education and Higher Education in 2011 (Somaliland), however for Puntland this study did not establish when the VQF was developed; the MoE&HS do not have assessment and certification functions. Jubaland and Benadir Region (Mogadishu) do not have a VQF in place. The MoE&HS in Benadir Region (Mogadishu) is relatively new and is still under development. There are no trainees assessed and certified based on the VQF across the four regions – Benadir Region, Jubaland, Puntland and Somaliland.

d) Private sector participation in VQA and TVET system

The participation of the private sector in TVET system is currently limited. In ideal situation the private sector would be expected to participate in curriculum development, internship programs, placement services and advice to the TVET training providers on the changes in the labor market. However, currently the private sector participation in TVET is limited to provision of internship programmes to TVET trainees, however one company – Somtel that is involved in curriculum review. The private sector is not involved in VQA.

e) Employment rate of graduates on completion

The TVET graduates access jobs; some start their own business ventures, while some get placement in the private sector. However, data on the employment rate is very elusive; employment rate is estimated at 70%, some say 75% access jobs, 50% start their own jobs, while 20% join production units such as auto mechanic and phone repair shops, as reported in the focus group discussions and key informant interviews with the private sector. This data has not been validated since no study has been conducted to establish employment rate of TVET graduates.

f) Perception of employers of trainees on links between skills acquired and productivity gains

Employers' perception on TVET graduate skills is very low; they literally do not recognize the skills of TVET graduates, this is based on the focus group discussions and key informant interviews conducted with the private sector. A number of companies that employ TVET graduates recruit them as unskilled labor since they do not meet market standards. The competence of the TVET graduates is further compounded by lack standardization in the curriculum, that reduces their levels of exposure to real work environment since a number of TVET Institutes do not have effective linkages with the private sector and as well do not have adequate equipment's and machines for practical sessions. Due to lack of adequate practical experience, the TVET trainees basically lack job skills and work ethics. The courses offered in the TVET institutes are as well short term that does not enable TVET trainees acquire adequate skills to enable them compete effectively in the labor market. This lowers their productivity at work since they are not able to deliver at optimal.

**ACCESS TO PRIVATE SECTOR-LED AND COMPETENCE-BASED SKILLS DEVELOPMENT OPPORTUNITIES LINKED TO ROAD INFRASTRUCTURE AND ENERGY SERVICES FOR YOUTH**

a) Trades identified using Labor Market Survey

Companies do not have the tendency of conducting Labor Market Surveys to identify trades. This baseline study established that it is only SECCO that conducts Labor Market Surveys, and the company identified 2 trades based on the LMS – gap in solar system; solar installation and solar panels and skills gap in solar energy. Based on these gaps, SECCO initiated the solar installation in households and sale of solar panels. SECCO as well started a TVET Institute to train the youth in solar energy skills. Other companies such as Gollis Energy, Sompower and NECSOM do not normally conduct Labor Market Surveys.

b) Employers participating in training process (design stage to employment)

A total of 16 of employers are participating in the training processes; they are offering internship to a number of TVET trainees. These private sector companies include: Allied Development and construction, Sompower, Gollis Energy company, SECCO, Jazira construction company, Beco Company, Mogadishu power company, Heenko construction company, Sompower company, RDA, Gaar construction company, Bilan construction company, Bare construction company, Somtel, Dhoof and NEPCO. However, Somtel has additional responsibility as they are also involved in TVET curriculum review.

c) Trainees trained in road/energy sectors using CBT approach

The CBT approach is not fully adopted in the TVET centres; none of the trainees in the public TVET centres - Galkacyo Vocational Training Centre, Kismayo Technical Institute, Hargeisa Technical Institute and Garowe Technical Institute is being trained using the CBT approach. The draft curriculum for road infrastructure and energy courses reflects CBT approaches though these curriculums have not yet been fully adopted in the VTCs<sup>1</sup>. However, SECCO a private TVET centre in Garowe, Puntland has a total of 20 students undertaking solar energy courses and they are being trained using CBT approach. This shows how valuable the TVET is to the private sector and therefore more effort should be put in the training to improve on the quality of TVET graduates. This practice should be adopted in the public TVET centres to increase the effectiveness of TVET courses so as to make the TVET graduates more competitive in the labor market.

d) Trainees trained through Dual Mode Approach

The dual mode training approach is not applied in the public TVET centres; none of the trainees in these centres is trained through the dual mode training approach. However, in the private sector, 20 trainees from SECCO were being trained through the dual mode approach. SECCO company provides practical training sessions to its trainees. SECCO has a company and a TVET training institute. The students undertake TVET classes in the training institute and as well they are taken for a training in the company. The EBTVET training approach is adopted in TVET centres; TVET trainees are sent to companies for internship programmes. In the vocational training centres, the centres have both training rooms for theory classes and the workshop rooms. The Institutes have a workshop for electricity classes that can as well be used for solar energy courses, by installing equipment's for solar. However, the institutes do not have a workshop for road infrastructure courses. The available workshops in the institutes are however, very small, coupled with old equipment's.

e) Trainees assessed and certified based on VQF

The Ministry of Education and Higher Studies in Puntland and Somaliland have Vocational Qualification Frameworks in place though not operational. However, the MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have VQF in place. The TVET students in these study sites are not assessed and certified based on VQF.

## **CAPACITY BUILDING OF TRAINING PROVIDERS, LECTURERS AND TVET TRAINERS**

a) CBT packages for road and/or energy developed

A total of 3 CBT packages – curricular for energy were developed in 2011 by ADRA for MoE&HS in Somaliland and Puntland. MoE&HS Somaliland as well has technical books on road infrastructure and energy courses from Kenya Technical Institute. CARE International in consultation with the MoE&HS in Puntland and Jubaland have developed a curriculum for road infrastructure and energy courses that are already in use in GVTC and Kismayo Technical

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<sup>1</sup> At the time of this study, CARE International had shared a draft curriculum for road infrastructure and energy courses to Galkacyo Technical Vocation Centre.

Institute, however these curriculums are yet to be validated. Hargeisa Technical Institute (HTI) has a curriculum for electricity courses (but not for solar energy). The MoE&HS in Benadir Region (Mogadishu) does not have a curriculum for Road Infrastructure and Energy courses (solar system). The MoE&HS in Benadir Region (Mogadishu) has a curriculum for electricity courses. Garowe Vocational Training Centre has a CBT package for solar energy it comprises – solar installation, solar panels, identification of tools, safety and lesson plan. Gollis University offers the following courses in energy – solar water pumping, solar design, marketing – entrepreneurship courses, solar installation, electricity measurement, statistics, probability and calculus. It is also worth noting that the private TVET providers use their own curriculum that is project based and different from the curriculum provided by the MoE&HS.

b) Number of trainers trained on CBT in road and energy

This baseline study established that none of the trainers in the vocational training centres - Galkacyo Vocational Training Centre, Kismayo Technical Institute, Hargeisa Technical Institute, HAVOYOCO and Hayle Barise Technical Development Centre, and Garowe Technical Institute have been trained on CBT approach. In the private sector, a total of 6 staff from Solar Energy Consulting Company in Somalia (SECCO) based in Garowe, Puntland have been trained on CBT approach. SECCO offers training on Solar Energy to TVET trainees. The staff have been trained on solar water pumps and solar street lighting. SECCO staff were trained by Adventist Development and Relief Agency (ADRA), United Nations Children's Fund (UNICEF), and Davis & Shirliff in Kenya.

c) Lecturers trained on CBT

In the vocational training centres, no lecturer has been trained on CBT approach. In the higher learning institutes, a total of 19 lecturers from Gollis University have been trained on CBT approach; 4 lecturers from the Department of Renewable Energy Institute and 15 lecturers from the Engineering Department. The lecturers have been trained by Gollis University on CBT approach. There are a total of five lecturers that undertake students in the renewable energy courses in the Institute, four of these lecturers have been trained on CBT approach.

d) Number of assessors trained on CBT approach

In the MoE&HS in Benadir Region (Mogadishu), Jubaland, Puntland and Somaliland no assessor has been trained on CBT approach.

e) Number of VQA staff trained on CBT management

Across the study sites, none of the VQA staff have been trained on CBT management.

f) VQF coverage

A 3 level VQF exists, that is certificate Level 1, 2 and 3. There is need to expand the levels to Level 4 and 5. This will allow those who wish to pursue higher education to progress.

### **VOCATIONAL QUALIFICATION FRAMEWORK**

a) Meetings, workshops to consult and/or explain the VQF

No meetings or workshops have been conducted to consult and/or explain the VQF.

b) VQF Implementation Manual developed

The Somaliland and Puntland MoE&HS have VQF Implementation manuals. The MoE&HS in Mogadishu and Jubaland do not have VQF implementation manuals in place. MoE&HS in Mogadishu is relatively new and is yet to establish itself.

c) Availability of accreditation manuals

The Somaliland MoE&HS has an accreditation manual. Puntland MoE&HS as well has an accreditation manual. Galkacyo Vocational Training Centre is accredited by the MoE&HS in Puntland. Garowe Vocational Training Centre is accredited by the MoE&HS, Puntland and the centre has an accreditation manual. Hayle Barise Technical Development Centre in Mogadishu is a private TVET Institute and it is accredited. The MoE&HS in Benadir Region (Mogadishu) does not have accreditation manual. TVET programmes in Benadir Region (Mogadishu) are largely managed by the NGOs both national and international. Kismayo Technical Institute has accreditation manual.

d) Availability of assessment and certification guidelines

The Somaliland and Puntland MoE&HS have assessment and certification guidelines. The MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have assessment and certification guidelines.

**Objective 2: To review the relevance, feasibility and targets of indicators established in the project's log-frame and provide recommendations on possible improvements**

#### **Relevance, feasibility and targets of indicators established in the project's log-frame**

The indicators and targets stipulated in the log frame are relevant and potentially attainable except for two targets that require review. In terms of relevance, the number of trades identified using labor market surveys helps in the design of curriculum content in order to impart skills and knowledge relevant and responsive to labor market needs. In addition, the trades identified are supposed to be adequate in terms of providing the market labor demands.

The number of trainees who undergo CBT either institute or enterprise based increase depending on whether the graduates gain profitable employment or not. Consequently, the

assessment and certification of trainees must be based on a VQF which is acceptable nationally or internationally to attract the confidence of employers. The diversity in which CBT courses are developed enables more access to training opportunities, especially for the vulnerable and disadvantaged groups, including girls and women. This calls for more trainers, lecturers and assessors to be trained and brought on board.

Manuals and guidelines that explain the VQF implementation, accreditation, assessment and certification may then be developed, guided by sound policy.

The indicators set out in the log frame are therefore appropriate if they are matched with achievable targets. However, two targets require review; 95% of graduates gain employment within 3 - 6 months after completion. This target is too high; it needs to be reviewed to make it achievable. The number of trainees to be involved in the road infrastructure and energy sector courses should as well be reviewed. The project targets 450 (30% women) trainees trained in through CBT approach by the end of project. Based on the findings of the baseline study, very few females are enrolled in these courses and as a result it might not be possible to achieve the target of 30% for women enrollment.

### **Objective 3: To provide a baseline understanding of the market/employment situation**

#### **Baseline understanding of market/employment situation**

The baseline study established that there is a weak linkage between the TVET Institutes and the private sector; this has contributed to mismatch of skills among the TVET trainees and consequently this has led to inadequate placement opportunities among the TVET graduates upon completion of their courses. For the TVET graduates who are lucky to join the labor market, in most cases start at the lower carder jobs within companies, since management of these private sector companies do not have trust in the capability of the TVET graduates as a result they cannot trust them with positions that require major responsibilities.

TVET trainees upon completion and graduation from the TVET Institutes get placement, however the placement process is gradual considering the limited opportunities within the job market and the competitiveness within the labor market. Some TVET graduates upon successful completion of their courses have managed to start their own jobs.

#### ***Recommendations***

The key recommendations derived from the BRIDGES project include:

##### **a) Recommendations at the private sector level**

**Linkages with the labor market:** The study established that the labor market linkages are not fully developed in the study sites at the moment. Thus, the need for TVET Institutes to be encouraged to strengthen linkages with the private sector to ensure that they offer courses that have demand in the labor market. Proper internship programmes need to be developed to ensure that TVET trainees acquire relevant skills from the programme. Likewise, the private sector should be involved in all stages of the training to promote effectiveness of the TVET training programme. At the time of this baseline study, the involvement of the private sector

was limited to provision of internship programmes except for only one private sector organization – Somtel that is involved in both internship and curriculum development.

#### **b) Recommendations at the Ministry of Education and Higher Studies level**

**Labor skills market survey and other assessments:** The baseline study established that labor market surveys are rarely done, this has contributed to unavailability of data on TVET graduate employment rates. Likewise, lack of market surveys has also contributed to mismatch of skills in the labor market. Therefore, the MoE&HS need to regularly conduct labor market surveys to determine changes in the private sector. This would aid in the revision of the curriculum to meet the market standards. Tracer studies should also regularly be conducted to determine employment rate and challenges that TVET graduates face and the outcomes of these studies should be factored in the training process to improve on TVET efficiency.

**Career guidance, counseling and information:** The baseline study established that there are very few girls/women enrolled in road infrastructure and renewable energy courses; this is contributed partly by cultural factors and lack of adequate information on the importance of participation of girls/women in the BRIDGES courses. Therefore, it is important that the youth need to be guided, encouraged and provided with information on TVET courses. Information on training places, programmes, costs and labor market should be fed into career guidance and counseling. Children at primary and secondary levels need to be encouraged and guided to undertake science subjects to enable have confidence to undertake road infrastructure and energy courses. Girls specifically should be encouraged to enroll in TVET and undertake road infrastructure and energy courses.

**Establishment and making TVET systems operational:** The baseline study established that in Puntland and Somaliland there are VQF though not operational, while Jubaland and Benadir Region (Mogadishu) do not have a VQF in place. Therefore, it is prudent to strengthen the VQF in Puntland and Somaliland to enable them to be operational, while in Jubaland and Mogadishu, it is important to establish the VQF. This is important as it will enable TVET trainees in the BRIDGES project to be assessed and certified based on the VQF.

**Training approaches:** The baseline established that the CBT and dual mode training approaches are not in use in the public TVET Institutes. Consequently, none of the TVET trainers have been trained on CBT approach, thus the need to introduce the training programs in the TVET Institutes to enable TVET trainees to acquire adequate competence. TVET trainers as well need to be trained on CBT approach to enable them deliver the TVET programme in the respective courses – road infrastructure and renewable energy courses diligently.

**Labor productivity:** The study established that there is low labor productivity among TVET graduates since they do not have adequate skills that meet the labor market demands. Therefore, it is important for the BRIDGES project to consider upgrading the qualification levels of TVET graduates by introducing Diploma and Degree certificate courses for the road infrastructure and renewable energy courses to improve on the skills of TVET graduates to enable them become more competitive in the labor market.

**TVET courses:** The study established that there are energy courses - electricity offered in the TVET Institutes, however renewable energy – solar is not offered in the TVET Institutes. In addition, road infrastructure courses at the time of the baseline were not being offered in the TVET Institutes. Thus, the need to introduce these courses in the TVET Institutes to meet the current labor market demands.

**Governance of the sector:** A number of skills training providers both national and international are engaged in the TVET sector. However, their contribution in the TVET sector is not systematically regulated. The contribution of stakeholders in TVET need to be systematically regulated, and guided by sector-wide oriented government policies and effective quality assurance measures and management, including reporting standards. TVET VQF, policies, assessment and certification guidelines need to be standardized in the country for effective administration of TVET. TVET needs to adopt international best practice to improve on quality service delivery. Curriculums need to be developed and implementation adopted in all TVET Institutes.

**Establish a training centre for trainers, directors and providers:** Currently there is no training institute for TVET trainers, directors and providers in Somalia. A number of trainers training in the TVET centres are equally not trained in pedagogy. Therefore, it is important to establish a training centre for that will specifically train trainers, managers and providers in pedagogy and curriculum implementation, management of institutions and governance.

### **c) Recommendations at CARE International level**

**Advocacy on TVET:** Community members have a negative attitude towards TVET; it is mostly considered relevant to persons who have failed and have no option of advancing their education. Energy and road infrastructure courses are mostly perceived to be for male gender. There is a need to sensitise the community on the need for everyone to access TVET regardless of gender, class, ethnicity, disability, or any other social factors. Likewise, girls and/or women need to be encouraged to undertake courses such as energy and road infrastructure since there are diverse areas of specialization that girls can undertake including marketing of energy and road infrastructure products.

**Vocational Training Institute Management and Instructor's Training:** The current Instructors in energy and road infrastructure sectors have competence in their specific areas, however, they do not have the pedagogy skills to impact the required knowledge to the TVET trainees. In addition, some TVET trainers were trained before the collapse of the central government, since then there have been tremendous changes in TVET in the country. Therefore, it is recommended to conduct a capacity building sessions for the Instructors to help improve on their capacities to transfer knowledge to the TVET trainees. Standardised policies for teacher training (training of instructors) need to be developed. Likewise, the Instructors need to be trained on TVET training approaches both the dual mode and competency-based training approaches to improve on service delivery as well as curriculum administration. The capacity of TVET centre managers need to be strengthened to improve on the effectiveness in management of the TVET centres.

## **Conclusion**

Technical and vocational Education and Training is an indispensable aspect of the educational system of Somalia. This is attributed to the fact that unlike other forms of education, TVET is aimed at acquisition of practical and applied skills as well as basic scientific knowledge for the development of the country. TVET is an instrument of self-employment to the individual who has been trained not only by subject matter inhibition but who, through experimental learning, perceives it as a real life solution to problems and can make use of their initiative in the labor market. Therefore, the BRIDGES project provides TVET trainees with an opportunity to acquire relevant skills in road infrastructure and renewable energy that would enable them participate in economic development. The project as well provides career progression that enables TVET trainees to acquire adequate and relevant skills that is anticipated would enable them compete effectively in the labor market and improve their chances of employability.

## 1.0 INTRODUCTION

### 1.1 Background

CARE Somalia/Somaliland received funding from the European Union to improve technical skills of the youth in roads and energy service sectors. The overall objective of the project is to promote economic growth through infrastructure development, employment creation and sustainable natural resources management. The specific objective is to improve access to markets and social services, improve access to energy services and enhance sustainable use of natural resources through an increased availability of skilled human resources for Somalia/Somaliland's road and energy sectors.

The TVET and Higher Education for Boosting Road Infrastructure Development and Growth of Energy Services (BRIDGES) project aims to support the Government of Somalia/Somaliland plans to enhance inclusive economic growth and reduce poverty. The BRIDGES project is anticipated to take 36 months. Given the increasingly dynamic employment market, the project supports the introduction of a *private sector-led and a high quality competency-based* skills development approach facilitated by innovate and integrated internationally bench-marked frameworks, to increase the relevance of the skills training offered and to ensure an optimal absorption of the (new) skilled workforce into the labor market. To attain these objectives, first national and local capacities in the design, management and implementation of skills development and employment promotion program in TVET and HE linked to the road infrastructure and energy services must be strengthened and training qualifications need to be brought to a higher quality and existing frameworks need to be aligned with standardized norms.

### 1.2 Purpose of the baseline study

This baseline study establishes a baseline measurement for the BRIDGES project objectives, results and indicators which will be used as benchmarks against which progress of achievements, as well as impact, effectiveness and efficiency of the project will be measured and evaluated using verifiable indicators presented in the logical framework during the project implementation phase. A clear study methodology, including tools, were developed for the study.

The specific objectives of the baselines study were:

1. Determine the baseline status on all indicators as established in the project's log-frame
2. To review the relevance, feasibility and targets of indicators established in the project's log-frame and provide recommendations on possible improvements
3. To provide a baseline understanding of the market/employment situation

Specifically, the study looked into the following issues:

**A) Project Design**

- Appropriateness of the project design against the ground reality
- Assessment of the targets set in the log-frame and determining their appropriateness and make recommendations where necessary

**B) Current TVET Situation**

- Studied TVET socio-economic environment and determined the current status, future direction and policy reforms
- Reviewed and analysed the current practice of TVET including policies, curriculum frameworks, providers, programs and career path progression, quality and cost recovery strategies
- Carried out an analysis of the potentiality of renewable energy and roads sectors for growth, linkages with TVET training and employment.

**C) Stakeholder and community engagement**

- Established the key risks to project implementation, including the stakeholder's limitations to participation, with the intention of establishing an entry, engagement and exit strategy
- Examined the appropriateness of the strategy in targeting marginalized groups such as the IDPs, minority groups, women and girls from vulnerable households, and the overall engagement of women the project implementation and
- Identified inherent capacities that require strengthening and proposed the best model for capacity building.

**1.3 Programme Design and Expected Results**

**Overall Objective:** to promote economic growth through infrastructure development, employment creation and sustainable natural resources management.

**Overall objective indicators**

1. Increased labor productivity
2. Changes in socio-economic livelihoods of graduates

**Specific objective:** to improve access to markets and social services, improve access to energy services and enhance sustainable use of natural resources through an increased availability of skilled human resources for Somalia/Somaliland's road and energy sectors.

**Specific objective indicator**

1. Availability of certificate, diploma and degree courses in road/energy sectors
2. Training institutes offering CBT and; trainers/lecturers trained

3. Vocational Qualifications Framework (VQF) with assessment and certification functions
4. Private sector participation in VQA and TVET system
5. Employment rate of graduates on completion
6. Perception of employers of trainees on links between skills acquired and productivity gains

The project has **three result areas** which are:

**Result 1: Increased equitable access to private sector-led and competence-based skills development opportunities linked to road infrastructure and energy services for youth**

**Indicators**

- Number of trades identified using Labor Market Survey
- Number of employers participating in training process (design stage to employment)
- Number of trainees trained in road/energy sectors using CBT approach
- Number and/or share of trainees trained through “Dual Mode Approach”
- Number and/or share of trainees assessed and certified based on VQF

**Result 2: Strengthened capacities of training providers, lecturers and TVET trainers to deliver market-oriented skills training to meet the immediate and emerging labor market demands within road infrastructure and energy services**

**Indicator**

- Number of CBT packages for road/energy developed
- Number of trainers trained on CBT in road/energy
- Number of lecturers trained
- Number of assessors trained

**Result 3: Skills delivery, assessment and certification standardized through further improvement and expansion of scope and coverage of Vocational Qualifications Framework**

**Indicators**

- Number of meetings, workshops to consult and/or explain the VQF
- VQF Implementation Manual developed
- Availability of accreditation manuals
- Availability of assessment and certification guidelines

**Note: The baseline values are provided in section 5.0 – Baseline indicators and targets set in the log-frame.**

#### **1.4 Challenges and study limitations**

1. Translators were used in the study hence the responses were dependent on how well they (translators) understood and translated the information between the audience and the consultant.
2. In Mogadishu, due to security regulations the consultant was not able to get out of the CARE International office compound to conduct interviews outside, however stakeholders were invited to the premises and interviews conducted. In addition, some stakeholders in Mogadishu who were randomly selected for the interviews could not be reached due to security reasons. However, this was averted by conducting telephone interviews by similar audience in Kismayo.

## 2.0 BASELINE STUDY METHODOLOGY

The baseline study was conducted from 14<sup>th</sup> to 28<sup>th</sup> December 2017<sup>2</sup>. Data collection was conducted in five regions including: Mogadishu, Kismayo, Garowe, Galkacyo and Hargeisa in Somalia.

### 2.1 Sample size

The sample size for the baseline study was calculated using the Fisher et al formula with the main objective of collecting data on the BRIDGES project baseline indicators among TVET trainees through 260 household questionnaires (**see table 1**). The study collected data through three focus groups including TVET trainees and the private sector. A total of 28 key informant interviews targeting government officials – MoE&HS TVET Directors, TVET Institute Directors, assessors, trainers, lecturers, university staff, CARE International staff, and private sector staff were also conducted (**see table 2**).

Table 1: Number of participants sampled for the quantitative data collection

No.	District	TVET Institute	Number of participants
1.	Mogadishu	Hayle Barise Technical Development Centre	68
2.	Galkacyo	Galkacyo Vocational Training Centre	87
3.	Hargeisa	HAVOYOCO	2
		Hargeisa Technical Institute	7
		Gollis University	26
4.	Kismayo	Kismayo Technical Institute	70
<b>Total</b>			<b>260</b>

Table 2: List of individuals and/or organizations interviewed

No.	List of individuals/organizations interviewed	Interview method	Number of respondents
1.	CARE International Program staff	Key Informant Interviews	3
2.	TVET Institute Directors	Key Informant Interviews	3
3.	University staff and lecturers	Key Informant Interviews	3
4.	Local governments – Ministry of Education – TVET Directors	Key Informant Interviews	2
5.	TVET Assessors	Key Informant Interviews	6
6.	TVET Trainers	Key Informant Interviews	5

<sup>2</sup> Appendix 2: Field work plan

7.	Private sector	Key Informant Interviews	6
8.	TVET trainees	Qualitative – FGDs	3
9.	Private sector	Qualitative - FGDs	1
10.	TVET trainees	In-person survey interviews	260

### **Sampling methodology**

A systematic random sampling methodology was used to select the respondents for the quantitative data collection. A total of 260 respondents participated in this baseline study. These respondents were distributed across the four participating districts<sup>3</sup>. The respondents were randomly selected from the population. The quantitative data collection was conducted by the study enumerators. The qualitative study was conducted by the consultant and CARE International staff employing purposive and quota sampling methodologies.

### **2.2 Data collection methods**

Data collection involved examination of secondary data, surveys, and participatory approaches such as focus group discussions, key informant interviews, observations, and household interviews<sup>4</sup>. Among the documents reviewed included the BRIDGES project proposal; competency based curriculums; National Development Plans; VQF implementation plan, Somaliland VQF; and Somaliland’s Education Sector Strategic Plan 2012 – 2016<sup>5</sup>. District level visits were completed in Mogadishu, Garowe, Galkacyo, and Hargeisa. The key activities during the district visits included interviews with CARE International staff, government officials – Ministry of Education TVET Director and assessors, TVET Institute Directors, TVET trainers and lecturers, the private sector, and the TVET trainees. Focus group discussions were held with TVET trainees and members of the private sector. Focus group discussions were moderated through a translator. In all of the interviews conducted, anonymity and confidentiality of the interviewees was guaranteed. The interviews were conducted with consent of the respondents in secure places.

### **Triangulation**

Data was collected from both primary and secondary sources. The primary data sources included focus group discussions, key informant interviews and in-person interviews. A discussion guide was used to collect information from the focus group discussions, while a structured key informant guide was used to collect information from the key informants. A questionnaire was used to collect information from in-person interview participants. Secondary data sources involved review of all the

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<sup>3</sup> Table 1

<sup>4</sup> Table 1 List of organizations and/or list of individuals interviewed

<sup>5</sup> Reference section

existing information on the project. Information generated from both the primary and secondary sources was triangulated in order to test the validity of the results from these sources. These results were used to generate findings, conclusions and key recommendations for this baseline study.

### **2.3 Data collection tools**

The data collection tools that were used in this baseline study included a key informant interview guide, a questionnaire, and a focus group discussion guide<sup>6</sup>. Data collection tools were developed after review of the literature and project documents shared by CARE International.

### **2.4 Data analysis**

Data and information obtained from interviews and examination of secondary data was organized and grouped under appropriate categories and themes. Processing data involved both manual tabulation as well as computer processing. Data collected from the key informants and the community members through the key informant guide and the focus group discussion guide was manually tabulated. Data collected from the students through the questionnaire was processed by use of the SPSS computer program. The computer processing involved data entry, data editing, sorting data, coding data, summarizing data, and converting data into more usable information.

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<sup>6</sup> Appendix 3 Guide

### **3.0 FINDINGS OF THE BASELINE STUDY**

This section presents the findings of the BRIDGES baseline study. The parameters of the study were based on the three objectives: SO1: Determine the baseline status on all indicators as established in the project's log-frame, SO2: Review the relevance, feasibility and targets of indicators established in the project's log-frame and provide recommendations on possible improvements, and SO3: Provide a baseline understanding of the market/employment situation. The baseline parameters were analysed based on the thirteen BRIDGES indicators:

- Number of trades identified using Labor Market Survey
- Number of employers participating in training process (design stage to employment)
- Number of trainees trained in road/energy sectors using CBT approach
- Number and/or share of trainees trained through "Dual Mode Approach"
- Number and/or share of trainees assessed and certified based on VQF
- Number of CBT packages for road/energy developed
- Number of trainers trained on CBT in road/energy
- Number of lecturers trained
- Number of assessors trained
- Number of meetings, workshops to consult and/or explain the VQF
- VQF Implementation Manual developed
- Availability of accreditation manuals
- Availability of assessment and certification guidelines

The baseline study documented the challenges of TVET and opportunities associated with renewable energy and roads sectors growth, linkages with TVET training and employment in the regions.

#### **3.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS – TVET TRAINEES**

##### **3.1.1 Sex disaggregation**

The study analyzed the distribution of respondents – TVET trainees in terms of being either male or female. A total of 25% (65) female and 75% (195) male respondents participated in the study (**see figure 1**). The relatively low participation of girls/women in the study is attributed to the fact that Somalia being a patriarchal society, courses such as road infrastructure and energy are considered as a preserve for male gender and as a result the female are not expected to undertake such courses. In addition, lack advocacy in the community in girls/women participation in road infrastructure and energy courses have also contributed to low enrollment of girls/women in these courses. Nonetheless, it was necessary for girls/women to participate in the study since TVET issues are a concern for both gender.

Figure 1: Gender of the respondents in percentage



### 3.1.2 Age and marital status of the respondents

The youngest respondent was 16 years of age while the eldest was 40 years. Majority of the respondents were youth aged between 0 - 20 years of age as reported by 46% (119) of the respondents, this was followed by 21 – 25 years of age as reported by 41% (107) of the respondents (**see table 3**). Of the total number of respondents who participated in this study 80% (208) were single, 17% (44) were married, 2% (5) were divorced, and 1% (3) of the respondents were widowed.

Table 3 Respondents ages

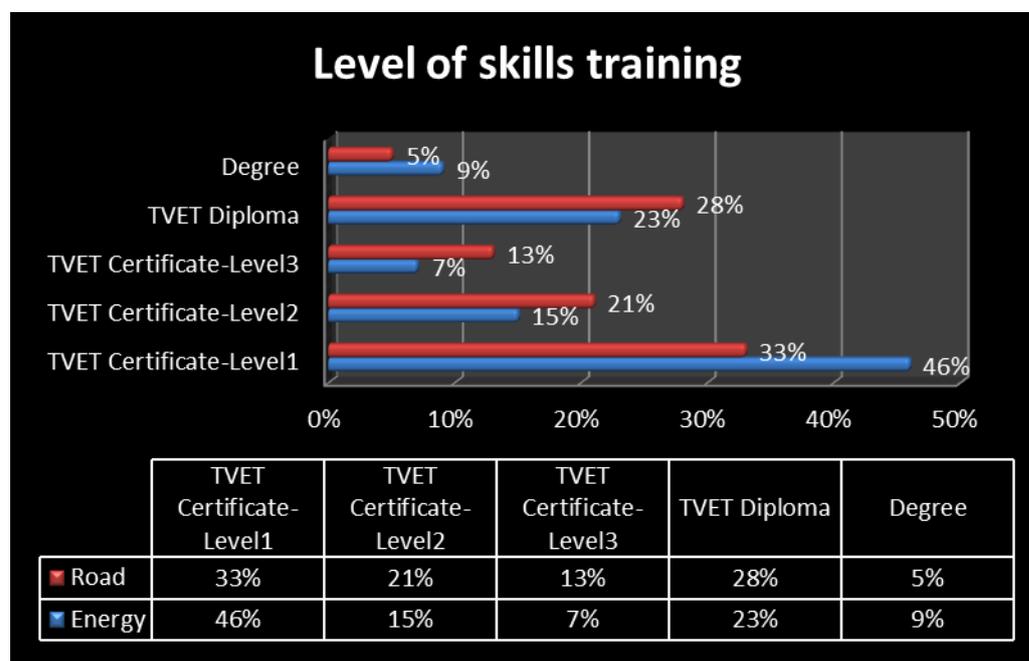
Age of the respondents	Frequency and percentages
16 – 20	46% (119)
21 – 25	41% (107)
26 – 30	10% (28)
31 – 35	2% (5)
36 – 40	1% (1)

### 3.1.4 Level of skills training

Most of the respondents – TVET trainees were in certificate level 1 as reported by 40% (104) of the respondents, diploma students were 27% (70), certificate level 2

were 18% (47), certificate level 3 were 10% (26), while students in degree courses were 5% (13) as illustrated in **figure 2**.

Figure 2: Level of skills training



### 3.2 PROJECT DESIGN

This section highlights the appropriateness of the project design; the current status of the targets set in the log-frame; and determining their appropriateness.

#### 3.2.1 Appropriateness of the project design

The inadequate road infrastructure in Somalia is a major constraint on the population's access to social services, such as education and health care, as well as a significant obstacle to the political integration of the country's territories. It is also one of the biggest challenges to the delivery of humanitarian aid. Thus, an investment in the roads infrastructure development will help address these challenges and can spur the overall economic growth. Against this backdrop, the Government of Somalia has started an extensive road, bridges and airport (runways) constructions in Mogadishu, Somaliland, Garowe, Galkacyo and Kismayo.

Due to lack of investment, the volatile security situation and the absence of public resources and public oversight, the potential to generate electricity and expand electricity infrastructure systems and markets has been hampered over the last two decades. Public supply of electricity reduced after the state collapse of the central

government as chaos, looting and destruction prevailed. However, over time there has been a change in access of electricity though still limited. The country suffers from three major problems related to broad-based electrification: lack of access, extremely high costs, and low reliability. Renewable and alternative energy sources, such as solar and wind power provide a substantive opportunity to diversify and expand the energy infrastructure systems in Somalia, however these opportunities have not been extensively explored due to insecurity and funding challenges. In the recent past, Somalia is witnessing a paradigm shift from fossil generated fuel to renewable energy with high demand of solar energy in rural areas due to insufficient electricity supply in these areas. The development in road infrastructure and renewable energy requires skills to meet the needs in these sectors. As a result, investing in skills development in road infrastructure and renewable energy through the BRIDGES project is timely. The BRIDGES project is anticipated to produce graduates who are highly competent with diverse and advanced skills that meet the labor market demands.

#### Appropriateness of the selected regions

The selected project implementation sites – Mogadishu, Kismayo, Garowe, Galkacyo and Hargeisa in Somalia are appropriate for the BRIDGES project considering the fact that the regions represent the entire population of Somalia/Somalia. In addition, these regions are well spread to ensure that result 1 of the project is achieved.

#### Appropriateness of the sectors

The roads infrastructure development and energy services sectors are appropriate for the BRIDGES project design since they represent the economic development priority areas of the country that will lead to achieving the overall project objective.

#### Appropriateness of private sector companies

The private sector companies involved in the study are those that provided input regarding to what should be included in the curriculum to make it labor market oriented. It was deemed appropriate to involve companies which engage in roads infrastructure development and energy services. They represent the industry advisory committees which are vital in approval of occupational standards of any CBT program if it has to bear any relevance to the job market.

#### Appropriateness of BRIDGES project in targeting marginalised groups in project implementation

The TVET system in Somalia has been criticized for its skewedness nature in terms of location of TVET centres in urban areas, thus hindering youth from rural areas from accessing these TVET centres. CARE International through the BRIDGES project is helping reverse the situation by provided opportunity for students from various districts

in Somalia to participate in the project. The selection targeted students from vulnerable households. In addition, the project is being implemented in various cities/towns thus reaching as many students in far off places as possible including – Mogadishu, Kismayo, Galkacyo, and Hargeisa. The BRIDGES project has as well provided girls/women with opportunity to venture into perceived male dominated courses – road infrastructure and renewable energy. However, the participation of girls is still very low as reported by 41% (107) of the respondents, in Galkacyo Vocational Training Centre for example, there are 73 students undertaking road construction, of which 12 are female students and 61 are male. In Higher Education institutions, such as Gollis University, there are 137 students enrolled in renewable energy courses of which only 2 are female. The low participation of girls in the BRIDGES project courses is attributed to the following factors: Cultural factors contribute in low participation of girls in energy and road infrastructure courses, the girls/women are in most cases expected to take care of the homes as reported by 11% (56) of the respondents. In the same vein, girls are expected to undertake courses with soft skills such as cookery, tailoring, beautification, and home decoration as reported by 22% (116) of the respondents. This jeopardises their chances of effectively competing in the labor market. However, the world is changing and it is important that this change is instilled in women/girls by encouraging them to undertake courses such as energy and road infrastructure. Energy and road infrastructure courses are perceived to be men/male courses as reported by 20% (107) of the respondents. Girls as well lack role models that would encourage them to participate in the BRIDGES project courses as reported by 12% (56) of the respondents. Across the study sites – Mogadishu, Garowe, Galkacyo, Kismayo and Hargeisa, in the public vocational training centres there is no female instructor for the electrical, renewable energy or road construction courses. However, SECCO a private vocational training centre has 1 female instructor that train TVET trainees on solar energy. In higher learning institutions, such as Gollis University there were female engineers lecturing renewable engineering courses. Other deterrents to girls participation in road infrastructure and energy courses included: lack of girls friendly spaces within the TVET Institutes as reported by 9% (49) of the respondents, high poverty levels that deters girls from being enrolled in TVET centres as reported by 7% (35) of the respondents, low literacy levels among the community members; they do not value education for girls as reported by 6% (32) of the respondents, high insecurity – girls/women fear attacks on the way to the institute as reported by 2% (13) of the respondents, early and forced marriages, also hinders girls from continuing with their education as reported by 2% (9) of the respondents, and lack of TVET Institute needs such as uniform as reported by 1% (7) of the respondents.

Therefore, to increase the participation of girls/women in BRIDGES project courses it is proposed that:

- The courses – road infrastructure and energy needs to be diversified to meet the demands of girls/women.

- Conduct a research to establish the demand for girls/women in energy and road infrastructure courses.
- Trained engineers in the country (women/girls) need to conduct advocacy in primary and secondary schools to encourage girls to undertake science subjects that would enable them to pursue courses in energy and road infrastructure in future.

Other modalities on how to increase participation of girls/women in the BRIDGES project courses have been illustrated in **table 4**.

Table 4: How to increase participation of girls/women in BRIDGES project courses

<b>How to increase participation of girls/women in BRIDGES project courses</b>	<b>Frequency<sup>7</sup></b>	<b>Percentage</b>
• Provide incentives such as accommodation and transport for students who reside very far from the TVET Institutes.	125	13.1%
• Provide scholarships to female students in private TVET centres to increase their participation.	126	13.2%
• The need to conduct more advocacy to increase the participation of girls in road construction and renewable energy courses.	186	19.5%
• Creation of girls friendly spaces in TVET Institutes	97	10.2%
• Train and employ female instructors in road infrastructure and energy course that can act as role models to the girls.	119	12.5%
• Provide internship programmes and job opportunities to girls upon completion of the course. This would motivate other girls to undertake the courses.	90	9.4%
• Enroll more girls/women in energy courses	77	8.1%
• Provide market information on energy sectors more often	46	4.8%
• Improve on security	28	2.9%
• Empower community members to enable them enroll the girls in TVET Institutes for energy courses	26	2.7%
• Provide apprentice opportunities for girls	13	1.4%
• Review the curriculum to accommodate female students especially the ones who are mothers.	19	2.0%

<sup>7</sup> The frequency is based on the statements from respondents in the baseline survey.

## Appropriateness of indicators and targets

The indicators set out in the log frame are therefore appropriate if they are matched with achievable targets. However, two targets require review; 95% of graduates gain employment within 3 - 6 months after completion. This target is too high, therefore, this consultancy recommends that the target be reviewed considering the fact that placement is determined by a number of factors including experience, job availability, skills and even attitude towards work. The consultancy suggests a target of 70% of graduates gain employment within 1 year after completion of TVET course. Another target that requires review is the number of trainees to be involved in the road infrastructure and energy sector courses. The project targets 450 (30% women) trainees trained in through CBT approach by the end of project. Based on the findings of the baseline study, very few females are enrolled in these courses and as a result it might not be possible to achieve the target of 30% for women enrollment. Therefore, this consultancy recommends that the target be reduced to 200 women instead of 450 women.

## 4.0 CURRENT TVET SITUATION

This section focuses on TVET socio-economic environment, current TVET practices including policies, curriculum frameworks, providers, programs and career path progression, quality and cost recovery strategies. It also documents potentiality of renewable energy and roads sectors for growth, linkages with TVET training and employment.

There is a large and diversified landscape of non-formal skills development activities and/or initiatives addressing marginalized and poor target groups, mostly with no further access to formal education and training in Somalia. The provision of labor market oriented trainings is largely from donor-funded interventions and the private sector with limited harmonization by the Government of Somalia. In spite of the efforts of the international community, weak coordination and fragmented implementation of actions has not supported the effective growth of the TVET sector in Somalia<sup>8</sup>. Institute Based Training (IBT) and Enterprise Based Training (EBT) have been the preferred modalities for TVET in Somalia/Somaliland. The main problem continues to be that of equity and accessibility, quality and relevance, efficiency and sustainability coupled with the distance of provider institutions from target trainees, cost of training including expensive infrastructures, and provision of appropriate career pathways for all kinds of clientele. A standardized TVET system is yet to be established.

### 4.1 TVET CURRICULUM PROVIDERS

Puntland, Somaliland and Central south Somalia do not have standardized curriculum or syllabi for TVET. There is no standardized system for TVET assessment and certification. The only standardized curriculum available but not being used in most of the TVET centres was the UNESCO PEER developed curriculum<sup>9</sup>. It is imperative that this is considered in any future intervention. The BRIDGES project supported by CARE International in roads and energy sectors complies with international CBET standards. Somalia/Somaliland experiences low quality skills training and lack of relevance to the labor market demand due to lack of qualified training providers, lecturers and trainers in TVET. There is limited capacity to design, develop and implement skills training programmes (curricula) that respond to the skill needs of the local labor market. To avert this situation the following actions need to be taken into consideration;

- a) Comprehensive needs assessment needs to be conducted to document market demands;

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<sup>8</sup> [www.ukessays.com](http://www.ukessays.com), /Technical, Vocational and Training in Somalia

<sup>9</sup> [www.ukessays.com](http://www.ukessays.com), /Technical, Vocational and Training in Somalia,

- b) Development of relevant competency based training and assessment packages for selected occupations;
- c) Provision of high quality equipment and training materials as defined in the curriculum;
- d) Provision of an innovative training programme to trainers and/or lecturers to enable them implement the competence- based curricula; and
- e) Development of competence- based assessors to support effective assessment of learners. A well designed curriculum should have the required standards to allow career progression from TVET system to Higher Education.

#### **4.1.1 Career path progression**

Puntland and Somaliland are in the process of adopting best practice models for TVET which is based on market-driven specification of standards and competence based programming. They have achieved the creation of a national VQF, which aims to align TVET programmes and qualifications with the needs of the labor market. The current VQF is however limited to three lowest levels of TVET qualifications and covers only a few occupations and the implementation process in both Puntland and Somaliland has been slow. The existing VQF covers only levels 1-3, certificate levels. To fill the skill gap it is expected that both levels 4 and 5 (Diploma and Degree) will be defined later in an expanded VQF document. The BRIDGES project is expected to support further development of the VQF and systematic implementation of its provision. More specifically, the action will expand the scope of the VQF to include more levels of qualifications (at least up to diploma level), increase its coverage to include more occupations within targeted sectors and accelerate its implementation for the targeted sectors. The expanded VQF shall serve as a tool for providing career paths/advice to trainees and facilitate upward progression within the TVET system as well as cross over to HE learning. Employers and industry experts will participate actively in the development process of the VQF, occupational standards and the training contents. The planned improvement of VQF will be based on international and regional standards for recognition purposes. The process will also seek to develop a VQF implementation manual, revise/improve accreditation guidelines and develop competence-based assessment and certification frameworks for Higher Education.

#### **4.1.2 Cost recovery strategies**

The cost of financing TVET policies, standardized curriculum, accreditation (in line with a National Qualifications Framework), establishment of new centers, improvement and extension of existing ones, and some provision for girls and members of disadvantage groups to obtain marketable skills will cost some US\$ 15,125,000 over the 5 year period in Puntland<sup>10</sup>, and US\$ 20 million over the 2012-16 ESSP period in

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<sup>10</sup> Puntland Education Sector Strategic Plan

Somaliland<sup>11</sup>. However, most of the priorities will need to be met on a carefully-designed and cost-effective basis through predominantly private sector contribution ensuring sector involvement. Utilization of other facilities – such as secondary schools and those of private companies will be encouraged. Development partners' support is welcomed, especially if it can result in reducing youth unemployment and generate income. The TVET centres are currently not self-sustainable. A number of TVET centres are donor funded, while in the government TVET Institutes, some have cost recovery measures in place though not well developed. HTI has a production unit for furniture, Kismayo Technical Institute has a brick and block making business which contributes 6% of the revenue in the institute though not adequate but this amount helps meet some expenses of the Institute. KTI as well has a plan to establish a metal and carpentry workshop in future. The brick and block making is an effective cost recovery measure for KTI since the country is rebuilding and a number of constructions are currently on-going. While Garowe Technical Institute has a production unit for clothes. The production unit complements the donor funding. The production unit has challenges since it operates in a rental space, the institution lacks modern equipment's and the institution also lacks adequate market for its products (clothes). Galkacyo Vocational Training Centre has a production unit for furniture. Nonetheless, there is need for improved capacity of TVET management including development of cost recovery measures to make them self-sustainable. In addition, other cost recovery measures that can be developed in the TVET centres to make them sustainable include: construction of a library and bookshops within the TVET centres, this would be accessible to the general public. The users of the library would pay user fee that would be used to maintain the TVET centre. The TVET centres can also establish auto-mechanic garage that can be used by the public and the fee generated from the garage can be used to maintain the TVET centres. Cost sharing recovery strategies such as paying school fees should be incorporated in the government plan to help meet some of the needs of the TVET centres. SECCO a private TVET centre in Garowe has stood the test of time even though the centre is relatively new, the centre charges school fees which helps in the management of the centre. The TVET centres can also initiate income generating activities such as carpentry, salon and tailoring. Income generated from these activities would help in the management of the TVET centres.

## **4.2 SOMALIA/SOMALILAND ROAD INFRASTRUCTURE AND ENERGY SUB-SECTORS**

This section looks into the potentiality of energy and roads economic sub- sectors for growth, linkages with the training institutions and employment creation.

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<sup>11</sup> Somaliland Education Sector Strategic Plan

### **4.2.1 Road infrastructure sector**

Somalia's primary roads, which serves major population centres like Kismayo, Mogadishu, Hargeisa, Berbera, Garowe and Bosasso represents about 2,860 km (13%) of the total roads network. The secondary roads which are predominantly earthen or gravel connects important settlements to one another and to primary road network. The inadequate road infrastructure in Somalia is a major constraint on the population's access to social services, such as education and healthcare, as well as a significant obstacle to the political integration of the country's territories and delivery of humanitarian aid. Investments in roads infrastructure will help create employment, link markets, and reduce the cost of doing business, making Somali enterprises more competitive and more connected to its neighbors<sup>12</sup>.

### **4.2.2 Roads Development and Improvement Plans**

Across Somaliland, Puntland and South Central Region of Somalia, development plans acknowledge the need to have policies and regulatory frameworks to guide future roads expansion, maintenance and related service delivery. Strengthening of institutional and technical capacity to design, build and maintain roads should be prioritized through TVET institutions with strong CBET curricula.

While a detailed budget is not in place and funding sources remain unclear, the government anticipates international support to implement these plans. Already the European Union (EU) and German Federal Ministry for Economic Cooperation and Development (BMZ) has committed funds for roads infrastructure project across Somalia. The project supports RDA and PHA by improving their performance capacity in the road transport sector. Its main focus is on the rehabilitation and maintenance of the existing road network in Somaliland and Puntland. In South/ Central Somalia, it intends to create the fundamental institutional conditions needed to maintain the roads on a sustainable basis. Equally, other donors and development partners such as African Development Bank (AfDB) have shown willingness to support sustainable roads infrastructure development. As a result, all these projects will require competent skills in road infrastructure thus the need for training in TVET Institutes.

### **4.2.3 Energy Sector**

#### **Energy Services in Somalia/Somaliland**

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<sup>12</sup> Somalia Federal Government Development Plan

The country suffers from three major problems related to broad-based electrification: lack of access, extremely high costs, and low reliability<sup>13</sup>. These unavailability and high cost of energy in Somalia have resulted into three distinct energy markets:

- Approximately, 87% of the energy used in Somalia is consumed in the form of biomass largely charcoal and wood for cooking and heating, predominantly in rural areas.<sup>13</sup>
- About 11% is consumed as petroleum, apparently for transportation, electricity generation, cooking and lighting.
- Less than 2% of the energy used is consumed as electricity, primarily from diesel generators, mostly in urban areas.

Renewable energy sources, such as solar and wind power, present substantive opportunities to diversify and expand the energy infrastructure systems of Somalia but have not been exploited so far. The solar energy potential ranges from 5 - 7 kWh/m<sup>2</sup>/day, with over 310 sunny days in a year or 3,000 hours of sunshine per annum. Cognisant of this potential, there is a growing interest from Somali governments for the development of the renewable energy sector. Across all regions, some investments have been made in solar energy by international donors and private companies. Both in Somaliland and Puntland, the private electricity providers have been planning to add substantial amount renewable energy to their diesel generation capacity. At the moment, skilled labor is mostly imported from other countries in the region to sustain the minimum provision of services. The shortage of technical skills is expected to deepen as the energy industry grows.

The unavailability of adequate skilled personnel to undertake the works related to the design, installation, commissioning and maintenance of renewable energy systems is likely to derail this and other similar programmes as well as the private investment in clean renewable energy. While electricity and energy services has the potential to transform the country, without substantial skills in the sector, it will continue to be a constraining factor for further development and impede opportunities for growth. Thus, the need to train skilled persons on energy related courses to avert this situation.

#### **4.3 CHALLENGES EXPERIENCED IN TVET INSTITUTES**

- ❖ Lack of standardised and up to date curriculum as reported by 11% (72) of the respondents; a number of TVET institutions use their own curriculum. The non-governmental organisations are project based and as a result their curriculums are very short and based on the projects they are undertaking.

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<sup>13</sup> Energy sector Needs Assessment, FGS and AfDB, Aug 2015, page 15.

- ❖ Lack of skilled personnel; a number of trainers especially for the energy and road infrastructure courses are experts in the various fields. However, they do not have pedagogy skills as reported by 12% (82) of the respondents.
- ❖ The MoE&HS does not put more emphasis on TVET; they value formal education at the expense of TVET.
- ❖ Inadequate number of TVET centres; the available TVET centres are limited and do not meet the demand of the potential trainees. Therefore, most trainees travel very far to access these centres.
- ❖ Lack of an established career path progression for TVET trainees and/or graduates. Most TVET centres and/or Institutes offer Level 1 and 2 courses, with very few offering Level 3. As a result, when trainees complete Level 2 or 3 they are not certain on continuity of their education. However, the BRIDGES project provides an established career path progression for trainees in renewable energy and road infrastructure courses, the programme offers Levels 1, 2, 3, and 4. Students who would like to progress with their education are at liberty to join Diploma classes and eventually university in the future.
- ❖ There is no standardised TVQF and TVQA. In Puntland at the time of this study there were discussions on the development of TVQF and TVQA. In Mogadishu there is no VQF or VQA, while in Somaliland and Puntland there is a TVQF and TVQA. Some private TVET have their own assessment and certification programmes for TVET trainees.
- ❖ Trainers undertaking renewable energy and road infrastructure courses do not have the relevant skills in these courses.
- ❖ Lack of reference materials for TVET courses – renewable energy and road infrastructure courses.
- ❖ Most TVET centres do not offer adequate practical sessions, emphasis is on theory classes.
- ❖ There are minimal linkages with the private sector. It is anticipated that the BRIDGES project will bridge this gap.
- ❖ In the TVET training centres most of the workshops do not have adequate and modern equipment's as reported by 11% (70) of the respondents.
- ❖ Cultural issues: energy and road infrastructure courses perceived to be male dominated courses as a result very few girls are participating in these courses as reported by 2% (10) of the respondents. Girls as well lack role models since all the trainers in vocational centres are male as reported by 9% (62) of the respondents.
- ❖ Language barrier; the education policy stipulates that the language of instruction should be English, however not all students are conversant with English and this reduces efficiency in learning.
- ❖ Some students are not able to pay for their school fees – especially for the private owned TVET centres as reported by 12% (77) of the respondents.
- ❖ TVET graduates do not possess high level skills that are relevant in the labor market as reported by 3% (18) of the respondents.
- ❖ Other challenges included: logistical challenges – since the trainees travel from far to access the TVET centres as reported by 13% (84) of the respondents; lack of

accommodation as reported by 12% (79) of the respondents; the TVET centres are day facilities; and worries on placement after completion of the course as reported by 7% (44) of the respondents. Inadequate training rooms was also a challenge as reported by 5% (35) respondents, insecurity was reported by 3% of the respondents, while 1% (4) reported inadequate practical experience due to unavailability of apprenticeship opportunities.

## 5.0 BASELINE INDICATORS

### 5.1 FINDINGS ON INDICATORS

**Objective 1: Determine the baseline status on all indicators as established in the project's log-frame**

**Overall objective: Impact**

Promote economic growth through infrastructure development, employment creation and sustainable natural resources management.

#### 5.1.1 Increased labor productivity

There is low labor productivity among TVET graduates; this is because a number of TVET graduates do not have adequate skills to meet market needs. This hinders their ability to perform tasks at work.

#### 5.1.2 Changes in socio-economic livelihoods of graduates

The baseline study established that there are limited socio-economic livelihoods opportunities for TVET graduates. A number of TVET graduates that get placements in the companies, are employed in the lower cadre that attracts low payment thus hindering them from accessing improved socio-economic livelihoods. Likewise, TVET graduates who have ventured in self-employment do not generate adequate income.

**Specific objective:** to improve access to markets and social services, improve access to energy services and enhance sustainable use of natural resources through an increased availability of skilled human resources for Somalia/Somaliland's road and energy sectors.

#### 5.1.3 Availability of certificate, diploma and degree courses in road/energy sectors

The road infrastructure and renewable energy courses are relatively new in the Institutes; this is based on the key informant interviews with TVET trainers, TVET Directors and the private sector. The focus group discussions with TVET trainees and private sector also established that road infrastructure and renewable energy are relatively new courses in the institutes. Certificate courses in electricity exists but not renewable energy - solar. Electricity courses at certificate levels are offered in a number of vocational training institutes – Hayle Barise Technical Development Centre, KTI, HTI, GTI and GVTC. Courses on road infrastructure are not offered in TVET centres. There are no diploma courses on road infrastructure and energy sectors in TVET centres. In higher learning institutions such as Gollis University, road infrastructure and energy related courses are offered at diploma levels. Currently, there is no vocational training institute offering road infrastructure and energy sector

courses at degree levels. Gollis University offers Civil Engineering course at the degree level but in formal education. At the time of this baseline study, Gollis University the Department of Renewable Energy was working with Tu/e University in Netherlands to develop a degree curriculum for the renewable energy course (informal education) that was anticipated would prepare students for advanced level of education in energy to enable them become competitive in the labor market.

#### 5.1.4 Training institutes offering CBT and; trainers/lecturers trained

The CBT training approach is not in use in the public TVET Institutes; none of the trainers in the TVET Institutes are trained on CBT approach, as reported in the key informant interviews with TVET trainers<sup>14</sup>. In the private sector, a total of 6 staff from Solar Energy Consulting Company in Somalia (SECCO) based in Garowe, Puntland have been trained on CBT approach. In the higher learning institution - Gollis University uses the CBT approach in training. A total of 19 lecturers from Gollis University have been trained on CBT approach; 4 lecturers from the Department of Renewable Energy Institute and 15 lecturers from the Engineering Department.

#### 5.1.5 VQF with assessment and certification functions

Puntland and Somaliland have a VQF though not operational; the MoE&HS do not have assessment and certification functions<sup>15</sup>. The VQF was developed by the Ministry of Education and Higher Education in 2011 (Somaliland), however for Puntland this study did not establish when the VQF was developed. Jubaland and Benadir Region (Mogadishu) do not have a VQF in place. The MoE&HS in Benadir Region (Mogadishu) is relatively new and is still under development. There are no trainees assessed and certified based on the VQF across the four regions – Benadir Region, Jubaland, Puntland and Somaliland.

#### 5.1.6 Private sector participation in VQA and TVET system

The participation of the private sector in TVET system is currently limited. In ideal situation the private sector would be expected to participate in curriculum development, internship programs, placement services and advice to the TVET

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<sup>14</sup> Competency-based training (CBT) is an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a program of training. Competency-based training programs are often comprised of modules broken into segments called learning outcomes, which are based on standards set by industry, and assessment is designed to ensure each student has achieved all the outcomes (skills and knowledge) required by each module. Ideally, progress within a competency-based training program is not based on time. Some competency-based training modules have two assessment components: 1. On-the-job 2. Off-the-job.

<sup>15</sup> Vocational Qualifications Framework is the structure into which accredited qualifications are placed. This allows learners, training providers and employers to gain information about the broad equivalence of qualifications. For example, a Vocational Qualifications Framework (VQF) helps to create parity of esteem between vocational and academic qualifications.

training providers on the changes in the labor market. However, currently the private sector participation in TVET is limited to provision of internship programmes to TVET trainees, however one company – Somtel that is involved in curriculum review. The private sector is not involved in VQA<sup>16</sup>.

#### 5.1.7 Employment rate of graduates on completion

The TVET graduates access jobs; some start their own business ventures, while some get placement in the private sector. However, data on the employment rate is very elusive; employment rate is estimated at 70%, some say 75% access jobs, 50% start their own jobs, while 20% join production units such as auto mechanic and phone repair shops, as reported in the focus group discussions and key informant interviews with the private sector. This data has not been validated since no study has been conducted to establish employment rate of TVET graduates. Therefore, it is important in future to conduct a tracer study to establish the employment rate of TVET graduates upon successful completion of TVET programme.

In addition, this project target 95% of graduates gaining employment within 3 – 6 months after completion as stipulated in the log frame. This target requires a review, 95% is on the higher side considering the fact that employment is determined by a number of factors including availability of placement opportunities, trust on credentials of the trainees, ability of the TVET graduate to establish their own work upon completion of the course, and competition with other graduates from other institutions and/or countries. Therefore, it is proposed that the percentage is reduced to 70% of graduates gain employment within 1 year after completion of the TVET course.

#### 5.1.8 Perception of employers of trainees on links between skills acquired and productivity gains

Employers' perception on TVET graduate skills is very low; they literally do not recognize the skills of TVET graduates, this is based on the focus group discussions and key informant interviews conducted with the private sector. A number of companies that employ TVET graduates recruit them as unskilled labor since they do not meet market standards. The competence of the TVET graduates is further compounded by lack standardization in the curriculum, that reduces their levels of exposure to real work environment since a number of TVET Institutes do not have effective linkages with the private sector and as well do not have adequate equipment's and machines for practical sessions. Due to lack of adequate practical experience, the TVET trainees basically lack job skills and work ethics. The courses

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<sup>16</sup> Vocational Qualifications Authority (VQA) is responsible for development of qualifications under the National Vocational Qualifications System. Qualifications under the mandate of VQA are based on occupational standards and learning outcomes. Assessment, evaluation and certification for these qualifications are executed by Vocational-Test Centers, authorised by VQA. These qualifications are classified under the qualification types "Vocational Qualification Certificate".

offered in the TVET institutes are as well short term that does not enable TVET trainees acquire adequate skills to enable them compete effectively in the labor market. This lowers their productivity at work since they are not able to deliver at optimal. However, the BRIDGES project is seen a game changer, since the project provides the trainees with a career path progression that would enable them acquire adequate and relevant skills for the job market.

## **5.2 ACCESS TO PRIVATE SECTOR-LED AND COMPETENCE-BASED SKILLS DEVELOPMENT OPPORTUNITIES LINKED TO ROAD INFRASTRUCTURE AND ENERGY SERVICES FOR YOUTH**

### **5.2.1 Trades identified using Labor Market Survey**

Companies do not have the tendency of conducting Labor Market Surveys to identify trades. This baseline study established that it is only SECCO that conducts Labor Market Surveys, and the company identified 2 trades based on the LMS – gap in solar system; solar installation and solar panels and skills gap in solar energy. Based on these gaps, SECCO initiated the solar installation in households and sale of solar panels. SECCO as well started a TVET Institute to train the youth in solar energy skills. Other companies such as Gollis Energy, Sompower and NECSOM do not normally conduct Labor Market Surveys.

### **5.2.2 Employers participating in training process (design stage to employment)**

A total of 16 of employers are participating in the training processes; they are offering internship to a number of TVET trainees. These private sector companies include: Allied Development and construction, Sompower, Gollis Energy company, SECCO, Jazira construction company, Beco Company, Mogadishu power company, Heenko construction company, Sompower company, RDA, Gaar construction company, Bilan construction company, Bare construction company, Somtel, Dhoof and NEPCO. However, Somtel has additional responsibility as they are also involved in TVET curriculum review.

### **5.2.3 Trainees trained in road/energy sectors using CBT approach**

The CBT approach is not fully adopted in the TVET centres; none of the trainees in the public TVET centres - Galkacyo Vocational Training Centre, Kismayo Technical Institute, Hargeisa Technical Institute and Garowe Technical Institute is being trained using the CBT approach. The draft curriculum for road infrastructure and energy courses reflects CBT approaches though these curriculums have not yet been fully adopted in the VTCs<sup>17</sup>. However, SECCO a private TVET centre in Garowe, Puntland has a total of 20 students undertaking solar energy courses and they are being trained

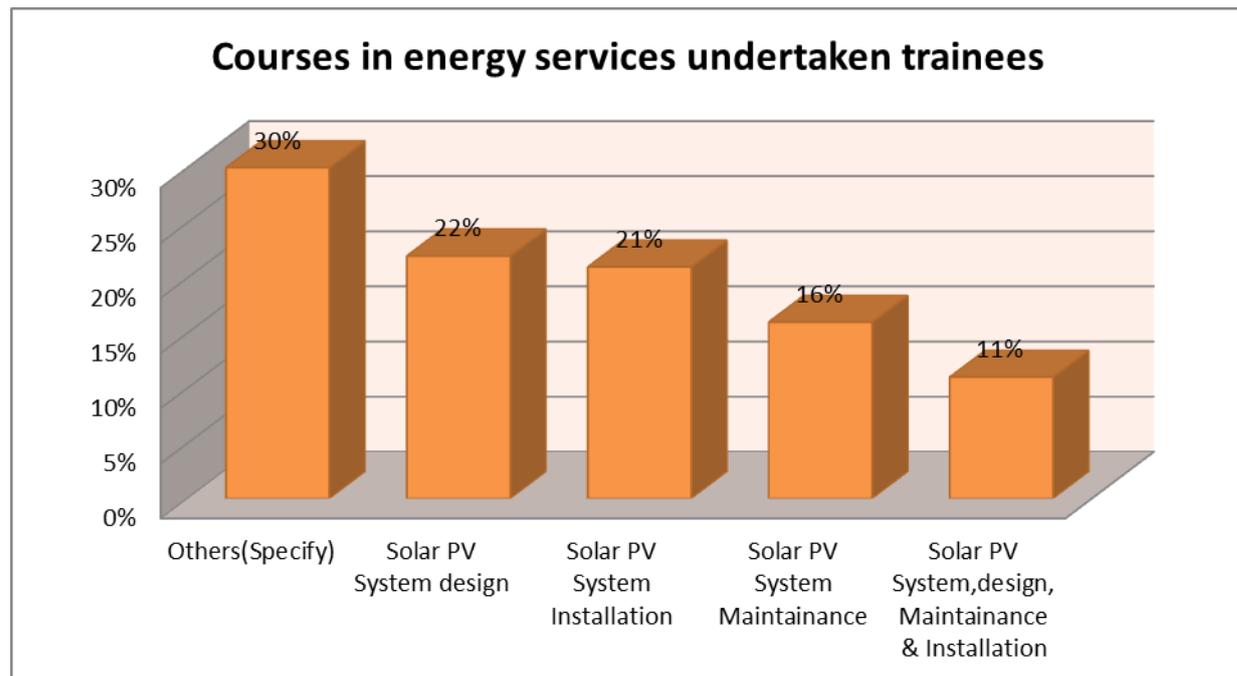
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<sup>17</sup> At the time of this study, CARE International had shared a draft curriculum for road infrastructure and energy courses to Galkacyo Technical Vocation Centre.

using CBT approach – 20% (4) female and 80% (16) male. This shows how valuable the TVET is to the private sector and therefore more effort should be put in the training to improve on the quality of TVET graduates. This practice should be adopted in the public TVET centres to increase the effectiveness of TVET courses so as to make the TVET graduates more competitive in the labor market.

The courses that were currently offered in Energy in the Institutes include solar PV system design as reported by 24% (34) of the respondents, others – computer systems, control systems, electrical design, engineering, English, household installation, mathematics, physics, power electronics, solar energy, solar systems, solar water pumping and workshop practice as reported by 23% (32) of the respondents, solar PV system installation as reported by 21% (29) of the respondents, solar PV system maintenance as reported by 19% (27) of the respondents, and solar PV system design, maintenance and installation as reported by 13% (18) of the respondents. The individual courses in energy that the trainees were undertaking include: Others – technical drawing, sales, power and system plan, physics, mathematics, English, engineering, entrepreneurship, electronics, computer and control systems as reported by as reported by 30% (42) of the respondents, solar PV system design as reported by 22% (31) of the respondents, solar PV system installation as reported by 21% (29) of the respondents, solar PV system maintenance as reported by 16% (23) of the respondents, and solar PV system design, maintenance and installation as reported by 11% (15) of the respondents as illustrated in **figure 3**.

Figure 3: Energy courses undertaken by trainees

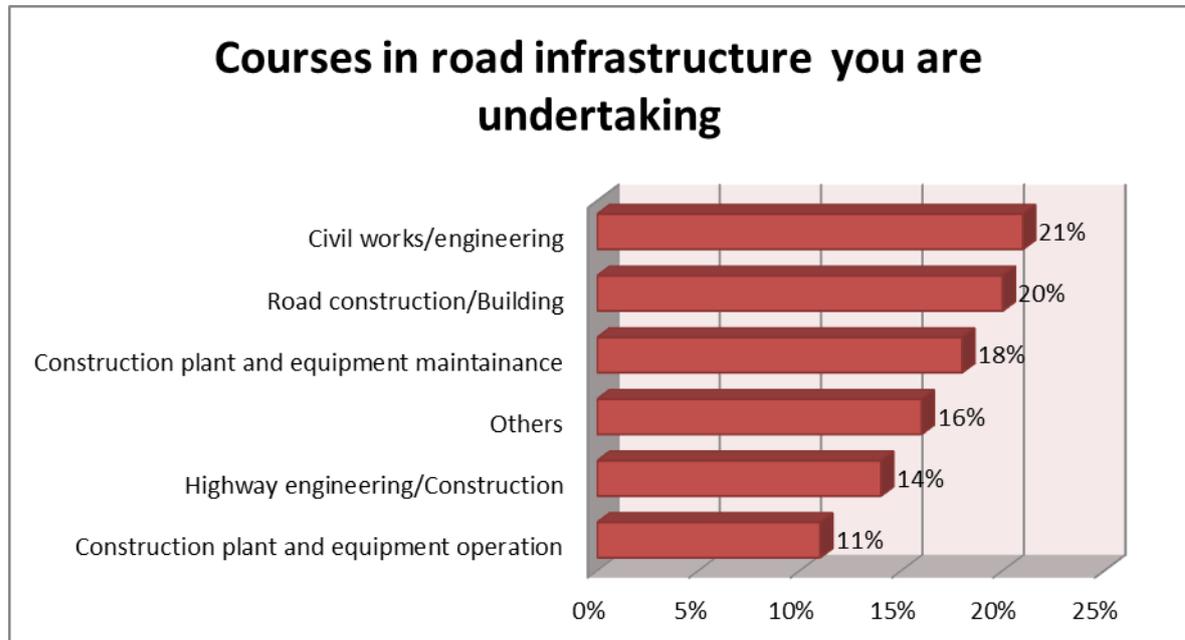


Majority of the respondents are taking other courses - technical drawing, sales, power and system plan, physics, mathematics, English, engineering, entrepreneurship, electronics, computer and control systems since they are in the inception of the programme and it was necessary to provide the trainees with background information on the energy courses before they are introduced to the core content of the courses. While very few of the respondents were taking a combinations of solar PV system design, maintenance and installation since most probably they are at advanced stages of the courses (diploma level), and they had started specializing.

The courses offered in road construction in the institutions include: Others – Building technology, design, drawing building, English, geometry, health and safety, introduction to road construction, mathematics, physics, road maps, road mechanics, survey and technical drawing as reported by 24% (29) of the respondents, road construction/building as reported by 23% (28) of the respondents, civil works/engineering as reported by 23% (28) of the respondents, highway engineering/construction as reported by 13% (15) of the respondents, construction plant and equipment operation as reported by 10% (12) of the respondents, and construction plant and equipment maintenance as reported by 7% (8) of the respondents. The individual courses in road construction that the respondents were taking include: Civil works/engineering as reported by 21% (25) of the respondents, road construction and building as reported by 20% (24) of the respondents, construction plant and equipment maintenance as reported by 18% (22) of the respondents, others as reported by 16% (19) of the respondents, highway engineering and construction as reported by 14% (17) of the respondents, and construction plant

and equipment operation as reported by 11% (13) of the respondents (see figure 4)<sup>18</sup>.

Figure 4: Courses in road construction taken by trainees



Majority of the respondents were undertaking a course in civil works and engineering since it was important to enable the trainees familiarize themselves with basic engineering before they could learn more on road construction courses.

From the log frame, the BRIDGES project targets the participation of 450 (30% women) trainees trained through CBT approach by the end of project. The baseline study established that very few female students are participating in the road infrastructure and energy courses; therefore, it is proposed that the percentage of women participation be reduced to 15%, which is still on the higher side but looks more realistic.

#### 5.2.4 Trainees trained through Dual Mode Approach

The dual mode training approach is not applied in the public TVET centres; none of the trainees in these centres is trained through the dual mode training approach<sup>19</sup>. However, in the private sector, 20 trainees from SECCO were being trained through the dual mode approach. SECCO company provides practical training sessions to its

<sup>18</sup> Other courses - Auto CAD, building technology, computer, construction tools, geometry, hydrology, mathematics, physics, road works, signs and safety, surveying and technical drawing.

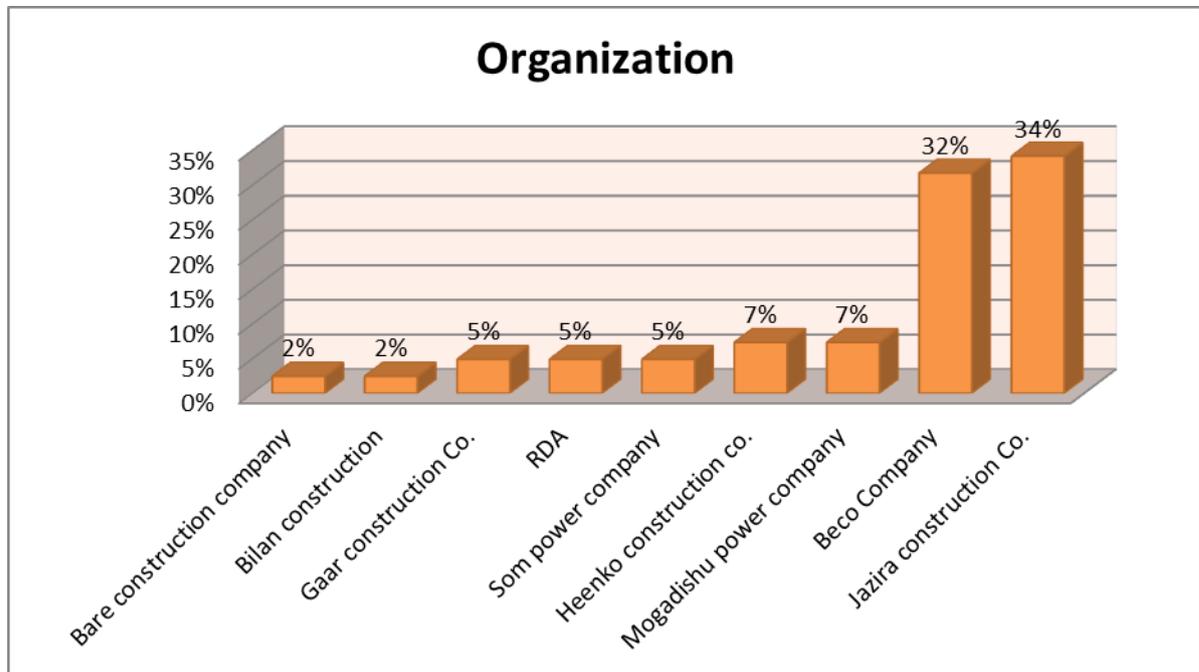
<sup>19</sup> Dual mode approach - Training of individuals, both academically and vocationally by an Institute, College, Centre or School.

trainees. SECCO has a company and a TVET training institute. The students undertake TVET classes in the training institute and as well they are taken for a training in the company. The EBTvet training approach is adopted in TVET centres; TVET trainees are sent to companies for internship programmes. In the vocational training centres, the centres have both training rooms for theory classes and the workshop rooms. The Institutes have a workshop for electricity classes that can as well be used for solar energy courses, by installing equipment's for solar. However, the Institutes do not have a workshop for road infrastructure courses. The available workshops in the Institutes are however, very small, coupled with old equipment's. Therefore, it is important to expand the available workshops for electricity courses to accommodate solar energy practical courses. Likewise, the vocational training Institute need to construct workshops for road infrastructure courses and equip them with modern equipment's effective delivery of the practical sessions. In addition, the vocational Institutes need to embrace change; the workshops need to be equipped with modern equipment's and technology that are in tandem with changes in the private sector. This gives TVET trainees an easy time when they go for internship as they would be able to adapt very easily. A practical example of a modern workshop that TVET Institutes can adopt is the Gollis School of Renewable Energy workshop that has modern equipment's for energy practical classes. This workshop provides equipment's that are actually within the private sector companies. The workshops and theory classes in TVET Institutes as well need to incorporate ICT in learning. For example, students undertaking courses on road construction - road design can also be learnt by use of computer software. In energy courses, students can learn electrical faults by use of a computer software. Electronic software can also be designed by use of solar. The solar system can be controlled by using computer software instead of using hands, this improves proficiency in learning.

Across the study sites, the TVET trainees participate in internship programmes in a number of private sector companies including; Jazira construction company as reported by 34% (15) of the respondents, Beco Company as reported by 32% (14) of the respondents, Mogadishu power company as reported by 7% (3) of the respondents, Heenko construction company as reported by 7% (3) of the respondents, Sompower company, RDA and Gaar construction company as reported by 5% (2) of the respondents respectively, and Bilan construction company, and Bare construction company as reported by 2% (1) of the respondents respectively. Other companies included Somtel, Dhoof and NEPCO as illustrated in **figure 5**. However, there is no clear agenda for the internship programme. The baseline study established that, despite TVET trainees participating in internship programmes, in some companies the TVET trainees were expected to observe the practical sessions but not participate in the activities. Data on the number of trainees who have been provided with internship programme in companies is also unavailable, a number of companies do not keep such records. Therefore, consultation with the private sector need to be done, and a clear terms of reference for the internship programme developed. The trainees' expectations, achievements, and deliverables should be clearly stipulated. A clear

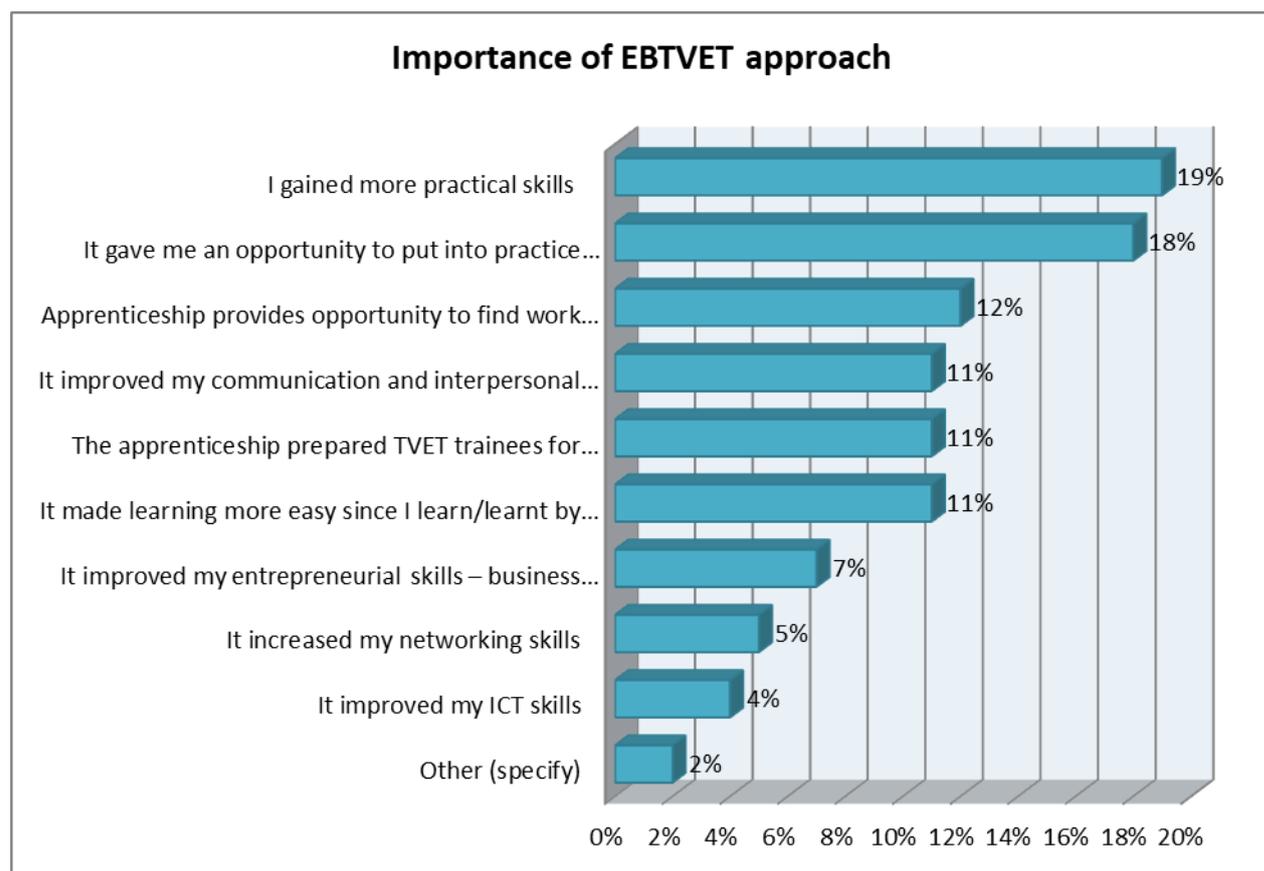
road map on the companies support including supervision and guidance should be well documented and both parties should sign a binding agreement on conformity. Private companies as well need to document the number of persons that they have provided internship to and the specific skills area for future follow ups.

Figure 5: Companies where TVET trainees get internship



A total of 87% (226) of the students indicated that it was important for them to be trained through the EBTVET training approach as it enabled trainees gain more practical skills as reported by 19% (49) of the respondents, it gave the trainees an opportunity to put into practice information they have learnt in class as reported by 18% (47) of the respondents; apprenticeship programme provides opportunity to find work easily in future as reported by 12% (31) of the respondents; it made learning more easy since the trainees learnt by practice, the apprenticeship prepared TVET programme prepared the trainees for future employment, and it improved the communication and interpersonal skills of the respondents as reported by 11% (29) of the respondents each respectively. Other benefits of the EBTVET training approach included: it improved the entrepreneurial skills of the trainees as reported by 7% (18) of the trainees, it increased by networking skills as reported by 5% (13) of the respondents, it improved my ICT skills as reported by 4% (10) of the respondents, and others felt the dual mode approach enabled them to see the equipment's at work place as reported by 2% (5) of the respondents (**see figure 6**).

Figure 6: Importance of EBTVET training approach



### 5.2.5 Trainees assessed and certified based on VQF

The Ministry of Education and Higher Studies in Puntland and Somaliland have Vocational Qualification Frameworks in place though not operational. However, the MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have VQF in place. The TVET students in these study sites are not assessed and certified based on VQF.

## 5.3 CAPACITY BUILDING OF TRAINING PROVIDERS, LECTURERS AND TVET TRAINERS

### 5.3.1 CBT packages for road and/or energy developed

A total of 3 CBT packages – curricular for energy were developed in 2011 by ADRA for MoE&HS in Somaliland and Puntland. MoE&HS Somaliland as well has technical books on road infrastructure and energy courses from Kenya Technical Institute. CARE International in consultation with the MoE&HS in Puntland and Jubaland have developed a curriculum for road infrastructure and energy courses that are already in use in GVTC and Kismayo Technical Institute, however these curriculums are yet to

be validated. Hargeisa Technical Institute (HTI) has a curriculum for electricity courses (but not for solar energy). The MoE&HS in Benadir Region (Mogadishu) does not have a curriculum for Road Infrastructure and Energy courses (solar system). The MoE&HS in Benadir Region (Mogadishu) has a curriculum for electricity courses. Garowe Vocational Training Centre has a CBT package for solar energy it comprises – solar installation, solar panels, identification of tools, safety and lesson plan. Gollis University offers the following courses in energy – solar water pumping, solar design, marketing – entrepreneurship courses, solar installation, electricity measurement, statistics, probability and calculus. It is also worth noting that the private TVET providers use their own curriculum that is project based and different from the curriculum provided by the MoE&HS. Thus, there is need to standardize the curriculum in the country for purposes of career path progression and also to promote uniformity of the courses offered.

### **Curriculum**

The draft curriculum for renewable energy and road infrastructure courses exists in Kismayo Technical Institute and Galkacyo Vocational Training Centre. While Mogadishu (Hayle Barise Technical Development Centre) and Hargeisa Technical Institutes still do not have a curriculum for renewable energy and road infrastructure courses. However, Hargeisa Technical Institute has a curriculum for electricity courses. The available draft curriculum for the energy and road infrastructure courses is user friendly and prepares trainees for higher education and the labor market. The curriculums have been developed taking cognisance of the current country context; Somalia is currently undergoing reconstruction and various skills including engineers, technicians, plumbers are required of which the draft curriculum prepares trainees in these key skills. The key strengths of the curriculum include:

- The curriculum documents the trainees expectations
- The curriculum has extra skills – engineering based and power installation
- The curriculum is diversified; it provides the trainees with diverse courses
- The proposed teaching methodology is participatory – there is team work, focus group discussions and assignments
- The curriculum has incorporated the dual mode training approach – it as well provides persons who are employed and would like to further their education an opportunity to continue with learning.

However, the draft curriculum has some limitations since it has not incorporated technology; the curriculum has content on software however the application of the software is not embedded in the curriculum. In addition, the curriculum might not be applicable in the context of NGOs that are short term and project based. The electrical part of the energy course has been left out. The curriculum is not standardised across the country, some vocational training centres use their own curriculum. The curriculum is written in English, however not all trainers and trainees are conversant with English language. Some of the courses that are expected to be offered in level 1 for example

highway construction are too complex for trainees who do not have basic engineering courses.

Some of the adjustments that are proposed in the curriculum include;

- ICT needs to be incorporated in the curriculum; software needs to be incorporated in road infrastructure and energy courses. Geographical Information System needs to be incorporated in highway programming.
- Application of technical materials – some measurement tools have left out some features. The measurement tools as well need to be modern.
- Relevant reference materials for the different courses need to be developed.
- The curriculum needs to be translated to Somali language for ease of understanding.

### 5.3.2 Number of trainers trained on CBT in road and energy

This baseline study established that none of the trainers in the vocational training centres - Galkacyo Vocational Training Centre, Kismayo Technical Institute, Hargeisa Technical Institute, HAVOYOCO, Hayle Barise Technical Development Centre, and Garowe Technical Institute have been trained on CBT approach. In the private sector, a total of 6 staff from Solar Energy Consulting Company in Somalia (SECCO) based in Garowe, Puntland have been trained on CBT approach. SECCO offers training on Solar Energy to TVET trainees. The staff have been trained on solar water pumps and solar street lighting. SECCO staff were trained by Adventist Development and Relief Agency (ADRA), United Nations Children's Fund (UNICEF), and Davis & Shirliff in Kenya. This warrants attention from CARE International, it is important for CARE International to organize capacity building initiatives for Instructors and assessors to build their capacities in Competency Based Training approach for the successful roll out of the CBT training in the various Vocational Training Institutes.

### 5.3.3 Lecturers trained on CBT

In the vocational training centres, no lecturer has been trained on CBT approach. In the higher learning institutes, a total of 19 lecturers from Gollis University have been trained on CBT approach; 4 lecturers from the Department of Renewable Energy Institute and 15 lecturers from the Engineering Department. The lecturers have been trained by Gollis University on CBT approach. There are a total of five lecturers that undertake students in the renewable energy courses in the Institute, four of these lecturers have been trained on CBT approach.

#### 5.3.4 Number of assessors trained on CBT approach

In the MoE&HS in Benadir Region (Mogadishu), Jubaland, Puntland and Somaliland no assessor has been trained on CBT approach<sup>20</sup>.

#### 5.3.5 Number of VQA staff trained on CBT management

Across the study sites, none of the VQA staff have been trained on CBT management.

#### 5.3.6 VQF coverage

A 3 level VQF exists, that is certificate Level 1, 2 and 3. There is need to expand the levels to Level 4 and 5. This will allow those who wish to pursue higher education to progress.

In summary, the training providers and TVET trainers do have the required competence to deliver the market-oriented skills training that meet the immediate and emerging labor market demands within the road infrastructure and energy services sector. The training providers and trainers require training not only on CBT approach but also on pedagogical skills to enable them provide quality education to the trainees. At the higher education level, the lecturers have been trained on CBT approach and they are using the skill to train the students, this is a best practice that needs to be replicated in the TVET centres. In addition, the CBT packages including the curriculums and reference materials should be made available in the TVET centres, the draft curriculums need to be validated to make them official documents and rolled out in all TVET institutions for purposes of standardization.

### **5.4 VOCATIONAL QUALIFICATION FRAMEWORK**

#### 5.4.1 Meetings, workshops to consult and/or explain the VQF

No meetings or workshops have been conducted to consult and/or explain the VQF.

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<sup>20</sup> In Mogadishu there are 5 assessors for TVET programme; 4 males and 1 female. The assessors are very few; they do not meet the needs of the needs of the trainees. In addition, the assessors do not have the required competence, not all the assessors have a background on civil engineering; only 2 assessors are civil engineers, 1 assessor has a degree in education, another assessor has a business administration course, while the other is a PhD candidate in education.

#### 5.4.2 VQF Implementation Manual developed

The Somaliland and Puntland MoE&HS have VQF Implementation manuals. The MoE&HS in Mogadishu and Jubaland do not have VQF implementation manuals in place. MoE&HS in Mogadishu is relatively new and is yet to establish itself.

#### **Reference materials and manuals**

At the time of this baseline study there were no reference materials for renewable energy and road infrastructure courses at the Ministry of Education in the study sites and the various government vocational training centres. This is detrimental to the delivery of the BRIDGES project since the trainees miss opportunity to study on their own in terms of making references. Therefore, it is important for the Ministry of Education and Higher Studies in the project sites in collaboration with other stakeholders to equip these vocational training Institutes with relevant reference materials for ease of understanding of the courses among the TVET trainees and effective course administration among the TVET trainers.

The BRIDGES project has provided an opportunity to TVET trainees to access competence based skills development opportunities in road infrastructure and energy services. However, at the time of this study the project was yet to roll out in all the selected public TVET centres. The BRIDGES project as well is not likely to achieve the planned 30% participation of female in the project since very few female students are undertaking road infrastructure and energy courses. Advocacy needs to be conducted in the communities to encourage girls/women participation in these courses.

#### 5.4.3 Availability of accreditation manuals

The Somaliland MoE&HS has an accreditation manual. The TVET centres accredited in Somaliland include; HAVOYOCO, HTI, YUVENCO, Ayora in Borama, Candlelight, Burao Technical Institute (BTI) and General Assistance and Voluntary Organisation (GAVO) TVET centres. Puntland MoE&HS as well has an accreditation manual. Galkacyo Vocational Training Centre is accredited by the MoE&HS in Puntland. Garowe Vocational Training Centre is accredited by the MoE&HS, Puntland and the centre has an accreditation manual. Hayle Barise Technical Development Centre in Mogadishu is a private TVET Institute and it is accredited. The MoE&HS in Benadir Region (Mogadishu) does not have accreditation manual. TVET programmes in Benadir Region (Mogadishu) are largely managed by the NGOs both national and international. Kismayo Technical Institute has accreditation manual.

#### 5.4.4 Availability of assessment and certification guidelines

The Somaliland and Puntland MoE&HS have assessment and certification guidelines. The MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have assessment and certification guidelines.

Generally, the VQF, the VQF implementation manual, assessment and certification guidelines in the Ministry of Education and Higher Studies in Benadir Region (Mogadishu), Puntland, Somaliland and Jubaland are not standardised since some Ministries such as MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have VQF and VQF implementation manuals. Likewise, it is only MoE&HS in Puntland and Somaliland that have VQF in place though not operational. The assessment and certification guidelines are not standardised, the Somaliland and Puntland MoE&HS have assessment and certification guidelines in place, while MoE&HS in Benadir Region (Mogadishu) and Jubaland do not have assessment and certificate guidelines in place. In terms of accreditation, all the public TVET centres are accredited.

**Objective 2: To review the relevance, feasibility and targets of indicators established in the project's log-frame and provide recommendations on possible improvements**

#### **Relevance, feasibility and targets of indicators established in the project's log-frame**

The indicators and targets stipulated in the log frame are relevant and potentially attainable except for two targets that require review. In terms of relevance, the number of trades identified using labor market surveys helps in the design of curriculum content in order to impart skills and knowledge relevant and responsive to labor market needs. In addition, the trades identified are supposed to be adequate in terms of providing the market labor demands. Employers, especially from the private sector should be encouraged to participate in the design and implementation of curriculum through to employment stage and give feedback on the quality and relevance of training offered to graduates of various trades.

The number of trainees who undergo CBT either institute or enterprise based increase depending on whether the graduates gain profitable employment or not. Consequently, the assessment and certification of trainees must be based on a VQF which is acceptable nationally or internationally to attract the confidence of employers. The diversity in which CBT courses are developed enables more access to training opportunities, especially for the vulnerable and disadvantaged groups, including girls and women. This calls for more trainers, lecturers and assessors to be trained and brought on board.

The TVET providers, managers and stakeholders are to provide direction after holding consultative meetings that direct policy formulation. Manuals and guidelines that explain the VQF implementation, accreditation, assessment and certification may then be developed, guided by sound policy.

The indicators set out in the log frame are therefore appropriate if they are matched with achievable targets. However, two targets require review; 95% of graduates gain employment within 3 - 6 months after completion. This target is too high; it needs to be reviewed to make it achievable. The number of trainees to be involved in the road infrastructure and energy sector courses should as well be reviewed. The project targets 450 (30% women) trainees trained in through CBT approach by the end of project. Based on the findings of the baseline study, very few females are enrolled in these courses and as a result it might not be possible to achieve the target of 30% for women enrollment.

### **Objective 3: To provide a baseline understanding of the market/employment situation**

#### **Baseline understanding of market/employment situation**

The baseline study established that there is a weak linkage between the TVET Institutes and the private sector; this has contributed to mismatch of skills among the TVET trainees and consequently this has led to inadequate placement opportunities among the TVET graduates upon completion of their courses. TVET trainees upon completion and graduation from the TVET Institutes get placement, however the placement process is gradual considering the limited opportunities within the job market and the competitiveness within the labor market. Some TVET graduates upon successful completion of their courses have managed to start their own jobs.

In terms of productivity, there is low labor productivity among TVET graduates; this is because a number of TVET graduates do not have adequate skills to meet market needs. This hinders their ability to perform tasks at work. Likewise, there are limited socio-economic livelihoods opportunities for TVET graduates. A number of TVET graduates that get placements in the companies, are employed in the lower cadre since management of these private sector companies do not have trust in the capability of the TVET graduates as a result they cannot trust them with positions that require major responsibilities.

## **6.0 STAKEHOLDER AND COMMUNITY ENGAGEMENT**

The BRIDGES project requires stakeholders and community engagement for successful entry and exit to the program. The stakeholders are key when it comes to advocacy and interpretation of the whole process and its relevance to improved

livelihoods of Somalia/Somaliland people. Their engagement means a lot when it comes to laying down long term strategies that will ensure the sustainability of the gains made from the project. Specifically, the stakeholders and community should be engaged in adopting internationally benchmarked standards and practices if they are to become globally competitive.

A market survey was conducted and road infrastructure and energy courses were established as the major needs in the private sector, thus the initiation of the BRIDGES project. The Ministry of Education should be at the forefront in the implementation of the BRIDGES project; meetings with relevant stakeholders should be convened and a policy for the implementation of the project developed. At the private sector level, it is advisable to conduct a labor market survey to determine the existing private sector companies in the road infrastructure and energy sector and the services they provide to determine their suitability and involvement in internship programmes in future. The Employment Services Promotion office should be established within the TVE centres to help in market the skills of TVET trainees.

The proposed exit strategy for the BRIDGES project would entail: Strengthening the capacities of the existing TVET centres to enable them continue providing quality trainings to TVET graduates. The skills strengthening would involve strengthening the capacities of trainers as well as management of the TVET centres by developing cost recovery measures to help promote sustainability of the TVET Institutes.

The linkages with the private sectors need to be strengthened, with clear roles stipulated. The private sector needs to be encouraged to continue providing internship opportunities and job placement to TVET trainees and graduates. The internship programme needs to be diversified to include life skill training such as customer care, public relations to help TVET trainees become more grounded to the work environment.

The MoE&HS needs to be empowered with adequate skills, human resource and funding for the management of the TVET Institutes. The MoE&HS need to establish a strong monitoring, evaluation and reporting system for follow up of activities of the TVET Institutes including ascertaining the authenticity of the skills being imparted on the trainees in addition to the delivery of the curriculum. The training should focus on trainees acquiring adequate skills that enable them not only to be absorbed in the private sector but also to enable them to become self-employed upon successful completion of the training.

The TVET graduates need to be provided with start-up kits to enable them start their own jobs upon completion of the TVET course.

Community contribution to the TVET system needs to be encouraged. The community should be encouraged to support the TVET centres for purposes of ownership and

sustainability. The community needs to contribute their own resources to support the management of the TVET centres. In the same vein, it is important to introduce school fee payment in TVET Institutes to promote sustainability. Subsidized school fees need to be introduced to help support the management of the TVET Institutes.

## **6.1 RISKS TO BRIDGES PROJECT IMPLEMENTATION**

The key potential risks to BRIDGES project implement include:

Cultural factors - Hargeisa Technical Institute might not be willing to accept girls in the institutions. The management of Hargeisa Technical Institute believes that female students should not be mixed together in the same class with male students. Therefore, to convince the management to change their perception on the enrollment of girls in energy and road infrastructure courses is challenging. However, the other institutes - Kismayo Technical Institute, Galkacyo Vocational Training Centre and Garowe Technical Institute are willing to enroll girls/women in their institutes.

- Insecurity is yet another challenge; some parents might not be willing to send their girls to the TVET centres especially in cases where the centres are far off from home for fear of attacks on the way.
- The proposed curriculums for energy and road infrastructure courses have provided provision for safety measures, however if these safety measures are not established within the TVET Institutes, this would compromise on the quality service delivery.
- The demand from the private sector is as well so high that warrants quality service delivery. Due to constant changes in the private sector, it is important for TVET Institutes to continuously organise refresher courses targeting TVET graduates to update their information. New equipment's as well keep on emerging in the markets, it is important to ensure that the TVET centres embrace this change.

## **7.0 RECOMMENDATIONS**

Key recommendations that are derived from the BRIDGES baseline study in Somalia include:

### **Recommendations at the private sector levels**

#### **Linkages with the labor market**

The TVET – labor market linkages are not fully developed in the study sites at the moment. There are relatively low linkages between a number of courses offered in the TVET centres, the training processes including assessments, and certification and the needs in the labor market. This will be a missed opportunity to accelerate the image and value of TVET certificates, and may contribute to often found distrust of the industry in the certificates from training providers. However, there are companies providing internship programmes to TVET trainees in electricity courses, however there is no clear distinctive programme for the internship programme in these companies. Some students are as well expected to observe processes during the internship programme contrary to the expectation of a practical session. As a result, relevant industry committees composed of practitioners (private sector and training providers) should be formed to review existing occupational standards and training plans as well as learning materials (curricula) and provide a clear distinctive programme that fits the internship programme based on the energy and road infrastructure course curriculum. Further consultations should also be conducted with the private sector and relevant and more stakeholders should be brought on board to provide TVET trainees with diversity of industries to select for internship programmes based on the diverse courses that they undertake in these institutions. Consequently, a reporting line should be established between the private sector companies offering internship and the training providers to report on the performance of the trainees in addition to the overall assessment by the industry at the end of the internship programme.

### **Recommendations at the Ministry of Education levels**

#### **Labor skills market surveys and other assessments**

The development of vocational education, within the VQF occupational standards, to meet the needs of the local economy offers further skills training in market driven skill sets, and contributes towards self and wage employment. It requires credible labor market survey's and markets systems development to boost private sector employment capacity. Regular Labor Market Analysis and Graduate Destination Surveys (tracer studies) are essential for proper direction and feedback in programme development (curriculum revision) and to keep pace with technological and social

changes. In developed TVET systems tracer studies have become a standard for all education and training providers, including higher education institutions to measure external efficiency, which represents the bedrock of TVET and Higher Education institutions as these are directly targeting the employment (external) system. However, this baseline study established that labor market surveys are rarely done; therefore, the MoE&HS should support TVET skills training providers conducting tracer studies, analysis of regulatory and other constraints facing these training providers. The MoE&HS should guarantee quality standards in and transparency in education (energy and road infrastructure course training). Currently the depth (and duration of the programmes) is rather shallow and limited to basic, short courses designed to promote immediate employment. While swift employment is indeed highly desirable to warrant internal and external efficiency gains, the actual programmes offered must fully link to opportunities in the economy. It is anticipated that the BRIDGES project will bridge this gap since the certificate courses for the BRIDGES projects are anticipated to take a period of 1 year and the diploma courses 2 years, thus giving students an ample and sufficient time for both theoretical and practical work with in-depth understanding of the courses they undertake. Therefore, the implementation of the BRIDGES project should be in tandem with international standards to enable TVET graduates (energy and road infrastructure) to be competitive in the market.

### **Career guidance, counseling and information**

Given the limited intake capacity for secondary education, and the fact that adolescents have a diversity of talents, not always in the academic-dominated secondary education area, TVET needs to be a conscious, equal alternative to secondary education needs to be provided to the individual adolescent. Research on available opportunities needs to be conducted and quantified in terms of training places, programmes, costs and financing, and this should be fed into career guidance and counseling to children in grade 7 to 8 primary education, but also in labor information offices, or similar fora (labor markets and telephone information services) on-the-job opportunities for further training. Girls in particular should be guided and encouraged to enrol in TVET courses – energy and road infrastructure that are perceived to be the preserve of boys. At primary levels girls should be encouraged to undertake science subjects that would help them develop interest in energy and road infrastructure courses. Exposure visits at primary levels should be organised for students more so girls to help build their confidence and interest in energy and infrastructure courses.

### **Establishment and making TVET systems operational**

To improve on the TVET performance in the country, systems and process need to be in place to guide on the roll out of the program. The baseline study established that in Puntland and Somaliland there are VQF though not operational, while Jubaland and Benadir Region (Mogadishu) do not have a VQF in place. Therefore, it is prudent to

strengthen the VQF in Puntland and Somaliland to enable them to be operational, while in Jubaland and Mogadishu, it is important to establish the VQF. This is important as it will enable TVET trainees in the BRIDGES project to be assessed and certified based on the VQF.

### **Training approaches**

The baseline established that the CBT and dual mode training approaches are not in use in the public TVET Institutes. Consequently, none of the TVET trainers have been trained on CBT approach, thus the need to introduce the training programs in the TVET Institutes to enable TVET trainees to acquire adequate competence. TVET trainers as well need to be trained on CBT approach to enable them deliver the TVET program in the respective courses – road infrastructure and renewable energy courses diligently.

### **Labor productivity**

The study established that there is low labor productivity among TVET graduates since they do not have adequate skills that meet the labor market demands. Therefore, it is important for the BRIDGES project to consider upgrading the qualification levels of TVET graduates by introducing Diploma and Degree certificate courses for the road infrastructure and renewable energy courses to improve on the skills of TVET graduates to enable them become more competitive in the labor market. This will not only help TVET graduates to become competitive in the labor market, but will also diversify their socio-economic livelihood opportunities, thereby improving on their incomes.

### **TVET courses**

The study established that there are energy courses - electricity offered in the TVET Institutes, however renewable energy – solar is not offered in the TVET Institutes. In addition, road infrastructure courses at the time of the baseline were not being offered in the TVET Institutes. Thus, the need to introduce these courses in the TVET Institutes to meet the current labor market demands. Similarly, the courses need to be offered at advanced levels – diploma and degree levels to enable TVET graduates to become competitive in the labor market.

### **MoE&HS levels – long term engagements**

#### **Governance of the sector**

A number of skills training providers both national and international are engaged in the TVET sector. Their contributions should be better (systematically) regulated, and guided by sector-wide oriented government policies and effective quality assurance measures and management, including reporting standards.

This baseline study established that there are records of the number of persons trained in various TVET courses including electricity courses especially from the national TVET Institutes. However, there is no national record of the various skills available in the country. Therefore, in the area of data management, data collection (gender disaggregated) should become the prerogative of the MoE&HS/ TVET Authority based on international standards. Data should reflect diverse areas in TVET including policy setting, implementation, monitoring, and re-planning. Data generation must be made easy, not only by curtailing the scope, but also by introducing hand-held devices and offline data generation. A data system should have the capacity of capturing information on pre-training, training and post training status of a trainee to ease decision making by stakeholders and MoE&HS.

## **Curriculum**

The curriculum for energy and road infrastructure courses exists however these curriculum are still in draft mode, therefore it is important for the MoE&HS in collaboration with the TVET stakeholders to consider validation of these curriculums to make them official. In addition, the curriculum for energy and road infrastructure sectors need to be rolled out in TVET private providers for purposes of standardization.

This baseline study established that currently there are no reference materials for energy (solar system) and road infrastructure courses – learning materials and books, therefore there is need for the development and procurement of these learning materials, where they exist there is need to revise and upgrade the materials to match with current courses being offered under BRIDGES project. In addition, the current workshops for practical sessions in the public TVET Institutes are very limited, therefore is need to expand the workshop facilities to accommodate energy and road infrastructure practical sessions. The workshops as well need to be equipped with modern equipment's.

For effective adoption of the standardized, VQF aligned level based training throughout Somalia in both public and privately run TVET Institutes, the MoE&HS and its TVET Qualification Authority should enter into a partnership agreement with neighboring TVET providers (for example, Kenya and Ethiopia) and align their training with these as technical standards are alike across countries. This cooperation should include the training of managers and trainers of TVET centres and/or Institutes.

In terms of language, despite the policy on TVET stipulating that the language of instruction should be in English, the MoE&HS should consider translating the curriculum to Somali language for ease of understanding for both the instructors as well as the students to improve the quality of service delivery of TVET.

## **Establishment of the training Institute for TVET trainers, providers and managers**

Currently there is no training institute for TVET trainers, directors and providers in Somalia. A number of trainers training in the TVET centres are equally not trained in pedagogy. Therefore, it is important to establish a training centre for that will specifically train trainers, managers and providers in pedagogy and curriculum implementation, management of institutions and governance. The centres will also offer CBET courses for fresh beginners as well as in-service training and short courses for those who are in employment. This will help improve the number of trained personnel in CBET and also serve as a means of progression to higher education.

## **Recommendations at CARE International level**

### **Advocacy on TVET**

Advocacy needs to be conducted in the community on the importance of TVET, more so higher skills education and girls' participation in energy and road infrastructure related courses for communities to buy in. Community members have a negative attitude towards TVET; it is mostly considered relevant to persons who have failed and have no option of advancing their education. Energy and road infrastructure courses are mostly perceived to be for male gender. There is a need to sensitise the community on the need for everyone to access TVET regardless of gender, class, ethnicity, disability, or any other social factors. Likewise, girls and/or women need to be encouraged to undertake courses such as energy and road infrastructure since there are diverse areas of specialization that girls can undertake including marketing of energy and road infrastructure products. Therefore, community leaders, religious leaders and persons in authority need to advocate for TVET and the need to enroll girls in energy and road infrastructure courses as it not only gives students a chance to acquire technical skills but it also provides an equal opportunity for the girls and/or women to effectively compete in the job market. The media as well should be at the forefront in educating the community and the public in general on the importance of TVET and more so the participation of girls in energy and road infrastructure courses. The governments of Somalia, Puntland and Somaliland needs to liaise with stakeholders in TVET and ensure that the private sector acknowledges TVET certificates.

### **Vocational Training Institute Management and Instructor's Training**

The major part of teaching has to refer to occupational tasks and the knowledge, skills and attitudes required for accomplishing them. The trainers therefore need a profound knowledge of the occupational tasks and their integration in work and business processes of the economic or industrial sector for which they educate their students.

Ideally, they themselves would be able to practically accomplish such tasks at an appropriate level of sophistication, especially in institutional-based vocational education systems.

Areas of duty which are specific to vocational trainers include providing vocational skills training, marketing up-to-date requirements of the economy and work places, cultivating collaboration with the private sector, providing career guidance and counseling, conducting a market systems assessments, local economic development market surveys, developing curricula for initial and further vocational education and training, and skills delivery in conjunction with development partners.

The current Instructors in energy and road infrastructure sectors have competence in their specific areas; however, they do not have the pedagogy skills to impact the required knowledge to the TVET trainees. In addition, some TVET trainers were trained before the collapse of the central government, since then there have been tremendous changes in TVET in the country. Therefore, it is recommended to conduct a capacity building sessions for the Instructors to help improve on their capacities to transfer knowledge to the TVET trainees. Standardised policies for teacher training (training of instructors) need to be developed. Study tours to other neighbouring countries with developed TVET systems should be organised for learning purposes such as Tanzania, Kenya and Ethiopia.

Competence of the trainer in the craft technology is important (not theoretical knowledge about certain phenomena). In cases where the trainers have acquired the necessary theoretical credentials, they need to be exposed to acquire the practical knowledge, through attachments, possibly with groups of students to real work places. Where this is not possible, trainers need to be attached to the relevant training in the region.

### **Post training**

It is imperative that the training providers anticipate the changes in the market, and adapt their training programmes accordingly. If the training is properly designed and inter-linked to the needs of the (informal and formal) economy, TVET can demonstrate positive employment effects, and will contribute to increased productivity, competitiveness, and sustainable growth strategies and this is what the BRIDGES project is anticipated to do. It should also become a standard option that training centres expand their scope of programmes offered and take the form of business incubators, by providing start-up capital, as often recommended. A side effect is that the training centres would create a source of modest income.

Success in training for the formal and informal sector rests mainly with pre- and post-training activities; these should include entrepreneurial training and support to business start-ups.

## **7.1 CONCLUSIONS**

TVET plays a significant role in the socio-economic growth and development in a country. Research has shown that countries that have breakthrough in the technological world today are those that have placed more emphasis and invested substantially on vocational and technological education. These countries have also re-defined their technological and vocational education through strategic planning, effective policy, and appropriate decision making strategies. Technical and vocational Education and Training will therefore be an indispensable aspect of the educational system of Somalia. This is attributed to the fact that unlike other forms of education, TVET is aimed at acquisition of practical and applied skills as well as basic scientific knowledge for the development of the country. TVET is an instrument of self-employment to the individual who has been trained not only by subject matter inhibition but who, through experimental learning, perceives it as a real life solution to problems and can make use of their initiative in the labor market. Therefore, the BRIDGES project is a game changer, the project provides TVET trainees with an opportunity to acquire relevant skills that would enable them participate in economic development. The project as well provides career progression that enables TVET trainees to acquire adequate and relevant skills that is anticipated would enable them compete effectively in the labor market and improve their chances of employability. Nonetheless, only time will tell if this fact comes to fruition.

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