

STUDY ON REASONS FOR ENTREPRENEURS ABANDONING CLIMBING KILNS IN RWANDA



FINAL REPORT

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Le présent rapport expose les résultats d'une étude conduite dans le cadre du programme « *Promoting off-farm employment and income in the Great Lakes Region through climate responsive construction material production* » - PROECCO, mis en œuvre par SKAT Consulting Ltd sur financement de l'Agence Suisse pour le Développement et la Coopération. L'étude a été réalisée en relation avec le début de la nouvelle phase de réalisation du programme et vise essentiellement à déterminer les raisons d'abandon des projets de fabrication de matériel de construction dans le passé. Cette étude avait pour objectifs principaux de documenter les raisons qui ont poussé à l'abandon initialement (avant l'intervention de PROECCO); fournir des éléments de compréhension pour l'utilisation des installations traditionnelles au détriment des infrastructures améliorées proposées aux producteurs ; informer SKAT Consulting et ses partenaires sur les motivations pour investir dans le secteur céramique au Rwanda et enfin d'indiquer les éléments clés de l'intervention actuelle qui permettraient d'éviter les erreurs commises dans le passé et assurer une durabilité certaine aux projets finances.

Après une revue de la documentation élargie, l'équipe de consultance a conduit une étude qualitative auprès de personnes et institutions capables de fournir une information de qualité et pertinente sur le programme. Un échantillon de 50 personnes a été rencontré et interviewé (soit individuellement ou alors en groupe de discussion) pendant les 15 jours qu'ont constitués la période d'étude. Les catégories de personnes rencontrées incluaient les partenaires au développement, les représentants du gouvernement au niveau central et décentralisé, ainsi que les bénéficiaires du programme (individus et coopératives). 14 sites de production situés dans 5 districts de la Province de l'Ouest ont été visités afin d'effectuer une observation directe des unités de production. L'étude a couvert la période de pré-intervention de PROECCO ainsi que la première phase d'intervention du programme (Novembre 2012-Octobre 2015).

L'étude révèle que parmi les raisons qui ont poussé à l'abandon initialement se situent :

- Le manque d'appropriation des fours qui étaient essentiellement construits par l'Etat et délivrés aux communautés pour exploitation sans mesures concrètes d'accompagnement ;
- Le manque de suivi par l'Etat des projets délivrés aux communautés pour exploitation a été une autre raison d'abandon ;
- Les défis techniques rencontrés lors de la phase d'exploitation et résultant de l'utilisation de technologies inadéquates pendant la phase même de construction de ces fours a été une autre raison d'abandon;
- Le choix de situation géographique des sites était essentiellement basé sur l'accès aux matières premières et notamment le principal combustible qui était le bois. Après l'interdiction de l'utilisation du bois comme combustible dans le secteur, la situation géographique de certains sites a été une raison de leur abandon ;
- Avec l'interdiction de l'utilisation du bois comme combustible dans le secteur céramique au Rwanda, les coûts de passage aux énergies alternatives a été un autre déterminant de l'abandon de certains sites de production ;
- Et enfin, la mauvaise gestion de certaines coopératives a conduit à leur éclatement et par conséquent à l'abandon des sites de production gérés.

L'étude a aussi permis d'identifier clairement l'importance du PROECCO en termes de réduction de l'impact environnemental du secteur céramique au Rwanda ainsi que l'importance du programme pour

l'amélioration des conditions de vie des producteurs surtout pour les jeunes en milieu rural et ces deux éléments constituent des motivations sûres pour investir dans le secteur céramique au Rwanda.

Malgré ce succès, la mise en œuvre de PROECCO présente des défis qui, pour certains, constituent des risques pour la durabilité du programme. L'étude s'est employé à les identifier :

- La situation géographique des sites représente toujours un risque pour l'impact du programme car il n'avait pas prévu de construire de nouvelles unités de production mais plutôt d'améliorer des projets existants ;
- Les producteurs perçoivent des difficultés à servir le marché local spécialement pour les briques (même si ce n'est pas le cas pour les tuiles) en raison de prix élevés. Leur frustration est essentiellement liée à l'existence d'une *compétition illégale* issue de briqueteries informelles ;
- Le manque de transfert de connaissance ainsi que le renouvellement limité des membres de coopératives constitue un risque pour la durabilité du programme ;
- En dernier lieu, l'étude a noté le rôle biaisé de l'Etat qui, tout en reconnaissant l'importance du secteur, délaisse le suivi et l'accompagnement des producteurs.

Sur base de ces risques, l'étude dégage les recommandations suivantes, catégorisées par type d'acteur.

Il est recommandé à SKAT Consulting de :

- Réviser la stratégie de sélection de ses bénéficiaires et éventuellement cibler les mieux organisés auxquels l'organisation offrirait un accompagnement ajusté à leurs besoins spécifiques;
- Ajuster sa stratégie de formation et renforcer la composante de gestion de projets afin de renforcer les compétences entrepreneuriales des producteurs ;
- Augmenter sa couverture en termes de nombre de bénéficiaires formés pour renforcer le transfert de connaissances au sein des structures productrices ;
- Renforcer sa collaboration avec l'Etat (avec une attention particulière aux autorités locales, à la fois aux niveaux du district et du secteur) en se positionnant comme un facilitateur à part entière du développement local. SKAT Consulting devrait aussi promouvoir le partenariat avec l'Etat auprès de ses bénéficiaires afin d'établir un dialogue régulier et continu.

Plus globalement, il est recommandé ce qui suit :

- Les autorités locales (au niveau du district et du secteur) devraient faciliter l'accessibilité des producteurs aux points de vente d'une part et aux sites d'extraction de matière premières d'autre part ;
- Les autorités locales (au niveau du district et du secteur) devraient renforcer leur contrôle de producteurs illégaux afin de garantir aux producteurs utilisant des techniques respectant l'environnement un cadre de travail idéal. Au niveau central, le Gouvernement devrait établir un cadre de régulation convenable afin de permettre une différenciation de produits;

L'étude conclue a un grand potentiel en termes d'impact du PROECCO au niveau local et national, à condition de proposer un cadre de mise en œuvre complet et efficace incluant une nouvelle stratégie de formation (révision de la sélection et contenu) qui serait facile à gérer, relativement à bas coûts et adoptée par les producteurs.

EXECUTIVE SUMMARY

This report presents the results of a study conducted in the framework of the « *Promoting off-farm employment and income in the Great Lakes Region through climate responsive construction material production* » - PROECCO, implemented by SKAT Consulting Ltd with the funds from the Swiss Agency for Development and Cooperation (SDC). The study was conducted in relation with the starting of the new implementation phase of the PROECCO and aims at determining the reasons for abandoning the previous projects of construction of building material (before the PROECCO). The study intended also to provide the key elements for understanding the preference for temporary structures (like traditional clamps) for brickmaking over established brick infrastructure and use; inform and ensure SKAT stakeholders the importance in investing in modern brickyards and the sustainability of current intervention and draw a strategy paper that indicates key elements of which the current intervention have to take into consideration, how to avoid any failure and build sustainable entities capable to run such businesses in the future.

After an enlarged documentation review, the consultancy team conducted a qualitative study with individuals and institutions capable of informing to the nest about the programme. A sample of 50 people was met and interviewed (either individually or in discussion groups) during the 15 days of the study period. The categories of people met included development partners, representatives of the Government at central and decentralized levels as well as the beneficiaries of the programme (individuals and cooperatives). 14 sites were visited in 5 districts of the Western Province in order to make asite observation and discussions with the beneficiaries. The study covered the period of pre-intervention of PROECCO as well as the first phase of intervention of the programme (November 2012-October2015).

The study revealed that among the reasons for abandoning the kilns initially, there are:

- The lack of ownership of the projects by their beneficiaries due to the fact that they were initially constructed by the Government and delivered to communities for exploitation without any concrete accompaniment measures;
- The lack of follow-up by the Government after handing over to the communities for exploitation;
- The technical challenges during exploitation phase resulting from the use of inadequate technology during construction phase;
- In the beginning, the choice of location of the sites was majorly based on the location of the principal inputs: the firewood. When it was banned for use in that sector, the geographical location of certain sites was the reason for abandoning them.
- High production costs related to the use of combustible alternative to firewood were another reason for abandoning the climbing kilns
- Finally, the mismanagement of some cooperatives resulted in their break-up causing them to abandon the kilns

The study also identified the importance of the PROECCO in terms of reducing the environmental impact of the ceramic sector Rwanda as well as the importance of the programme for the improvement of living conditions for its beneficiaries in Rwanda especially the Youth in rural area. These constitute the principal motive for investing in the ceramic sector in Rwanda.

Despite the success of the programme, its implementation faces some challenges that constitute risks for the programme and the study has helped to point out:

- The geographical situation of some production sites still represents a risk for the sustainability of the programme's impact as there wasn't any plan to build new production units or refurbish existing projects;
- The producers have problems serving the local market especially for improved bricks (even if this is not a problem for the tiles) because of high prices. Their frustration comes from the existence of illegal competition at local level due to informal brickyards;
- The lack of knowledge transfer and the limited renewing of the cooperatives' members constitute a considerable risk for the programme's sustainability
- Finally, the study has noted the biased role of the Government, which, even if it recognizes the importance of the sector, doesn't ensure the monitoring and accompaniment of the producers.

Based on the challenges and risks, the study has formulated the following recommendations, categorized by specific actor. It is recommended that SKAT Consulting:

- Revise its strategy for selecting beneficiaries and target the most-organised to whom would be provided a tailored accompaniment, adjusted to their specific needs;
- Adjust its training strategy and reinforce the project management component in order to strengthen the entrepreneurial skills of the producing structures;
- Increase its coverage in terms of number of beneficiaries trained in order to strengthen the transfer of knowledge within the managing structures;
- Reinforce its collaboration with the Government (with specific attention to the local authorities, both at district and sector level) and position itself strategically as the real facilitator of rural development where it is present. The organization would also promote among its beneficiaries a reinforced partnership with the local authorities in order to establish a regular and continuous dialogue;

More globally, it is recommended the following :

- The local authorities (at district and sector level) should ease the accessibility to selling points and extraction sites (of raw material) for the producers;
- The local authority should reinforce the control of illegal productions sites in order to guarantee to the producers using environmental friendly techniques, a sound production environment. At the central level, the Government should establish a proper regulatory framework in order to standardize the products.

The study emphasizes the high potential of PROECCO in terms of impact at local and national level. The potential would be entirely unleashed under the condition of proposing a comprehensive and effective training method that is easy to handle, owned by producers and has low costs in order to increase the sustainability of the interventions' impact.

I. INTRODUCTION: BACKGROUND, PURPOSE AND SCOPE OF THIS STUDY

The present report is proposed by the Consultancy team as a summary of the results from the study conducted on the reasons for entrepreneurs abandoning climbing kilns in Rwanda. After this introductory part, the report will present the findings on the reasons for abandoning the climbing kilns in Rwanda, the lessons learnt from the current phase of implementation (ended in October 2015) as well as the recommendations for the sustainability of the programme. The reader will notice the reporting format that combines the consultancy team's analysis with quotes portraying the informants' views. This was chosen due the qualitative character of the study and it allows the reader to perceive by him/her self the informant's wording giving more room for own-analysis.

1. BACKGROUND

In the last 20 years, different development agencies as well as the Government of Rwanda have helped rural populations construct and operationalize climbing kilns (in Rwanda) for the production of roof tiles and fired bricks. More than 30 kilns have been constructed by the Government under different funding frameworks and handed over to local cooperatives and associations. The main purpose of constructing such kilns was meant to create off-farm employment for youth and women in rural areas as well as availing roofing and walling materials at affordable prices while adding value to local materials (such as clay). When external funders withdrew their funds , it was observed that most of these brickyards were slowing production, until most of them closed their businesses.

Table 1. Key dates in the ceramic sector in Rwanda in the perspective of the support provided by the SDC to the sector

Prior to 1993: intervention of SDC to support large-scale producers -
- mainly private companies (E.g., Ruliba)

1993: Close of most of the projects funded by SDC, principally due to political instability in Rwanda

1995 - ...: Slow revival of the sector, principally run by cooperatives

2005: Banning of firewood in brick-making and tiles-building sectors by the Government of Rwanda + weakening of many production units → abandoning of some of them and back to informal traditional making

1993-2012: No intervention of SDC in ceramic sector in Rwanda

2011: Funding strategy restructuring in the Swiss Government availing funds for "Overseas development in climate adaptation and resources"

January 2013-October 2015: Implementation of the Phase 1 of the "Promoting off-farm employment and income in the Great Lakes region through climate responsive construction material production" programme.

From 2013, SKAT Consulting Rwanda was commissioned by the Swiss Agency for Development and Cooperation (SDC) to coordinate the PROECCO programme. The new project in the Great Lakes Region aimed to promote the brick sector by:

- supporting the creation of off-farm employment especially in rural area
- promoting new technology for production, using environmentally friendly firing materials and constructing energy efficient kilns and also
- putting in place permanent production units which are economically and environmentally viable for growth.

Since then, SKAT Consulting Rwanda has helped entrepreneurs to rehabilitate or upgrade more than 30 abandoned kilns in Rwanda and Burundi.

In light of the previous experience with climbing kilns projects in the brick sector in Rwanda, SKAT Consulting Ltd and its stakeholders have started a reflection around the sustainability of the impact of their interventions. This study was commissioned in order to identify and document the reasons why the previous entrepreneurs had abandoned the previous kilns.

2. OBJECTIVES OF THE STUDY

This study is conducted in line with the above background with the objectives to:

- To effectively document the rationale of constructing those kilns (from donors' point of view);
- To effectively understand the various reasons why brick entrepreneurs have abandoned established brick infrastructure and use temporary structures (like traditional clamps) for brickmaking;
- To inform and ensure SKAT stakeholders the importance in investing in modern brickyards and the sustainability of current intervention;
- To draw a strategy paper that indicates key elements the current intervention should take into consideration to avoid failure and build sustainable entities capable of running such businesses in the future.

The consultancy team aimed also to determine the sustainability of the rehabilitated/upgraded sites with regards to the previous experiences. To do so, they have explored various dimensions including:

- What was the rationale behind the initial construction of climbing kilns in Rwanda and how were the initiatives organized?
- What are the main reasons why the climbing kilns have been abandoned previously?
- What were the motivations for those who have rehabilitated/upgraded them?
- What are the achievements of the rehabilitated/upgraded sites? The respondents will have to introduce a comparative aspect between now and the previous phase.
- What are the main challenges identified by new comers? And what would be the best ways to handle them?

In order to answer to the questions raised above, the present study explored the previous phase of projects (rationale for constructing the kilns and the project design including the challenges faced, which, in the end, contributed to the abandonment of the kilns) and the current phase in order to draw the lessons learnt from the previous phase (selection criteria of rehabilitated production units, new projects design, challenges which constitute the risks for PROECCO and recommended sustainability measures).

3. METHODOLOGY OF THE STUDY

Tailored interview guides (the main questions are presented in the annex to this report) were prepared in order to collect necessary information from the various actors of the ceramic sector who were consulted. After a wide documentation review, the consultancy team visited production sites and consulted various categories of the sector's stakeholders including Government representatives at central and local level as well as beneficiaries. The table below represents the categories of informants consulted and a detailed list will be presented in the annex.

Table 2. Number of stakeholders consulted

Category	Techniques	Number
Commissioners of the study (SKAT Consulting Ltd)	In-depth interviews	2
Central government representatives	In-depth interviews	6
Local government representatives (at district and sector level)	In-depth interviews	12
Beneficiaries	In-depth interviews	8
	Group discussions	20
Donors representatives	In-depth interviews	2
Total number of people consulted		50

With the aim to vary, as much as possible, the quality of information collected in the framework of this study, the consultancy team concentrated on interviewing key actors outside of Kigali and the Western province. The following table represents the sites that have been visited and the map of the visited sites is shared in annex.

Table 3. Type of production units that have been visited during the study

No	District	Name of the enterprise	Type of producers	Categories
1	NGORORERO	DUHESHAGACIRO IBIDUKIKIJE	Cooperative	Rehabilitated
2		ABISHYZEHAMWE	Cooperative	Rehabilitated
3		KOPTKA	Cooperative	Rehabilitated
4	RUTSIRO	TWIYUBAKIRE	Cooperative	Rehabilitated
5		WOMEN ENTREPRENEURS	Association	Identified for rehabilitation
6		UBUDEHE/GITARAMA	Public	Identified for rehabilitation
7	KARONGI	TUGOBOKANE	Cooperative	Rehabilitated
8		COJETRAVO	Private company	Identified for rehabilitation
9	NYAMASHEKE	Kamonyi Brickyard	Private company	Rehabilitated
10		KOPEDEVUKA	Cooperative	Rehabilitated
11		NSENGUMUREMYI Valence	Individual	Identified for rehabilitation
12	RUSIZI	COFABRI	Cooperative	Identified for rehabilitation
13		UWITONZE Fiacre (Imbaraga Association's)	Association	Identified for rehabilitation
14		FARG Beneficiaries' Kiln	Association	Other

II. FINDINGS ON REASONS FOR ABANDONING KILNS PROJECTS

In this chapter, the Consultancy team presents the results of the discussions held during the study. In the light of the sequential schema presented in the introductory part, the team was specifically looking at the reasons for abandoning the kilns before PROECCO's interventions (before 2012).

1. INITIAL RATIONALE FOR INVESTING IN THE BRICK SECTOR

In a small country like Rwanda the scarcity of land has been, for many years now, a reality that represents an enormous challenge for the development of the country. Various governmental reforms have been initiated intending to address the shrinking income of farmer families and to shift from subsistence to commercial farming. In a situation where most of the population depends on the agriculture sector (more than 80% of all Rwandans declare themselves farmers), government measures banning the partitioning of agrarian land demonstrate the need to seek alternative employment areas especially in rural areas. The ceramic sector was identified as one sector with a high potential to create off-farm jobs, especially for the Youth, in Rwanda.

In addition to creating jobs, investments in the ceramic sector were also intended to provide quality construction material to the population in rural areas. The investments in the sector (construction of kilns and distribution of Hydraform machines) coincided with the implementation of the “*Bye Bye Nyakatsi*” programme¹ by the Government of Rwanda whereby the production of roofing and walling material in rural areas was promoted by the Government. Also, the projects were initiated in the framework of the decentralization of governance in Rwanda, transferring the power to local authorities up to the closest level to the population. Therefore, in terms of operationalization, the construction of kilns was mostly handed to private companies while the follow-up of their functioning was the responsibility of the Government. In direct contrast to the situation before 1993, where most of producers were private actors, after 1994, the Government promoted the exploitation of those projects by organized cooperatives.

After conducting a review of the existing documentation, the consultancy team met with different categories of people conducting one-on-one interviews or group discussions. Below are summarized what was said to be the main reasons for abandoning the kilns before the intervention of SKAT Consulting Ltd and they are strongly interconnected.

2. REASONS FOR ABANDONING THE KILNS

This section presents the reasons mentioned by the informants to the study as causes for the abandon as well as the consultants' analysis of the information which was collected.

To start, the following quantitative-based insights demonstrate the weight given by the respondents to the reasons for abandoning the kilns. In terms of interpretation, the table represents the number of people who mentioned each reason as a cause of abandon. The reason which was mentioned by most of the people was considered the highest in terms of ranking.

¹ In the framework of participating in Rwanda development process, different projects were initiated by the Rwandan Diaspora and *Bye Bye Nyakatsi* is one of them. The project aims at improving the welfare of Vulnerable Rwandan Community. The project goes in line with Government policy of eliminating grass-thatched houses in Rwanda and the role of Rwandan Diaspora in this struggle will be through this project.

<http://www.rwandandiaspora.gov.rw/diaspora-initiatives/bye-bye-nyakatsi-project.html>

Table 4. Reasons for abandon of climbing kilns previously to PROECCO programme

Reasons for abandon	No of interviewees		Percentage
	To have mentioned the reason at this "rank"	Total interviewed in one-on-one interviews	
Lack of ownership by beneficiaries	10	30	33%
Lack of follow up on the side of the Government	8	30	27%
Technical challenges related to use of inadequate technology during construction phase	8	30	27%
Location of the production units in comparison to the raw material extraction sites or to the markets to be served	6	30	20%
Mismanagement of cooperatives of producers	5	30	17%
High production costs related to the use of alternative combustibles	5	30	17%
Other Causes	4	30	13%

1. Lack of ownership by the intended beneficiaries of kilns projects. This was mentioned as the major problem that brought the kilns projects to being abandoned. These kilns projects were mainly expected to create off-farm jobs and the local entities (district and sectors) were in charge of their construction. The construction was handed to private companies and the production units were handed over to local communities for their use and management. Without an effective accompaniment that would have eased the proper working of the projects (training and follow-up), the transfer was characterized by a lack of ownership by the very beneficiaries intended to use the production units. This influenced the decision to abandon the projects because the communities felt that the projects still “*belonged to the government.*” The producers were not taking any initiative to invest in maintenance or upgrading of the production units. In some cases, the communities preferred to rebuild traditional kilns, not wanting to “*leave their comfort zone.*” The following quote illustrates the challenge.

“The construction of these kilns was not made in consultation with the local population although they were going to become their end-users. This was very unfortunate and it led to the lack of ownership of the production units. This happens often at local level! It is like when markets are constructed without consulting the population needs: they are not used at all!”, **Central government representative**

2. Lack of follow-up by the Government was another challenge mentioned as a reason for abandoning the kilns. Indeed, the initial construction of kilns was largely funded by the Government of Rwanda, which, in most of cases, hired private companies to perform the work. The procurement processes in the Rwandan public sector tend to follow the rule of the-most-cost-effective putting aside the crucial technical considerations. In that, there was not a proper follow-up of the construction of kilns projects and this resulted in technical challenges (presented in the second point below) that brought to the kilns being abandoned. Another dimension of this lack of follow-up is that after handing over the projects to the communities, there was no follow-up by the Government on how they were used. The following quote informs on this point.

“It was common that the Government didn’t follow-up on the production units after handing them over to the communities. No one took care of the sites, which led to their abandonment. The local Government should have followed up better. I have rarely seen kilns constructed as Ubudehe projects but for those which were under Ubudehe scheme, it is true that the communities are expected to conduct the projects themselves, the authorities playing only an advisory role (in order to encourage the prioritization of local needs and discourage the Government’s influence) but the authorities should have played a bigger role.”, **Central Government representative**

3. **Technical challenges related to the construction of kilns.** With “*Bye Bye Nyakatsi*” programme, the opportunity to provide rural areas with construction materials was timely but there was not a proper market study to ensure that the options chosen (technology of construction for kilns, location of sites or again management of production units) were well informed. In the context of this study, many informants have mentioned that some private companies were not knowledgeable of the techniques relevant to the construction of kilns and ended up delivering irrelevant solutions. In some cases, the districts were even ending up with non-finished units, impossible to use for the communities, which was the reason for abandoning them. The biggest technical challenge was that the construction of the kilns was, sometimes, not proposing optimal firing technologies and once the production units had been handed to the communities; the exploitation has met technical challenges whereby the products were a low quality. This was one reason for abandoning the climbing kilns. Another technical challenge was related to that the climbing kilns didn’t allow the delivery of a high production at once which represented a challenge for the producers being able to cover, in a timely manner, for large needs. The technical challenges are expressed through the following quotes.

“Before the intervention of PROECCO, previous constructions were weakened by the lack of adequate technology that resulted in low production and inefficient products. The production units were working to their lowest capacity of production and the quality of the products was not the best.”, **Skat technician**

“The biggest problem that caused the abandon of the kiln was its poor construction. We initially hired a technician to support us but he could not perform the necessary tests on the quality of the products throughout the firing process. The technician ended up abandoning the cooperative and yet we could not use the kiln by ourselves”, **Beneficiary, Rutsiro district**

“In our case, apart from the lack of ownership, the poor construction of the kiln that made its exploitation very difficult and not profitable is of cause of its abandoning.” **Beneficiary, Rusizi district**

4. **Location of the production units in comparison to the raw material extraction sites or to the markets to be served.** The location of the production site heavily influenced the production costs, which directly impacted the selling price of the final product. As a cascading effect, the expensive products brought to the lack of viable market at local level causing the decrease of production because of the slow move of products. All this was resulting in the deterioration of the production unit, which was no longer regularly used because of a lack of investment. Indeed, most of the sites were located near their principle resource (usually near forests before the banning of firewood by the Government) and when the firewood was banned, the location was no longer relevant for the production. The transport of alternative combustibles represented a new and considerable cost that influenced the prices. But when the accessibility was privileged, it happened that the site was located near the sell points easily accessible; and in that case the producers faced some costs related to the transport of the raw material from the extraction areas which also have an incidence on the price of final products as explained above. The following was mentioned by the study’s informants and illustrates this point.

“Sometimes the kilns were constructed too far away on top of hills, near forests where the firewood was found. This was practical for the work even if it was difficultly accessible. But after the banning of firewood, the location of such units really became a big challenge and threatened their profitability, bringing to the abandonment of some of them.” **Beneficiary, Ngororero district**

“Many brickyards operated by farmers are traditionally located near forests and are far away from alternative energy sources. Changing to alternative fuel results in considerable additional transportation costs, which soon exceeded any energy savings”, **Document of programme PROECCO P.16, SKAT-September 2012**

5. Mismanagement of cooperatives. According to the donors, before 1993 most of the managing structures of these production units were private companies but the revival of the ceramic sector was characterized with the promotion of cooperatives. In some cases, the mismanagement of cooperatives was a reason for abandoning the kilns. Some informants mentioned the fact that the very functioning of cooperatives lack of the business mind that is necessary to sustain the success of those projects. Related to that, it was also mentioned as a challenge the fact that the cooperatives had problems to maintain their membership rate, having problems to renew their human resources. This last point continues to constitute a challenge for the current phase and will be discussed further in the following section.

“Management problems were another reason why the kilns were abandoned. In the neighboring sector, the president of a cooperative working in the ceramic sector wanted to create a parallel activity similar to theirs using their money and the members didn’t agree with it. They ended up closing and they went to the court to solve their problems”, **Beneficiary, Ngororero district**

“In some places, it happened that the young people who were trained ended up leaving the area without transferring the knowledge to the rest of the groups. In that case, the knowledge was lost and the managing structure compromised”, **Central government representative**

6. High production costs related to the use of alternative combustibles. The decision to reduce the use of wood as a combustible was another reason that restrained activity in the kilns. When the decision was taken in 2005, there was no accompaniment measures proposed to economic sectors that depended on wood such the ceramic sector. The users were told to find alternative combustibles such as peat or other organic waste (rice peelings, coffee waste or sawdust). The use of this alternative combustible was costly especially for small-scale producers who saw their costs-profile highly impacted. Some informants have also mentioned that the use of these combustible in traditional kilns gave less quality products. Another aspect of this problem has to be considered environment-wise and it is the contradiction related to the use of these organic wastes that are supposed to serve as organic manure for agricultural activities. They have mentioned the fact that there was no proper market study made before the decision to stop using wood as combustible. All this, combined with the other reasons mentioned above, especially the lack of ownership, clearly explains the abandoning of some projects even if among the various stakeholders visited (both at central and local level) none mentioned it as the major reason.

“I am from Nyagatare (Eastern province) and I usually have to go 50kms away from my home to look for good bricks because those produced at the improved kilns near my home have the reputation not to be solid” **Central Government representative.**

“The peat that we were advised to use is extracted in Rusizi district and that’s why we have preferred sawdust. But sometime we can’t find it nearby and we have to pay for its transport from Ngororero city! This is a heavy cost line for us. But also, the clay that we use is extract two hills from here and we hire independent employees for its extraction and transport. This is also expensive” **Beneficiary, Ngororero district**

“Of course it is profitable; the cooperative has 30Rwf of profit margin per brick. But if I was a member of the cooperative I would propose to reduce the price in order to become relevant on the market” **Cooperative employee, Ngororero district**

In addition to documenting the reasons for abandoning the production units in the ceramic sector, the consultancy team looked at what would be the lessons learnt for the current implementation phase of PROECCO. In the following chapter, we are presenting the results from the documentation review and the interviews and group discussion held at central and local level.

III. LESSONS LEARNT FOR CURRENT IMPLEMENTATION PHASE: CHALLENGES AND SUSTAINABILITY MEASURES

Since 2013, SKAT Consulting Ltd has been hired to implement the PROECCO with the aim to have “*the impact of building material production on environment and climate in the Great Lakes region minimised, and at the same time, the livelihoods and working conditions of the workers in the building material sector improved*”. The identification of the main challenges to the ceramic sector helped to define the programme’s scope of work and priorities. We can mention the following²:

- The rural livelihoods were still challenged by the scarcity of land and the need of an effective diversification of income sources was stronger than ever;
- The proper skills (technologies and business environment) for appropriate building material production were still rarely owned by the producers. Most of the interventions were concentrating on technologies, rarely considering the business environment in which the rural building material manufacturers operate;
- Firewood restriction policies for brick making were difficult to implement as long as alternative fuels (rice and coffee and sawdust) were scarce or not yet available.

The PROECCO programme focuses on improving the whole value-chain of the products departing from the soil exploration level up to the construction level and it is phased into four parts (capacity building, demonstration, consolidation and dissemination)³.

Another objective of the current study was to assess the sustainability of the current intervention. The consultancy team asked relevant informants, questions about the perceived impact of the programme, the challenges faced by the sector and the risks that they represent for the current and coming implementation phases of PROECCO. Below are presented a summary of the results of the discussions.

1. PERCEIVED EFFECTS OF PROECCO

The consultancy team has identified the perceived positive impact of the PROECCO. Several informants have strongly mentioned the fact that SKAT’s interventions were clearly and sustainably impacting the ceramic sector in Rwanda. Specifically, two important points have been noted and below are presented some highlights of the impact of PROECCO identified by the study.

1. [The introduction of new technologies using sustainable alternatives to firewood](#) is praised by the authorities as well as the beneficiaries of the kilns projects. The PROECCO clearly and directly contributes to reducing the use of firewood allowing a better management of forests and decreasing the negative impact of the ceramic sector on environment. The accompaniment of producers provided by SKAT is highly appreciated and provides to the beneficiaries strong and sustainable knowledge and skills. Although the environmental impact is appreciated, the downside identified by some informants has to be noted here and it is related to the rehabilitation of soil after the extraction of raw material used for the production. The quotes below highlight the perceptions of the study’s informants on the environmental aspect of PROECCO.

² Source: Document of programme “Promoting off-farm employment and income in the Great Lakes region through climate responsive construction material production” prepared by SKAT for the SDC, P7-9 – September 2012

³ Source: Document of programme “Promoting off-farm employment and income in the Great Lakes region through climate responsive construction material production” prepared by SKAT for the SDC, P. 23 – September 2012

« The official orders to stop using firewood should have been based on robust evidence. For example, in order to reduce the use of wood in private settings, the priority has been put on the development of cooking stoves and they are being promoted since some years but a proper measuring of the environmental impact is only going to be conducted now. Another example is related to the extraction of clay. The rehabilitation of soil after extraction of clay is not real at local level. The valleys are left empty after extraction and the districts which are in charge of its monitoring don't do it. There is some contradiction because on one side we say that the mining sector is profitable for the country but on the other side, we don't measure its negative impact on the environment. We should be more coordinated and pay attention to the environmental externalities related to all our development initiatives» **Central Government representative**

“SKAT contributes to the Government's mandate to professionalize the ceramic/brick sector. The contribution is sustainable because it touches to the core part: the technology” **Central Government representative**

“We would work even if they weren't here anymore. We have acquired the knowledge for good after all!” **Beneficiary, Ngororero district**

2. **Industrialization of the ceramic sector and creation of off farm jobs especially in rural areas** is also on good track as the new technologies introduced by the PROECCO programme have allowed the producers to improve the quality of their production providing construction material of good quality available for use at local level (especially for the roofing material. The challenges related to the production of walling material are discussed in the following part). The creation of off-farm jobs for the youth is also observable, especially in rural areas and the ceramic sector offers alternative and sustainable employment to agriculture, which serves the second goal of PROECCO. The picture is more ambivalent for the employment of women because, especially in rural areas, the cultural mindset reserves to women the biggest part of domestic duties. The informants told us that women's domestic duties are incompatible with the fulltime character of the work in kilns. Through the discussions also, the consultancy team has noted that the small-scale producers tend to be more fragile as they don't realize the economies of scale that would allow them to be more profitable.

“The impact in terms of provision of off-farm jobs is clearly visible, including in rural areas. The youth are the most concerned. In urban areas a kiln can employ 100 people and even in rural areas the ceramic sector is a viable alternative to the agriculture sector in terms of employment” **Central Government representative**

“In the villages, the wealthiest is considered to be the owner of a kiln!” Dismas-RNRA **Central Government representative**

“Yes we used to have women as members of the cooperatives but they had to leave because the work that we do is fulltime and it competes with their domestic responsibilities. When they work here, their houses suffer from it and they prefer not to” **Beneficiary, Ngororero district**

“Whether they are producing 1500 units a day or less, the producers will have the same costs in terms of combustible and other main inputs. According to me, the smallest producers have higher production costs because they can't realize economies of scale” **Central Government representative**

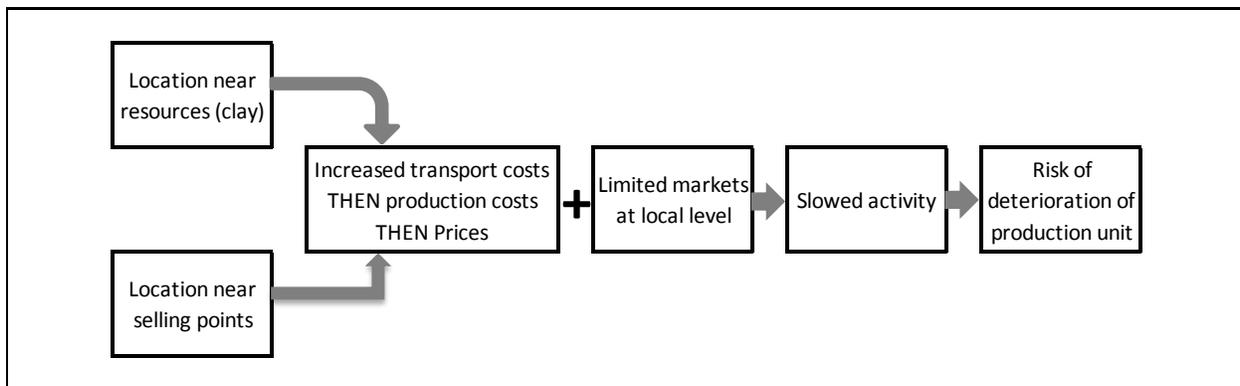
The impact of PROECCO programme in terms of reducing the environmental damages caused by the production of building material and also in terms of improving the livelihood of its beneficiaries is visible, and this constitutes the motivation for investing in the sector in Rwanda. Despite that fact, the study has identified some remaining challenges.

2. REMAINING CHALLENGES AND RISKS

This chapter presents the main challenges to the sector that were identified in the current implementation phase. If not addressed properly, they also present a risk for the current phase of PROECCO programme.

1. The [location of the production units in comparison to the raw material extraction sites](#) was mentioned by the informants of the study to be among the remaining challenges in the sector. In the beginning, the PROECCO project was not supposed to intervene on existing production units. But given that the construction of new and improved production units is too expensive and wasn't planned in the local authorities' budgets, SKAT selected a few existing kilns to be rehabilitated and exploited in an improved manner. They cover the Western province with up to 30 kilns for now. A technical analysis was conducted to identify challenges and served as an internal learning process for SKAT Consulting Ltd. The selection criterion for the production units to be rehabilitated by SKAT was a combination of accessibility and quality of soil. In the current phase, the location of the production site is still a challenge for the producers because of the same reasons pertinent to the previous phase that are explained in the previous chapter. The following graph helped to understand the relation between the various factors.

Figure 1. Cascading effect of the challenges for the current implementation phase of PROECCO programme



2. According to a certain number of informants (local authorities and beneficiaries), [the prices of the improved products are too high for the local market](#), which represents a loss of earnings for the producers. In relation to this challenge, the main determinant of the high costs was said to be the high transport costs of the raw material (clay or combustible) from the extraction site to the production unit. We have also noted that even if this is perceived as a challenge by some beneficiaries, it has to be noted that the brick market is segmented and the urban needs represent an opportunity for the products that are produced in rural areas. This is not, therefore, a limitation for the producers in terms of availability of market (as they can sell in other areas than the production areas) even if it doesn't contribute to achieving the objective of providing improved construction material in rural areas as desired by the Government of Rwanda. But in relation to this, what constitutes a real challenge is that the banning of wood as a combustible encouraged

the apparition of informal and illegal traditional kilns that still use wood as a combustible up to now. These units propose construction material at a cheaper price and constitute illegal competition for the producers using improved kilns, which is a considerable challenge for the producers.

“The brick produced in upgraded kilns are still on average more expensive than the traditional ones and they have not a viable market at local level. Then, if the production is intended for the market in more developed areas, the production sites would have been located in accessible areas rather than near the raw material extraction zones as some of them were!” **Central government representative**

3. In many cases, **the management of cooperatives** is indicated to be a strong challenge if it is problematic and in any case to be a determinant of the PROECCO’s success. The capacity building dimension of PROECCO targets the leaders of the cooperatives who receive knowledge that they are supposed to share with the rest of their groups. But some concerns have been expressed about the fact that the trainees don’t transfer that knowledge to the rest of the groups. What if the ones who know leave the cooperatives? This lack of knowledge transfer constitutes a risk for PROECCO as it could bring back to the lack of ownership that was identified as among the reasons that brought to the abandoning of kilns projects during the previous phase. Under this point again, we have noted the possibility that the members of the cooperatives reduce as time passes as the new generation of young people who want to join the cooperative *“don’t have enough money to acquire the minimum share in order to be in the cooperative”*. Most of the time, the young generation intervenes with the producers as employed staff without being members of the cooperatives because of that limitation.

“Sometimes the leaders end up developing their own businesses in competition to the cooperative’s”
SKAT Consulting employee

4. The **“biased” role of the government when it comes to the ceramic sector** is also mentioned as a possible risk for the sector. On one side the Government recognizes the important role played by the ceramic sector in terms of contributing to the improvement in the quality of construction material; which is demonstrated by its integration in the *Imihigo*⁴ (both at central and local levels). In the Rwandan context, the performance contracts also known as *Imihigo* usually portray the best indicator of whether or not the Government integrates a sector in its priorities, guarantying the sustainability of the said sector. But when it comes to the follow-up, maintenance or repairing (though crucial even if costly) of the very structures that help in the realisation of the goals set in *Imihigo*, the Government doesn’t plan accordingly. On this point, some people mentioned also the malicious effect of *Imihigo* on the producers (private sector and cooperatives) whereby they sense the pressure to fulfill with the Government’s commitments, sometime putting aside their own interests.

On another hand, and in pursuit of the objective of industrialization of the production of the construction material, the Government of Rwanda has introduced the utilization of Hydraform machines without necessarily training their beneficiaries on how to use them which has a big impact on the quality of the produced material. Under this chapter, there is also a need to note the fact that the public sector is incapacitated by the absence of a proper *standards and regulatory framework*. Even if public policies exist, their implementation is still hampered by the fact that, the production of these improved products is

⁴ Every member of the civil service is required to complete and sign a performance contract, known as *Imihigo*. This is referred under Prime Ministerial Order (2010 - N°121-03 of 08-09-2010 - Prime Minister’s Order establishing the procedure of performance appraisal and promotion of public servants).

<http://www.rwandapedia.rw/explore/imihigo>

still minimal when considered at national level. The imposition of their use for example wouldn't be realistically feasible.

« *The official orders should have been based on robust evidence. For example, in order to reduce the use of wood in private settings, the priority has been put on the development of cooking stoves and they are being promoted since some years but a proper measuring of the environmental impact is only going to be conducted now* » **Central Government representative**

5. As a general comment about this study, it was **challenging for the consultancy team to collect information on an implementation phase that has ended too much time ago**. In some cases, especially during the fieldwork, the informants could hardly perform the comparing exercise that was requested from them.

After analyzing the above, the Consultancy team has formulated the following recommendations. These recommendations portray the team's analysis but also it presents for some of them, qualitative information collected from the field that illustrates the proposed recommendations.

IV. RECOMMENDATIONS FOR SUSTAINABILITY OF THE PROECCO

In line with the identified challenges, it was recommended that:

1. Even if the location of the production sites can't be changed, a couple of efforts may be made by different stakeholders of the ceramic sector in order to improve the working conditions of the producers. The Government of Rwanda should reinforce the monitoring and support offered to the producing structures (instead of intervening only when there are problems). The local authorities especially, should provide to the producers adequate infrastructure that increases the accessibility of the selling points (roads, *Umuganda* activities to repair or maintain existing structures, etc...) and in case of remote extraction sites, to ease the procedures for granting accessible extraction sites.

SKAT Consulting could introduce (or reinforce if it is already existing) the component of business management (especially the planning processes) in the trainings proposed to the PROECCO project's beneficiaries so that they can understanding more the need of investment in order to ensure sustainable profits. Overall, it is suggested that SKAT adapt its training strategy in order to reach more cooperative members.

Secondly, it is recommended that SKAT Consulting privileges the quality over the quantity and offer accompaniment which is tailored to specific needs of the producers who are the most organized. In rural areas, SKAT would concentrate its effort on enough large-scale producers who are the very ones that have the potential to realize the economies of scale necessary to guarantee them a long-term and sustainable profit. Indeed, supporting small structures takes too much effort to SKAT Consulting and its partners, and yet, the *return-on-efforts* is diverse depending on their profiles. In urban areas though, SKAT would support initiatives (small or not) that target niche-markets and propose good quality products to specific buyers.

2. The Rwanda Environment Management Authority and the districts are responsible for the monitoring of illegal use of wood but the realities at local level elude this control up to now. These entities should reinforce their monitoring in order to regulate the ceramic sector in a better way. In relation to this, the authorities would have to improve the regulation framework at national level, especially its

implementation side, which would set clear standards for the sector in order to increase the normalization of the construction material.

3. Even if the lack of ownership identified during previous phases has reduced, the risk that it could reappear as a result of cooperative mismanagement has been identified by this study. Some informants have suggested that the risk may be reduced if the production units are handed to the private sector. But given the importance of cooperatives in terms of structuring the activities at local level, reaching the level of complete privatization in the ceramic sector is not an option to be considered. SKAT Consulting, as a supporting entity, would need to increase the level of ownership within cooperatives by reinforcing the business management dimension of the trainings that are proposed to the producers. Specifically, a stronger monitoring of how the acquired knowledge is used and shared within cooperatives' members would be a good way to boost the ownership of the projects by the cooperatives and their accountability.

4. Overall, the level of consultation among the stakeholders of the ceramic sector would need to be increased. It is recommended that the Government of Rwanda, especially the local entities, better consider the producers' needs during their planning priorities and provide the necessary facilitation for a sound development of the sector. The Districts are essential actors for the development of the ceramic sector but the sectors would be the entry point for any engagement with the local authorities as they play a central role in the public sector's planning processes. It is suggested that SKAT Consulting engage the Sectors to take into considerations the ceramic sector's needs during their short, mid and long-term development plans.

5. Given the important impact on local economies demonstrated by the producers supported by the PROECCO Project, SKAT should target geographical areas that present a real potential of profitability for the producers (eased accessibility for end-users of products, eased accessibility to inputs for producers) in order to ensure an increased impact of its interventions overall.

“Who would put a kiln in Nyaruguru (Southern)? None would afford the improved construction material there! They don't have the money to buy improved material” **Central Government representative**

6. On the other side, the public authorities have suggested that the producers (cooperatives and individuals) should involve them more and earlier in their projects' cycles in order to have their full ownership in the end. It is suggested that this is part of a larger partnership strategy for SKAT Consulting that would aim to introduce a consulted approach for the second phase of PROECCO.

“I am asked to intervene only when the cooperatives have managerial problems and it is unfortunate. We would all gain if the authorities were involved from the beginning of the project so that we can join our efforts for the success of these projects. The owner of the projects would approach us and involve us throughout the project implementation” **Beneficiary, Ngororero district**

“For sustainability of all development initiatives there is a need of coordination and integrated planning so that the farmer knows that he has an effect on rivers and the brick producers keep in mind that his/her activity is linked to others' This will be done if all stakeholders are involved from the beginning of a project” **Central Government representative**

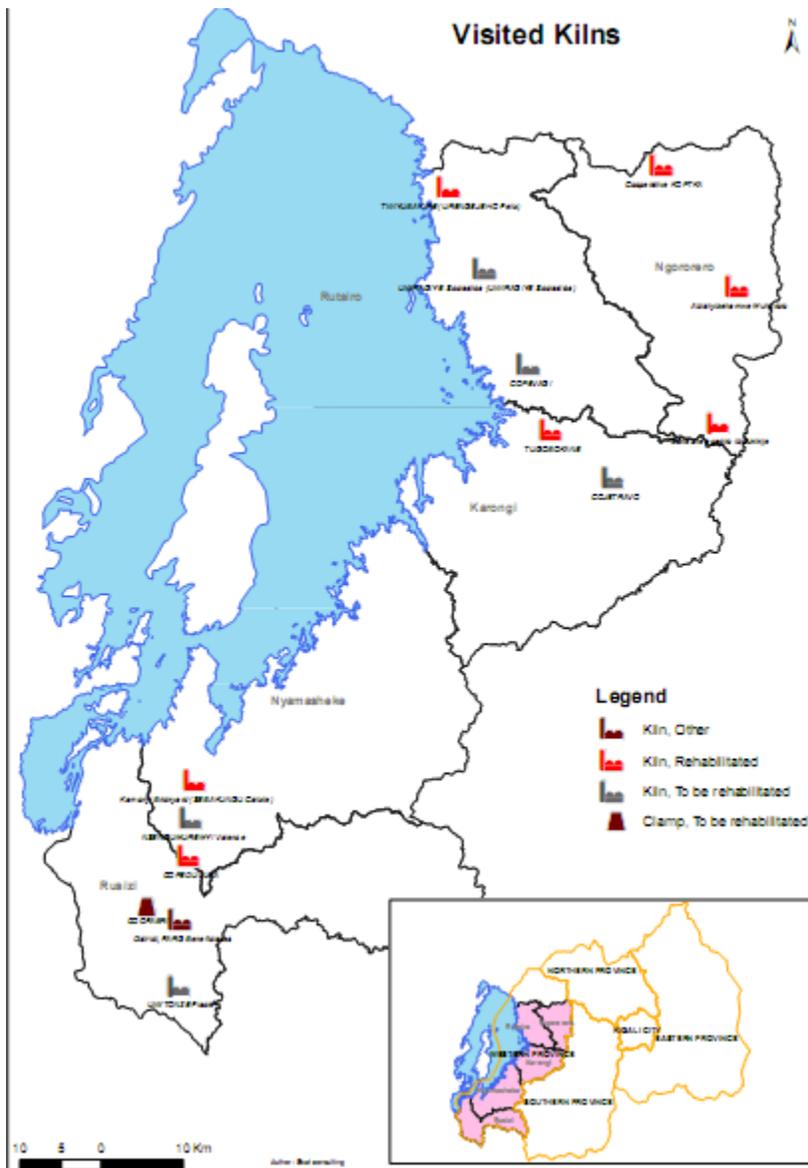
“The realities of small producers are usually more problematic than the bigger ones. The smallest can’t realise the necessary economy of scales in order to reduce their production costs and their final prices. Firing operations have the same cost whether you use small or bigger kilns. This results in the smallest ones facing more issues in finding markets” **Central Government representative**

SKAT would need to work on and introduce a comprehensive and effective training method that is easy to handle, owned by producers and has low costs in order to increase the sustainability of the interventions’ impact

END

ANNEXES

Annex1. Map of the visited production sites



Annex2. Case study on cooperative Abishyizehamwe / Muhororo sector / Ngororero

The cooperative started working in 1991 and is made of a moulding hangar, a stove, shelves and a store place for clay which is not used because they don't happen to store clay anymore. They bring all that they need to use because of the cost.

Reasons for stopping activity: Genocide of 1994.

Reasons for delaying to re-open after 1994: administrative processes + reunification of cooperative's members.

Turnover of members: after the rehabilitation of the site in 2002 up to now, the number of members decreased from 20 to 14.



Daily production: 1600 bricks and no problem for selling off their products especially with the help by SKAT.

Gender considerations: there is no woman member for now. Women are interested to join the cooperative but they don't join because their activities would hamper domestic duties because they wouldn't have time to take care of both activities. Sometime they are employed as occasional staff.

Management: there is no problem with management in the cooperative even if the district employee in charge of cooperatives at district level declared to have been called to resolve "problems in Muhororo sector"

Improvement in comparison to previous phase: Even if the sawdust has to come from far sometime which increases the production costs, at least it is always available which wasn't the case for the firewood, as it happened to lack especially after the banning by the authorities.

Support from SKAT: "We gained very much in this new technology using sawdust instead of firewood also SKAT trains us in business and cooperative management".

Challenges: (1) high costs for the transport of the clay that is extracted two hills far from the site (the wheelbarrows owned by the cooperative that are used by the staff are old); (2) the combustible (sawdust) is not always available and when it is not (on average once per month), they incur transport costs to bring it from Ngororero center to the site.

Obstacles to new members (especially the young employed as staff): the high value of the principal share (50.000Rwf). "I was part of the cooperative but I had to leave and to withdraw my shares because I wanted to re-invest my money elsewhere. My projects didn't go very well and now that I want to re-join I can't because I don't have the money to buy back the shares", former member and employed staff to transport the clay from extraction site.



END

Annex3. TERMS OF REFERENCE FOR STUDY ON REASONS FOR ENTREPRENEURS ABANDONING CLIMBING KILNS IN RWANDA

1. Background

SKAT Consulting Rwanda Ltd is implementing a project known as PROECCO (Promoting off –farm employment and income through climate responsive construction material production) funded by Swiss Agency for Development and Cooperation (SDC). The project is implemented through three coordination offices, one in Kigali City, a field coordination office in Rusizi district of the Western Province of Rwanda and another field office in Bujumbura, Burundi. The overall aim of the project is to minimize the impact of building material production on the environment while improving the livelihoods and working conditions of workers in the building material sector.

In last 20 years, different development agencies as well as government of Rwanda have helped rural population to construct and operationalize climbing kilns (in Rwanda) for production of roof tiles and fired bricks. More than 30 kilns have been constructed and handed over to nearby cooperatives and associations. The main purpose of constructing such kilns was meant to create off-farm employment for youth and women in rural area as well as availing roofing and walling materials at affordable price while adding value to local materials (such as clay). During the time, especially when development agencies were taking-off it was observed that most of these brickyards were slowing production, until most of them closed their businesses.

From 2013, SKAT Consulting Rwanda was commissioned by Swiss Agency for Development and Cooperation (SDC) coordinate a new project in the Great Lakes Region and promote the brick sector with the purpose of creating off-farm employment, promoting new technology for production, using environmental friendly firing materials and constructing energy efficient kilns, and also putting in place permanent production units which are economically and environmentally viable for growth.

Since then, SKAT Consulting Rwanda has helped entrepreneurs to rehabilitate or upgrading more than 30 abandoned kilns in Rwanda and Burundi. SKAT Consulting Rwanda is also helping brick entrepreneurs in construction of modern kilns with efficiency in combustible (such as Zig-zag kiln, VSBK, Ugandan kiln). One of questions already raised by SKAT stakeholders is the assurance of re-establishment/promotion of brick entrepreneurs with new technology and sustainability of such intervention once SKAT concludes its facilitation activities. *To assure the sustainability of such brick production businesses, Skat Consulting needs to analyse the reasons why other projects failed to assure the sustainable use of the kilns they constructed.*

2. Objectives of the Assignment

- ❖ To effectively document the rationality of constructing those kilns (from donors point of view);
- ❖ To effectively understand the various reasons why brick entrepreneurs have abandoned established brick infrastructure and use temporary structures (like traditional clamps) for brickmaking;
- ❖ To Inform and ensure SKAT stakeholders of the importance in investing in modern brickyards and the sustainability of current and planned interventions;
- ❖ To draw a strategy paper that indicates key elements of which the current intervention have to take into consideration, how to avoid any failure and build sustainable entities capable to run such businesses in the future.

3. Scope of the work

The consultant is requested to conduct a field study that will include but not be limited to:

- ❖ Document the purpose, objectives, rationality and motive from donors point of view to decide on constructing climbing kilns in Rwanda, beneficiaries selection and responsibilities;
- ❖ Document the financing mechanisms used to construct those kilns;
- ❖ Field visit to abandoned kilns (Western Province of Rwanda) and collect maximum information regarding the current status of kilns, ownership, operationalization, etc. Conduct interviews with local government and donors who have supported the construction of kilns (Suisse Cooperation, and other donors) and collect maximum information on objectives, and expected outcome to put in place such projects;
- ❖ Conduct interview with cooperatives/associations leaders and some members and document reasons why these kilns have been abandoned;
- ❖ Assess and analyze deeply the true reasons of abandoning kilns operations and compare the set up with SKAT current intervention;
- ❖ Provide key recommendations and advise to SKAT based on major risks in operating a brick kiln.

4. Deliverables

Before and by end of the assignment, the consultant will have to deliver the following:

- ❖ Inception report which includes methodology and work plan;
- ❖ Draft report to be delivered in 15 working days;
- ❖ Final report to be delivered after SKAT & stakeholders comments within 3 working days.

5. Requirements

The consultant should have previous experience in brick/tile sector and a diversity of skills in conducting project or program evaluation with at least five years' experience of undertaking similar tasks.

6. Duration of Assignment and submission of application

The assignment shall take a period of 15 working days and should be completed not later than June 29th, 2016.

END

Annex4. Interview guide for the STUDY ON REASONS FOR ABANDONING CLIMING KILNS IN RWANDA

Interview guide (key informants at national level)

Descriptive information (to be filled in for each interviewee)

Name or group description (number; W/M; Age → Youth/Elder;

Location: district, sector, cell

Category of respondent/group:

Individual ? Cooperative? Private company?

Introduction

- Follow protocol introduction
- Mention the plan/scope of the interview
- Clarify role of interviewee within institution/organization/cooperative

Previous phase: project design and rationale

- What constitutes the production unity? Kilns, hangars, HR etc
- What does the person know about the previous phase of the project?
- Was the person/group part of the previous phase?
- Was the project implemented in line with local needs?
- What were the challenges that brought to abandoning the kiln in the previous phase? (technical, technological, amasoko → technical problems, environment)
- What are the reasons for the lack of ownership if identified as a challenge? Trainings, management skills?
- Role of the private sector in constructing and managing the site?

Current phase: project design and rationale

- What was the rationale for selecting the site to be rehabilitated?
- What exactly is done differently in comparison with the last phase? Any upgrade? If yes, what exactly?
- Is there any dimension left out by the current organisation? Any remaining need? Any challenge encountered?
- What would be proposed to be changed if in charge of SKAT? Any proposed solution to tackle identified challenge?

Impact of the brick sector on beneficiaries? Beyond (community, country)?

- Perception on the project's impact? Youth and Women empowerment aspects? Creation of off-farm jobs?
- Identified indirect impact? Individual and community level.
- Sustainability of impact

Additional questions for key informants at national level

- What was the rationale for reinvesting in the brick sector?
- Selection criteria for rehabilitated sites?
- Risks for SKAT? Sustainability measures?
- Partnership for successful sector?

Annex5. List of contacts

Name	Institution/organization + Position (where possible)	Category	Location
Marius Hermann	SDC	Donor	Kigali
Claude Rwagitare	SDC	Donor	Kigali
Leopold Uwimana	Affordable Housing Division Manager	Central Government	Kigali
	Rwanda Housing Authority		Kigali
Alain Nizeyumuremyi	Rwanda Natural resources authority	Central Government	Kigali
Dismas Bakundukize	Rwanda Natural resources authority	Central Government	Kigali
	Forestry management unit		Kigali
Samson Twiringire	Air pollution control department -REMA	Central Government	Kigali
Daniel Wyss	SKAT Consulting Ltd		Kigali
Emmanuel Munyamahoro	SKAT Consulting Ltd		Kigali
Adriel	SKAT Consulting Ltd		
Jean Pierre Mugabo	Mining department-RNRA		Kigali
Jacques Mugemanyi	LODA - Minaloc	Central Government	Kigali
Evariste Musemakwari	President -	Cooperative Abishyizehamwe	Muhororo-Ngororero
Vincent Musanganya	Former member and Staff	Cooperative Abishyizehamwe	Muhororo-Ngororero
Odette Niwemwungeri	President -	Cooperative Twiyubake	Ngororero district
Members (5M and 5W)	Members	Cooperative Twiyubake	Ngororero district
Aloys Kanita	Member	Cooperative Turengere Ibidukikije	
Samuel Nyirishema	Member	Cooperative Turengere Ibidukikije	
Adrien Bucyedusenge	Hired staff	Cooperative Turengere Ibidukikije	
Gerard Kayitsinga	In charge of forestry and natural resources	LG	Ngororero district
Alphonse Hitayezu	In charge of SMEs and Cooperatives development officer	LG	Ngororero district
	ES Kabaya sector	LG	Kabaya sector
Fulgence Ndikubwimana	Agronomist	LG	Kabaya sector
Fidele Murwanashyaka		Cooperative Tugobokane	Karongi
Murego Pasteur	AGETRAVO Company	Beneficiaire	
	In charge of SMEs and Cooperatives development officer	LG	Karongi district
	In charge of environment	LG	Karongi district
Anasthase Hitabatuma	Ubudehe cooperative	Beneficiaire	Rutsiro
Antoinette Ndayisenga		Beneficiaire/Coop	
Scolastique Uwiragiye		Beneficiaire/Individuals	

Felix Urengjeho	Cooperative Twiyubakire/Legal representative	Beneficiaire/Coop	Rutsiro
	In charge of SMEs and Cooperatives development officer	LG	Rutsiro district
	In charge of environment	LG	Rutsiro district
Phenias Nsabimana	Coopeduvuka	Beneficiaire/Coop	Nyamasheke
Ngabonziza	Staff - Kamonyi brickyard company	Beneficiaire/Individual	Nyamasheke
Callizte Mwiseneza	MD - Kamonyi brickyard company	Beneficiaire/Individual	Nyamasheke
Valens Muvara	Worker - Pr sector	Beneficiaire/Individual	Nyamasheke
Valens Nsengumuremyi	Owner - Pr sector	Beneficiaire/Individual	Nyamasheke
Ananias Iyakaremye	In charge of SMEs and Cooperatives development officer	LG	Nyamasheke
Evelyne Iyakaremye	In charge of environment	LG	Nyamasheke
Uwitonze Fiacre	Owner - Pr sector	Beneficiaire/Individual	Rusizi
Cooperative COFABRI			Rusizi
	Agronomist		Sector Muganza / Rusizi
	Agronomist		Sector Gitambi / Rusizi