

BUILDING DECENT WORK FOR ALL A MARKET SYSTEM ANALYSIS OF THE CONSTRUCTION MATERIALS SECTOR IN MOZAMBIQUE

May 2018



MOZTRABALHA

With support from the Government of Sweden, the ILO implements the MozTrabalha project, which seeks to create and improve employment outcomes in both urban and rural areas, by focusing on the implementation of employment-intensive infrastructure investments and green enterprise solutions, and by creating opportunities to access productive employment for women and female-headed households.

The project pursues a market systems development approach as the unifying framework. The application of this methodology has been supported by ILO's project The Lab.

This paper summarises the findings of the market system analysis of the cashew processing industry in Mozambique. To request the full report please contact: maputo@ilo.org

I. CONSTRUCTION MATERIALS: OPPORTUNITIES FOR DECENT WORK?

The oil and gas boom in Mozambique has opened up employment opportunities for men and women in the construction sector and related sub-markets. Significant investments in the liquefied natural gas (LNG) market, estimated at US\$54 billion between 2016-2024, have meant that approximately 15,000 direct jobs and 685, 000 indirect jobs can be created if the opportunities are harnessed. At the same time,

the LNG-related construction works, especially of new housing for workers, have increased the demand for construction materials and inputs, a market with enormous opportunity to generate more and better employment prospects for men and women.

But demand for construction materials does not only derive from the LNG sector. In fact, district-level public works and small-scale urban and rural housing provide greater access for local construction material companies and workers. Despite the opportunities, the sector is permeated with high levels of informality and precarious working conditions which in turn prevents firms from growing and accessing business opportunities.

To understand the sector limitations to generate decent employment, MozTrabalha analysed their root causes, focusing on the provinces of Cabo Delgado, Nampula and Inhambane. The analysis also aimed at identifying feasible interventions to stimulate employment opportunities for youth and women, using a range of green and employment-investment infrastructure solutions.

informal businesses. However, it is within the residential market where informal enterprises are dominant. It is also here where we find the majority of local contractors and more intensive use of locally-generated building materials and project developers³. In this market, complaints regarding unfair competition, project delays, and delivery of poor quality projects are frequent.



II. THE CONSTRUCTION MATERIALS MARKET

Construction materials are key to the development of the construction sector. In the last decade, the sector enjoyed a positive though low growth rate with a yearly average of 2%¹. It is expected that the construction sector boom will re-vamp this market if the opportunity is tapped. Domestic firms are typically MSEs which are unable to meet the growing demand. In the absence of local capacity, large and medium contractors usually import or manufacture construction materials. In fact, approximately 60% of the inputs used by producers of building materials and by construction companies are imported².

The market in Mozambique features both formal and

A) MARKET DEMAND

In Mozambique, the most important final client for domestic companies is the Government, which contributes directly or indirectly to around 80-90% of the jobs in construction. The main construction investments are in health infrastructure, schools, roads and water supply and buildings for public administration. The figure below presents a picture of the several demand sources for local construction materials.

Demand for construction materials is also fuelled by the residential and commercial construction sector's boom of 2010 in Maputo, Matola, Tete, Nacala and Pemba cities. The housing market, small-scale industries and district-level public works also drive demand. According to the state-owned Fund for Housing Promotion (FHH), there is a deficit of 2 million housing units, attributed to the high population growth

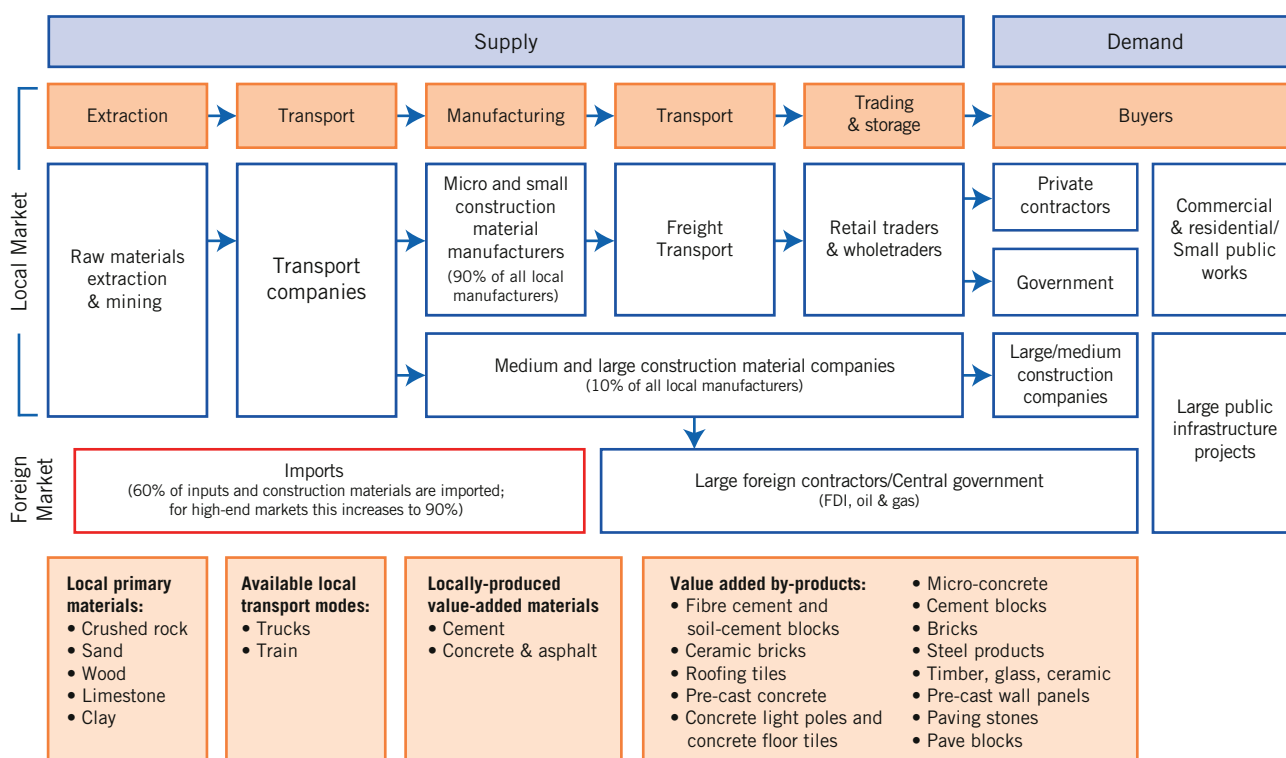


Figure 1: The construction materials value chain

- 1 Growth rate reported for the period 2005-2012 (Sutton, 2014)
- 2 ANEMM (2000)
- 3 ANEMM (2000) and Lopes (2006)
- 4 Global Development Solutions (2016)

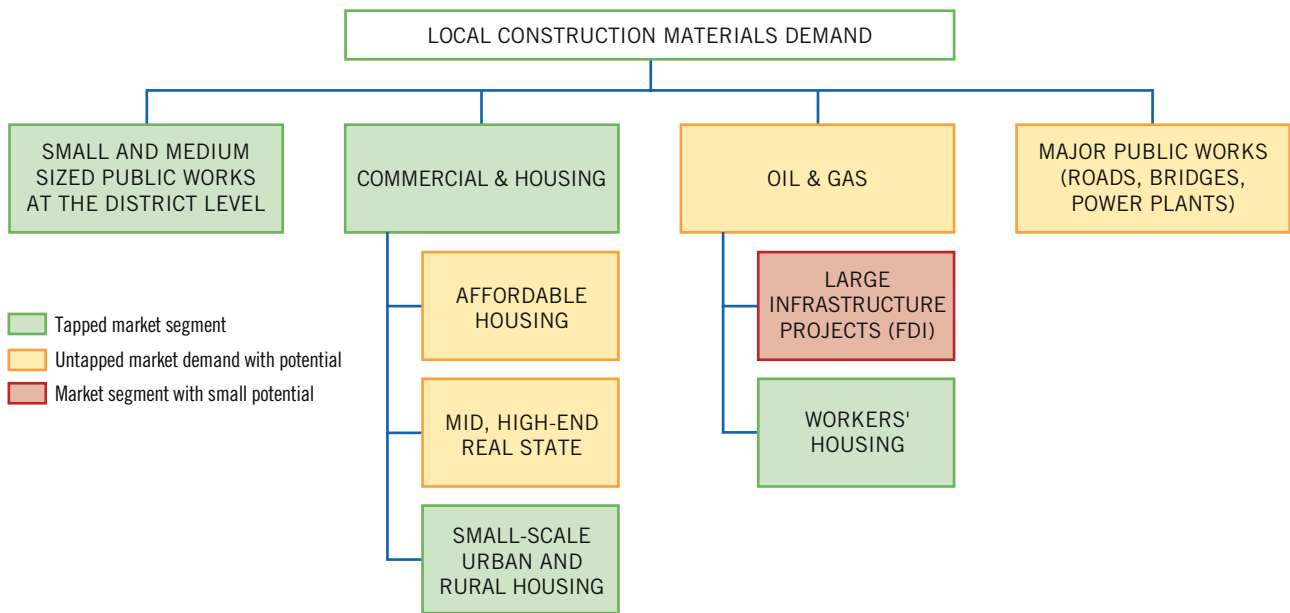


Figure 2: Current and potential market segments for local construction materials

rates, which swelled from 20 to 25 million from 2007 through 2014, as well as rising disposable incomes. Population growth has been particularly high in the 19-29 year age group, a segment with many first-time home buyers. Over 4,500 new housing units are expected to enter the market in central Maputo over the next five years, versus a projected demand of 23,000 units in the same area⁴. Although new home development has focused on mid and high end real estate markets, it is within the the market for affordable housing where opportunities for domestic material companies lie. In that regard, the FHH plans to construct 100,000 homes across the country to address the issue of affordable housing.

In the area of heavy construction works and major LNG projects, recent major offshore gas projects are expected to drive demand for workers' housing and building materials, especially cement and concrete-based materials.

B) MARKET SUPPLY

Mozambique offers a range of inputs going from raw materials through intermediate inputs, building components to finishing goods. Once produced, these are transported by

truck or rail to manufacturing sites that are run either by medium and large construction companies or by micro and small enterprises (MSEs). In the case of MSEs, the following step involves the transportation of materials for trading and storage by retailers and wholesalers. At this point, locally-manufactured materials meet the demand, which is led by private companies and government agencies for commercial and residential construction as well as for small-scale public works.

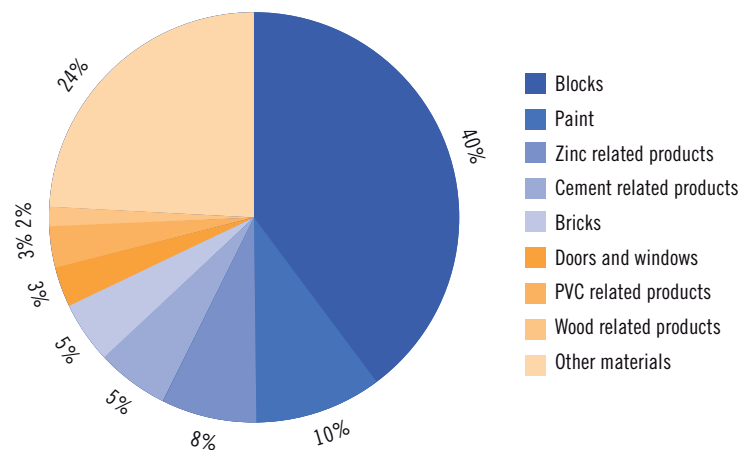


Figure 3. Distribution of companies by type of construction material

4 Global Development Solutions (2016)

5 IGC (2015)

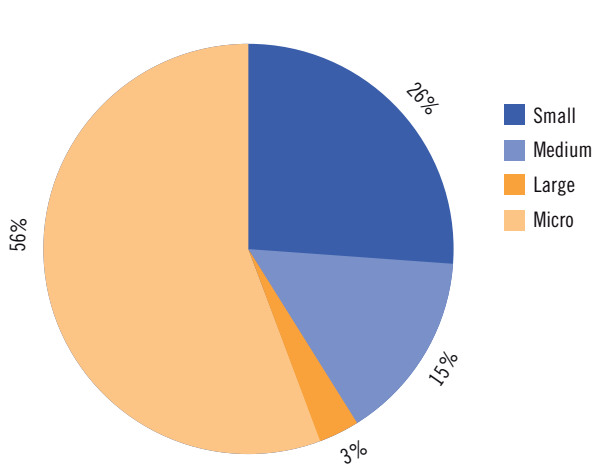


Figure 4: Distribution of companies by size

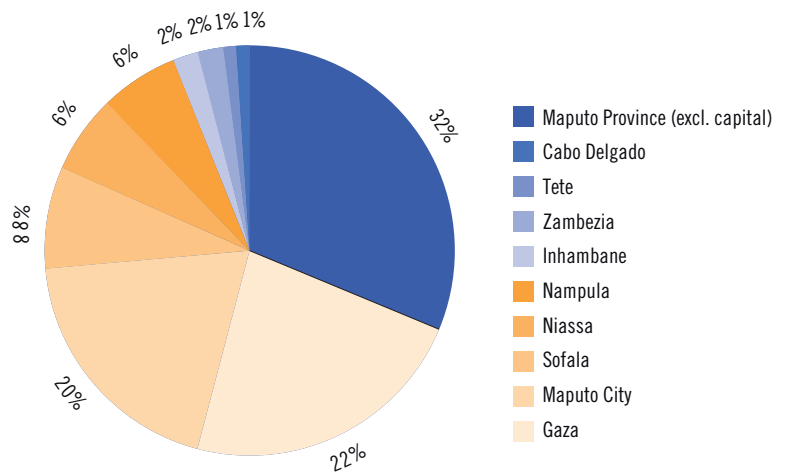



Figure 5: Geographical distribution

The following figure offers a picture of the distribution of companies by type of materials⁵.

At present, there is a total of 2,097 construction material companies⁶ in Mozambique, a limited number considering the size of the construction sector. The domestic market is also primarily dominated by MSEs with small capacity to supply the construction sector. The following figure describes the market's distribution by enterprise size, in which micro-sized enterprises dominate (56%), followed by small-sized enterprises.

Regarding geographical distribution, most of the firms are concentrated in the Southern region, as Maputo acts as a catalyst for various economic activities.

As noted earlier, approximately 60% of the inputs used by producers of building materials and by heavy construction companies are imported⁷. Only the most basic materials are sourced locally –e-g- cement and wood-, though even steel has to be imported. Nevertheless, a variety of materials do offer potential business opportunities, including pre-cast concrete, and soil-cement products.



WHY FIRMS IMPORT

- Almost half of the companies import because of high costs
- Around 35% admit the required inputs do not exist in the country
- Almost 10% of companies attribute the issue to logistics and transportation problems
- Nearly 10% of companies say local materials are of poor quality and lack standards

C) WORKERS AND WORKING CONDITIONS

EMPLOYMENT LEVELS

There are approximately 60,347 workers in the construction material companies⁸. The labour market consists mostly of men (95%)⁹, while women participate in lower levels administrative jobs or other activities like carrying water.

HIGH LEVELS OF INFORMALITY AND POOR WORKPLACE CONDITIONS

There is a high number of unregistered companies in this sector¹⁰, which is also linked to the precarious working conditions in which illegal or informal manufacturers operate. Examples include the continued practice of extracting river sand at the risk of floods, a practice that is banned in Mozambique, and the inadequate or poor use of personal protective equipment (PPE), even by medium and larger companies. Despite continued warnings by CONSILMO and inspection units companies fail to enforce the use of PPE among workers.

5 IGC (2015)

6 INE (2016), Second National Company Census, based on the 2014 – 2015 period

7 ANEMM (2000)



LOW SKILLED AND UNMOTIVATED WORKFORCE

In the building materials sector, over 60% of workers hold only a primary school certificate. Moreover, around 17% of companies report their inability to access skilled labour as a general constraint¹¹. In general, there is a significant shortage of specialists in the industrial production of building materials. Firms highlighted the need to be able to understand health and safety regulations and training, such that literacy was a prerequisite for employment. Nevertheless, with a 50% adult illiteracy understanding issues about safety regulations and training becomes difficult. In this sense, there is a need to shift the capacity building approach from traditional classroom training to more practical and targeted tools given the current reality.

HIGH LEVELS OF ABSENTEEISM

This is an issue particularly in the Northern region. Employers explain that absenteeism is high particularly in the days following salary payments and during key agricultural seasons.

LOW WORKER PRODUCTIVITY AND INCENTIVES

Among the recognized causes of low productivity stakeholders highlighted are low skills and high levels of illiteracy, as well as low wages and absence of formal and practical human resources training.

¹¹ AIMO Survey



III. THE CONSTRUCTION MATERIALS MARKET SYSTEM

This section analyses the market system’s most relevant supporting functions, rules and regulations, which were determined to have a greater impact on the conditions of work and employment opportunities. Each of these types of functions and rules contains a description of the different actors that exercise or shape the function, as well as an overview of the problems that companies, institutions, and workers face in that area.

A) QUALITY CONTROL, STANDARDS, AND CERTIFICATION

Despite increased awareness of the importance of standards, the number of construction companies and building materials certified in Mozambique is small. According to the Small and Medium Sized Enterprises Association (APME), Mozambique has only 30 certified companies while in the SADC region the level of certification reaches 98%¹². Construction firms considered that it is impossible to trust subcontractors, including building material companies, if they are not certified. A competent authority is therefore needed to monitor, certify and control the quality of services and

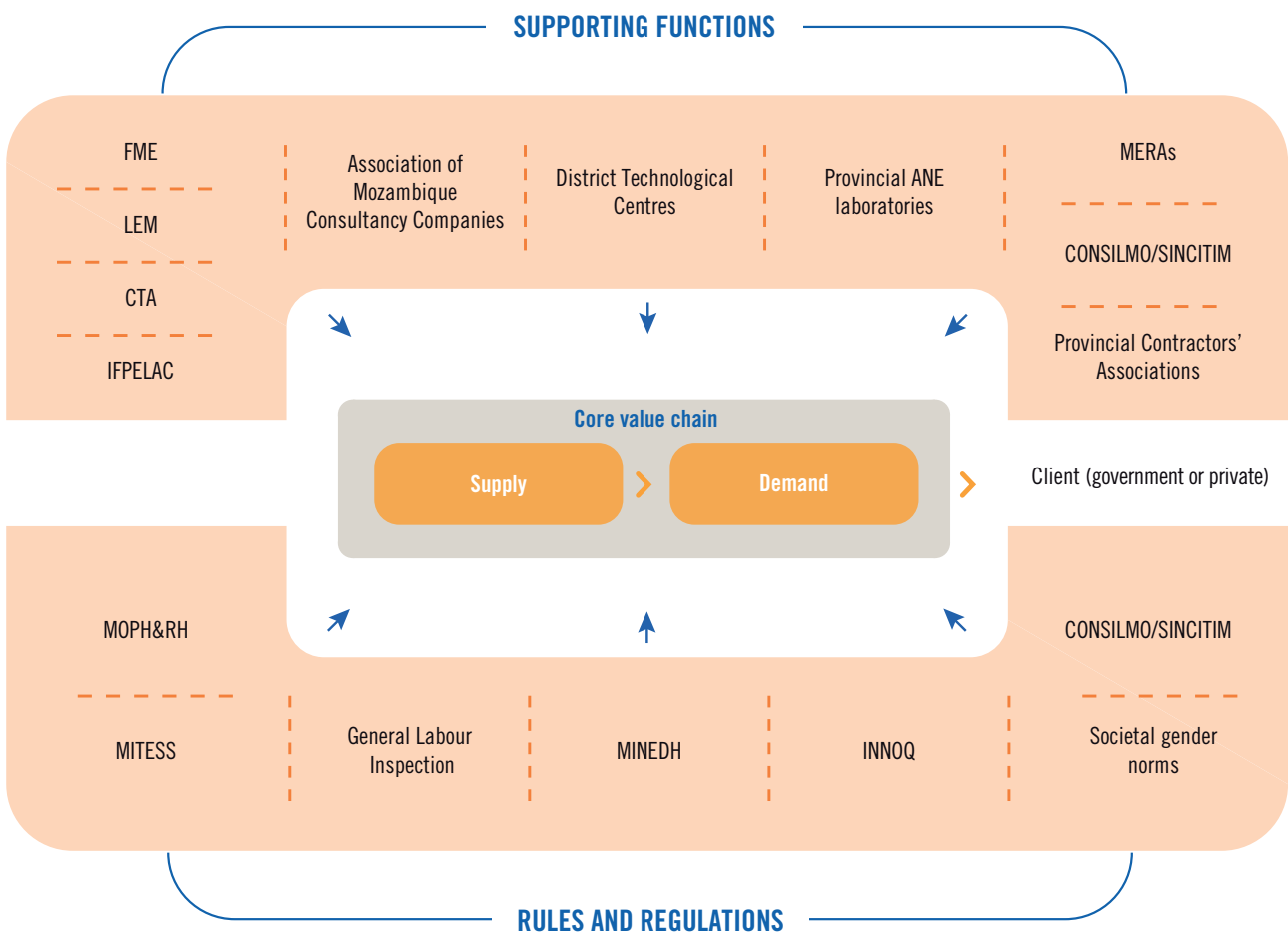


Figure 6. The construction material market system

12 Interview with APME President published in “Domingo” newspaper

materials. Moreover, due to adverse climate situations the country is in need of resilient construction that can resist natural disasters. This has led the government to consider the use and promotion of certified building materials.

As a response, the GoM established **District Technological Centres** throughout the country. The Namialo Technological Centre (NTC), located in the Nampula Province, is one of them. The NTC aims to train local artisans from the local community in producing alternative and innovative construction materials using environmental technologies, while also utilizing local human resources efficiently. Materials include soil-cement blocks, micro-concrete tile and pave blocks. To enable this production, the centre provided technical training to women and youth, and coached them to form **Rural and Associative Micro-enterprises** known as MERAs. As of 2008, around 30 MERAs had participated¹³.

The potential business case for these locally-produced materials relies on their low cost and good quality thus making them accessible to buyers. Once produced, they may go through a quality certification process by the **National Road Authority (ANE) Laboratory** at provincial levels¹⁴. In principle, the existing NTC and related laboratories for civil construction should certify the quality of produced materials, but their resources are quite limited, and they often complain of a lack of financial resources. The **Engineers Laboratory of Mozambique (LEM)** certifies the National Road Authority (ANE) Provincial Laboratory equipment.

B) TECHNICAL AND VOCATIONAL TRAINING

There are currently three main types of institutions that are licensed to provide training for purposes related to the construction industry: a) industrial institutes or mid-level polytechnic institutes; b) schools of arts and crafts and other technical schools, and c) universities providing higher-level engineering courses. Currently, there are 214 professional education centres, out of which 17 are administered by the Ministry of Labour, through **IFPELAC**, and which target specific industrial sectors¹⁵.

The main weaknesses of the training system in this area are¹⁶:

- Scarcity of mid-level training opportunities for skills needed in the construction/building materials industry;
- Difficulties faced by the private sector in building human resources at the level required;
- Low value placed on education by students. Technical and vocational education suffers particularly in this respect;
- Insufficient quantity and quality of high and mid-level professionals trained in-country/low qualification level of human resources generally;
- Low level of teaching/learning process at high school level;
- Static and outdated curricula;
- Lack of resources and school equipment;
- Lack of training on safety and health measures at the enterprise level;
- Scarcity of on-the-job learning opportunities (internships) for youth and adult workers;
- Absence of management training and professional consultancy services aimed at improving overall firm productivity, with focus on labour productivity.

Available technical courses related to construction materials include carpentry, electricity, and others. It is often the case that cement companies send their workers to be trained in individual short courses at IFPELAC centres¹⁷.

C) BUSINESS DEVELOPMENT SERVICES AND INCUBATORS

In the particular case of local construction materials, the **NTC** has the role of a business incubator. In the recent past, the NTC helped artisans to organize and form MERAs, and provided them with services such as management training, in addition to training in the manufacturing of innovative materials. The NTC also provided office and working space, including for

13 National Housing Directorate (2017), Interview

14 Interview with Provincials Directors of Public Works

15 MITESS 4th Labour Market Information Bulletin

16 PIREP (2010)

17 Interview with CONSILMO

storage of products. Unfortunately, due to several reasons, including but not limited to, management problems, weak product awareness, and end of support from donors, the NTC is no longer working. However, with small and structured help the centre could restart their activities.

Concerning **business development services**, the landscape is rather weak and is reflected in the several construction industry firms in Mozambique that are characterized by weak management practices. This is a disadvantage, as a growing body of evidence has found strong management practices to be correlated with higher productivity and better overall firm performance¹⁸. Financial management, accounting, and corporate governance practices are generally of poor quality in the construction industry¹⁹. This is one of the factors increasing the level of risk perceived by the banking sector, thereby reducing the amount of credit provided to construction firms. While the government has supported the emergence of mid-level and higher education institutions geared towards the study of business and management, firms still complain that the available institutions are not sufficient to train high-level professionals. They propose that the government should promote more 'on the job training' schemes integrating local and international companies.

D) EMPLOYERS' ORGANISATIONS AND BUSINESS ASSOCIATIONS

The Confederation of Business Associations of Mozambique (CTA) is the umbrella organization for the private sector in Mozambique. CTA aims to contribute to a favourable business environment to the development of the private sector. Almost all private business-related associations, chambers of commerce and federations are CTA's members. From their side, contractors are organized in an association. Each province has one (or more) contractors' associations, and together form the Mozambican Federation of Contractors (FME), which represents contractors at the central level. However, most of the associations in the FME are not proactive. Moreover, the membership quota is low, resulting in insufficient financial resources for the federation to work. This limits the provision of business services, which in turn contributes to a weak financial situation.

The Association of Mozambican Consultancy Companies (AEMC) represents the formal consulting companies operating in Mozambique, whose principal activity is the provision of consultancy services including engineering consultancy companies. There is also the so-called **Club of Big Constructors**, which is not an association but a group of 16 most relevant construction companies of Mozambique. Lastly, the **Mozambican Industrial Association (AIMO)** is made up of industries of the country. While AIMO and Constructors Associations are sector-based organizations, the CTA is the general organization dealing with cross-cutting issues and support these associations. Both AIMO and FME are CTA members.



E) WORKERS' ORGANISATIONS AND SOCIAL DIALOGUE

Workers in the market of building construction and construction are represented by **CONSILMO**, an umbrella confederation of trade unions which represents four different unions. It serves a total of 106,858 workers, in 6,397 companies. **SINTICIM** is the National Syndicate on behalf of workers in the industries of civil construction, wood and mining activities. In civil construction, CONSILMO represents a total of 26,470 workers and 810 companies²⁰.

F) SECTORIAL PUBLIC-PRIVATE DIALOGUE

The institutional organization of both public and private institutions is made on a sector base, and the level of coordination between institutions is not effective. The Government and CTA established a **formal mechanism for Public and Private dialogue (PPD)** with regular meetings between each sectorial government institution and their respective private sector counter-

¹⁸ Bloom et al (2013)

¹⁹ Lopes (2006)



part, both at the technical and Ministerial level. These hold meetings twice a year with the Prime-Minister and an **Annual Private Sector Conference** is chaired by the President of the Republic. For construction materials, dialogue occurs between MOPH&RH and CTA Civil Construction Pylorus. However, the results are insufficient.

Furthermore, both private contractors and consultancy companies are not informed about the work being done by the National Directorate of Urban and Housing on the promotion of local and innovative construction materials²¹. As a consequence, contractors ignore the availability of these materials, a symptom of the lack of coordination and communication between the public and private sectors.

G) LABOUR AND WORKPLACE INSPECTION

INAE is the national authority, under the **Ministry of Industry and Commerce**, with the mission of ensuring legality in the exercise of economic activities. It is also responsible for regulating workplace health and safety conditions. **The General Labour Inspection (IGT)**, an institution subordinated to the **Ministry of Labour, Employment and Social Security** is responsible for inspecting and providing technical advice on labour law and other labour legal issues to companies. IGT is also responsible for regulating workplace and labour conditions, including the compliance with labour regulations.

H) FINANCIAL SERVICES

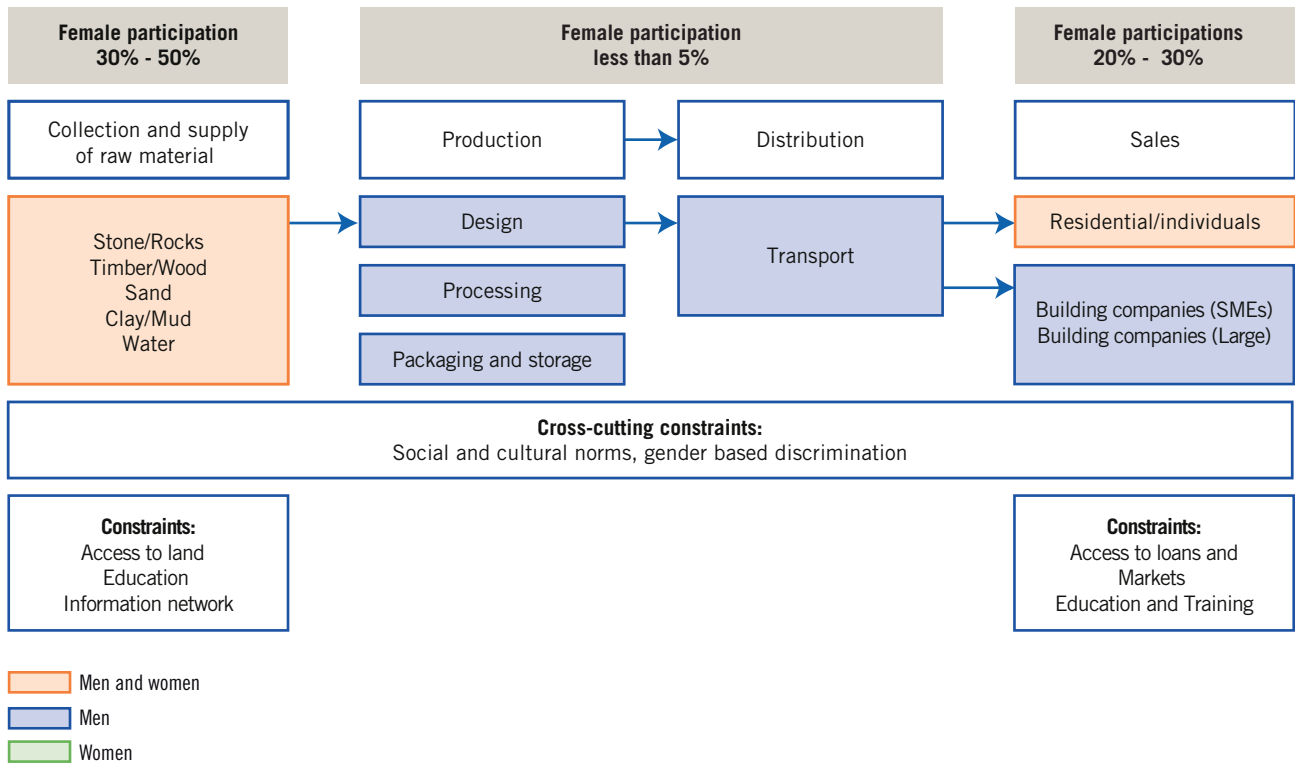
Access to credit is a general and serious constraint for companies in Mozambique as reported by contractors during all meetings. Mozambique has approved the Law 6/2015 for Private Credit Bureau and its regulation (Decree 11/2016), representing an improvement for companies to access credit; however, the access to credit still difficult for most of SMEs. During the interviews with companies and provincial contractors' associations, it was highlighted that delays in services payments and VAT reimbursements were crucial problems affecting their financial situation.

²⁰ Figures as of 2003. Information by CONSILMO

²¹ Meeting with CTA Civil Construction Pylorus



IV. A GENDER LENS INTO THE CONSTRUCTION MATERIALS SECTOR



Part of the chain	Activity	Men	Women
Collection and supply of raw material	Collection of raw materials (informal/community level)		x
	Collection of raw materials (formal/companies)	x	x
Production	Designing	x	
	Processing	x	
	Packaging and storage	x	
Distribution	Transport	x	
Sales	Price negotiation (formal and informal)	x	x

I) ACCESS AND CONTROL OVER RESOURCES

In general, men have greater access and control over resources. Furthermore, when women are involved in the collection of raw construction materials, the land where they collect these materials belongs to the State, communities, and sometimes men. Women also find financial barriers to access bank loans when they want to expand their retailing businesses.

they have to rent these spaces; moreover they find it difficult to get loans from the banks to expand their businesses;

Lack of networks: There is a need to push for more female-led networks. By networking, they can be in the decision-making positions, get access to information to reach new markets for their businesses, and even influence the opening of jobs for women in the sector.

J) CONSTRAINTS TO CREATE MORE AND BETTER JOBS FOR WOMEN IN THE SECTOR

Lack of education and training: The problem with the lack of training is generalized in this value chain; however, women are most affected by it.

Gender stereotypes: There is a robust social belief that this sector is only for men. Thus women can only assume the administrative work within the value chain. Nonetheless, there is an increase in numbers of women involved in the commercialization of construction materials as well as in the consumer base;

Access to land and financial resources: The lands in which women work or trade are typically owned either by the Government or by men. In this situation,



V. ANALYSIS OF SYSTEMIC CONSTRAINTS TO DECENT JOB CREATION

In this section, the analysis presents a series of priority systemic constraints to the creation of decent jobs in the construction material sector. For this purpose, the study departs from constraints at the business level, namely constraints directly impacting the everyday performance of businesses and their workers, followed by the identification of systemic or system-level constraints, understood as the causes of the business-level constraints. This section also identifies more relevant related opportunities in the market system to change the practices of both businesses and system-level actors to create more and better jobs, which are then explored to propose market-led interventions in the following section.

Constraints	Systemic constraints
1) Lack of applied quality control, standards, and certification	<ul style="list-style-type: none"> ■ Little market awareness of the benefits and cost-effectiveness of using locally-produced quality building materials (soil-cement blocks are less expensive and provide savings in the long-term due to their resilience). ■ High cost of certification (basic certification process can cost up to \$25 m per year; UFSA certificate is also required for which companies need to comply with tax and social security) ■ Access to and capacity of ANE laboratories is limited. Moreover, the staff and financial capacities of these laboratories are small. In overall, only large civil works make use of these laboratories.
2) Low skills of workers, business owners, and training institutions	<ul style="list-style-type: none"> ■ Lack of market-oriented training opportunities in the manufacturing and use of building materials. This includes the lack of on-the-job/practical courses through which students can also explore issues on health and safety measures. ■ Low capacity of technical training schools to fulfill market demands
3) Weak business management practices leading to low worker productivity	<ul style="list-style-type: none"> ■ Absence of management training and consultancy services aimed at improving firm productivity, with a focus on labour productivity
4) Institutional fragmentation and lack of effective public-private dialogue	<ul style="list-style-type: none"> ■ Absence of a common information-exchange platform, in particular between CTA Civil Construction Pylorus and MOPH&RH. Despite the available PPD mechanism, a top-down administrative structure does not promote a cooperation platform.
5) Limited access to credits and cash flow problems	<ul style="list-style-type: none"> ■ Unfavourable credit conditions with high-interest rates and costly fees and procedures. ■ Absence of micro-finance services in the sector that are suitable for MSMEs. ■ 30-day due date of payment condition is not respected, while VAT reimbursement delays are also frequent.
6) Poor health and safety conditions at building manufacturing sites and companies	<ul style="list-style-type: none"> ■ Low professionalization and capacity of trade union's OSH committees and inspection units to assess health and safety compliance, while the lack of an incentives-based enforcement approach to inspection is also needed



VI. A VISION FOR CHANGE: PROPOSED INTERVENTIONS

This chapter outlines innovations and project interventions that can lead to sustainable and scalable results with particular emphasis in women and female-led households, the development of green jobs and green enterprises (or locally-produced materials) and the application of employment-intensive solutions. Please note that based on the recommendations of the stakeholder validation workshop, no recommendations were made for the constraints on limited access to credits and poor health and safety conditions.

AREA OF INTERVENTION 1: STIMULATING DEMAND TO DEVELOP THE MARKET FOR LOCALLY-PRODUCED QUALITY CONSTRUCTIONS MATERIALS

Soil-cement blocks, micro-concrete tiles and paving blocks have been identified as innovative construction materials with great potential due to their low cost, good quality, low environmental impact and the opportunity to involve women and youth in their manufacturing. However, there is a need to promote their demand, which shows potential to be used for the construction of social infrastructures, such as primary schools and health centres, as well as road construction within the municipalities. This indicates that although the Ministry of Public Works and Hydric Resources has actively promoted capacity building initiatives in the manufacturing of these materials (supply side), these efforts will not harvest results if government-led district works (demand side) are not aligned and incentivized. For that purpose, technical specifications for the procurement of materials aimed at the construction of schools, health centres, and municipality roads need to include or promote such materials.

INTERVENTION 1.1: CONSTRUCTION OF GOVERNMENT-LED INFRASTRUCTURE USING ALTERNATIVE AND INNOVATIVE CONSTRUCTION MATERIALS

The proposed project intervention suggests the construction of a civil building using alternative and innovative constructions material, which should serve as a demonstration project to boost demand. Key actors involved and their and responsibilities include:

- **ILO** through MOZTRABALHA Project will be co-responsible for the overall project implementation, promotion, coordination and guiding the involvement of other stakeholders.



- **Ministry of Education and Human Development** will be responsible for approving the use of innovative constructions materials. The Ministry works with MozTrabalha to elaborate technical specifications in the procurement of services for construction projects, and issue instructions to all Provincial Directorates.
- **National Directorate of Housing** should monitor the overall production of the alternative and innovative construction material, supervising the NTC, and contracted MERAs.

It is recommended that a seminar involving all stakeholders is organized to present and discuss the proposed project intervention.

INTERVENTION 1.2: REFORM IN PROCUREMENT POLICY IN ORDER TO INCLUDE A MANDATORY PERCENTAGE FOR LOCAL ACQUISITIONS

The GoM is the major client in the construction industry and, consequently, in the construction material industry. Government procurement has made a specific guideline approved through the Decree 5/2016 of 8th



of March. The Mozambican procurement guideline does not include any mandatory article/language for local acquisition, although it includes the domestic preference margins which are applied to the services provider (10%) and goods (15%). These preferential margins are applied during the selection of the winning bidder. However, this is not sufficient to stimulate demand. In this regard, it is recommended to revise the procurement guidelines to include a mandatory percentage for the acquisition of services and goods produced locally.

AREA OF INTERVENTION 2: ENSURING QUALITY SUPPLY THROUGH THE DEVELOPMENT OF A SUSTAINABLE CERTIFICATION AND QUALITY CONTROL SYSTEM

Certification is the best way to ensure high levels of standard and quality. However, certification is a long and costly process, and SMEs (MERAs in particular)

do not always have the capacity to gain this immediately. As an alternative to the certification, quality control can guarantee that construction materials are made in accordance with required standards.

LEM does not have offices in the provinces, but ANE does count with representative offices, equipped with key staff who can perform quality control tests for construction works. This is an opportunity to develop a sustainable quality control process which could be demanded by mandated construction works at the beginning of operations. For this to be done, the contract supervision needs to lay a critical role, and LEM and ANE need to be involved. For certification, the National Institute of Standards and Quality (INNOQ) will guide the process.

INTERVENTION 2.1: SUPPORT INNOQ AND LEM'S CAPACITY TO DISSEMINATE AND IMPLEMENT QUALITY CERTIFICATION

This intervention entails supporting INNOQ and LEM in attaining internationally-recognized operating standards. The intervention will also work with MOPHR&RH to develop technical norms for selected priority materials, as well as seals of quality for alternative materials and green construction. The project could also work to disseminate and train SMEs to adopt these available certifications.

AREA OF INTERVENTION 3: DEVELOPMENT OF MARKET-ORIENTED TRAINING IN CONSTRUCTION MATERIALS AND PRODUCTIVITY MANAGEMENT

In response to the lack of market-oriented training opportunities in the sector, the research team suggests to support training institutes in reforming their curricula to be more market-oriented, gaining financial autonomy, and increasing their capacity in curricular development and delivery of training courses.

INTERVENTION 3.1: ASSISTANCE TO DEVELOP MARKET-ORIENTED CURRICULA IN IFPELAC

It is recommended to provide technical assistance to develop market-oriented curricula (skills gap analysis per province). It is important that the training is for areas that the market demands and that innovative feedback systems are developed as part of the TVET system to enable to obtain up-to-date information on market changes.

On the other side, being subordinated to MITESS without financial and administrative autonomy, IFPELAC does not have the necessary flexibility to respond to the swift changes in the labour market regarding skill

areas that the market needs. Not having the financial autonomy, IFPELAC is limited regarding mobilization of financial resources as well. An assessment of IFPELAC's viability to restructure its organizational model (and financial) needs to be undertaken and, based on the conclusion, IFPELAC needs to be adjusted.

INTERVENTION 3.2: SUPPORT NTC IN IMPROVING AND PROVIDING TRAINING TO MERAS IN SELECTED TECHNIQUES AND MATERIAL HANDLING

The analysis suggests to assist in the adaptation or readjustment of existing training curricula (based on NTC's technical training curricula) in collaboration with the NTC and IFPELAC. To ensure sustainability, the analysis suggests to develop a Training of Trainers system.

INTERVENTION 3.3: DEVELOPMENT AND PROMOTION OF BUSINESS AND PUBLIC CONTRACT MANAGEMENT TRAINING FOR BUSINESS OWNERS

In relation to productivity-led management training, the research spotted opportunities to implement productivity-led management training and professional services in Mozambique, such as the ILO SCORE program. This training is directed to managers and workers at different levels and aims to improve working conditions, worker skills and productivity, and firm performance in SMEs. ILO can promote these courses in partnership with the Mozambican Association of Consultancy Companies, CTA, and MITESS, although a scoping of interest should first be performed to select potential lead companies and business development services who would provide such training.

The training should orient trainees to focus on firm and labour productivity. Further analysis is required for the implementation of readily available training methodologies such as the SCORE Program in the construction material sub-sector, or the development of new but targeted training.

AREA OF INTERVENTION 4: KNOWLEDGE-SHARING, COOPERATION AND ENGAGEMENT BETWEEN PRIVATE AND PUBLIC SECTORS

It was evident that both, private and public sectors do not share information on the latest alternative innovative construction materials and related programmes. Efforts to promote the building materials sector should be coordinated and communicated to ensure maximum benefits.

INTERVENTION 4.1: IMPLEMENTATION OF A COMMON INFORMATION PLATFORM

The proposed common information platform should be a one-stop-shop for information about local construction material. The team suggests developing a web-based information platform that can contain an all-embracing database about raw materials (based on a national survey), standards, rules and regulations, prices, tenders, credit facilities, and events. The one-stop-shop can be coordinated and managed by the DNUH.

INTERVENTION 4.2: ESTABLISHMENT OF AN INTER-MINISTERIAL AND PUBLIC-PRIVATE FORUM FOR THE CONSTRUCTION INDUSTRY

The forum should bring together all relevant stakeholders to discuss and share information about ongoing and planned program about local and innovative constructions materials. In particular, the forum should disseminate the approved local construction materials including technical information and standards, government strategies, priorities and programs in the sub-sector. Key point in the forum agenda should be the MozTrabalha project and activities in construction material sub-sector, with particular emphasis on EII techniques.

INTERVENTION 4.3: UNDERTAKE A NATIONAL SURVEY OF CONSTRUCTION MATERIALS

Information regarding local construction materials is insufficient, including the availability and characteristics of raw materials (mainly rock, sand, limestone and clay). In order to promote the manufacturing of local construction materials, it is crucial to obtain information on the different materials and develop technical specifications.

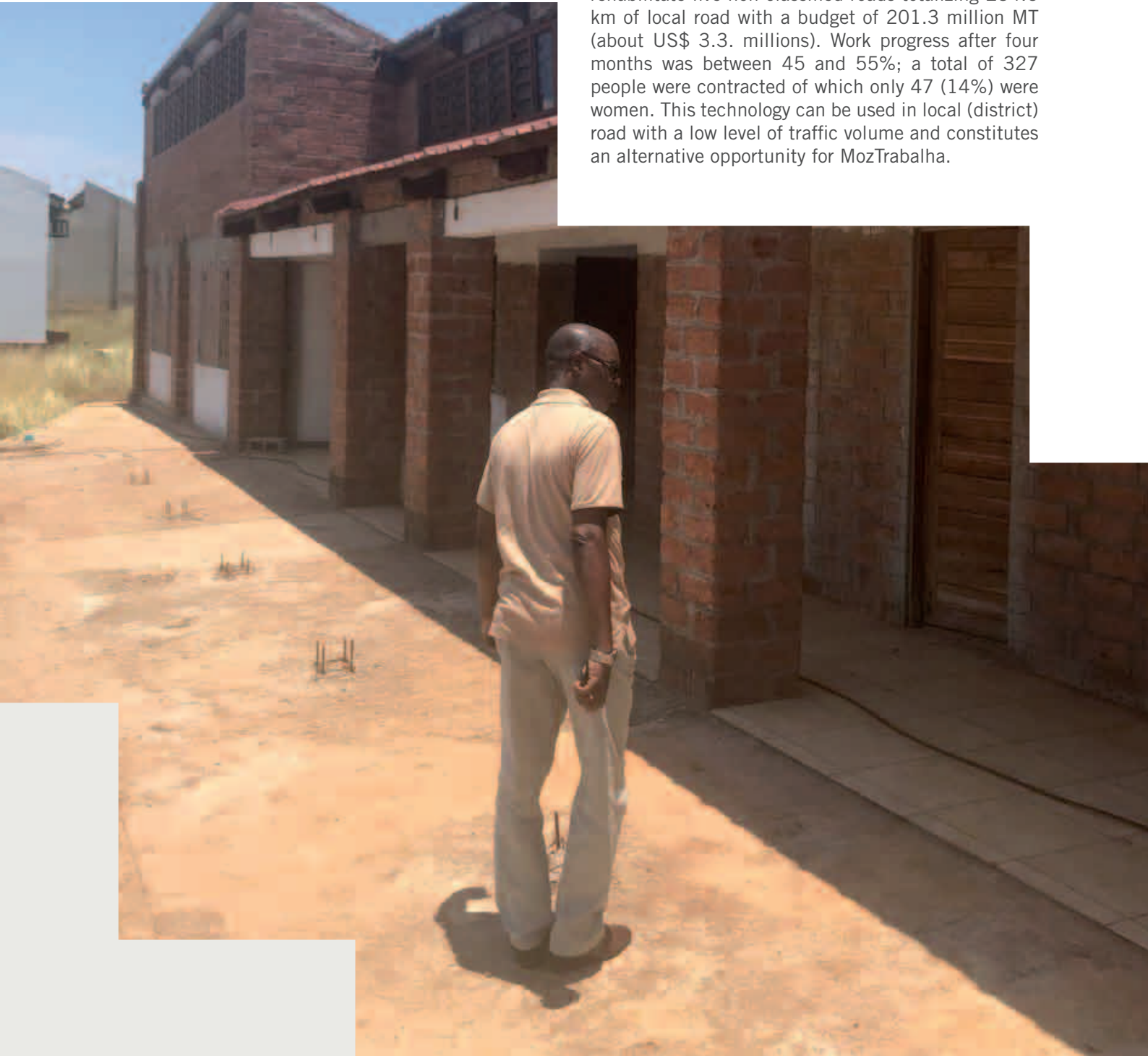
AREA OF INTERVENTION 5: IMPLEMENTATION OF OTHER EIIP PILOTS USING LOCAL MATERIALS AS DEMONSTRATION AND DISSEMINATION TOOLS

This MSA focused on construction material sub-sector, using small-scale public works (hospitals and schools) as potential demonstration projects for the promotion of green and locally produced materials. However, opportunities have also been identified for local road con-

struction. The ANE in Nampula is implementing a road construction/rehabilitation program with the objective of improving access to local agriculture production regions using labour-intensive technology and materials. This is an alternative intervention for the promotion of the proposed locally-produced materials in this report.

INTERVENTION 5.1: ROAD REHABILITATION USING LOCALLY PRODUCED MATERIALS

ANE in Nampula is implementing a road construction/rehabilitation program with the objective of improving access to local agriculture production regions using labour intensive technology. The program aimed to rehabilitate five non-classified roads totaling 234.5 km of local road with a budget of 201.3 million MT (about US\$ 3.3. millions). Work progress after four months was between 45 and 55%; a total of 327 people were contracted of which only 47 (14%) were women. This technology can be used in local (district) road with a low level of traffic volume and constitutes an alternative opportunity for MozTrabalha.



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